Hua, Loo-Keng

TO REMAIN AT 85 EINSTEIN

cc: Allen Rowe
Mary Wisnovsky
Caroline Underwood

November 11, 1980

Accr. 10/23/80
Dep. 12/2/80

Professor L. K. Hua
School of Mathematics
Institute for Advanced Study

Dear Professor Hua:

I am happy to inform you that your current visit has been extended for two weeks for a total of six weeks, with a grant-in-aid of $400 per week.

With all best wishes, I am,

Sincerely yours,

Harry Woolf

Hua

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY 08540
Telephone-609- 734-8000

cc to Dir Off 11/10/80

SCHOOL OF MATHEMATICS

November 4, 1980

Mathematics Faculty
Institute for Advanced Study

Dear Colleagues:

Professor Hua wants to stay here for a total of six weeks. I propose that we continue his grant of $400 a week and rent for the additional two weeks. Housing has agreed for him to remain in 85 Einstein Drive if his visit is extended.

Sincerely yours,

S. T. Yau

	Approve	Disapprove
Professors Bombieri	X E.B.	___
Borel	X	___
Harish-Chandra	X	___
✓Selberg	yes	___

Please return your vote to Miss Underwood.

a.s.

CHARGE TO MATHEMATICS VISITORS FUND

cc: Allen Rowe
Mary Wisnovsky
Caroline Underwood

October 28, 1980

Professor L. K. Hua
School of Mathematics
Institute for Advanced Study

Dear Professor Hua:

I am happy to inform you that during your current visit you will be provided a grant-in-aid of $400 per week for up to four weeks, plus housing.

With all best wishes, I am,

Sincerely yours,

Harry Woolf

Hua

October 21, 1980

Director's Office
Institute for Advanced Study

It is requested that a stationwagon be made available to Professor Yau to meet Professor L. K. Hua and his two companions at Newark Airport on Thursday, October 23. Besides the driver and Professor Yau there will be Professor Hsiang from Princeton University. Professor Hua's party has 10 large pieces of luggage to be deposited at his apartment in the Institute project (85 Einstein Drive).

The flight will be U. S. Air (formerly Allegheny Airlines), Flight #8, arriving at 2:06 p.m.

Thank you,

School Administrative Officer

CC: J. Bess

Charge L. K. Hua
(800-02-0-31-0002)

October 21, 1980

Mathematics Faculty
Institute for Advanced Study

Dear Colleagues:

Professor Hua and his party will arrive Thursday, October 23. Hsiang and I plan to meet them at Newark Airport. We have learned that they are carrying 10 pieces of luggage between them. I am requesting that an Institute stationwagon and driver be made available to us for this trip.

I hereby request your permission to charge this service to the School's Visitor's Fund. It is estimated to be about $60; possibly less.

Sincerely yours,

Shing-Tung Yau

	Approve	Disapprove
Professors Bombieri	X	___
Borel	X	___
Harish-Chandra	X	___
Selberg	X	___

Please return your vote to Miss Underwood.

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY 08540
Telephone-609- 734-8000

SCHOOL OF MATHEMATICS

October 21, 1980

Mathematics Faculty
Institute for Advanced Study

Dear Colleagues:

Professor Hua and his party will arrive Thursday, October 23. Hsiang and I plan to meet them at Newark Airport. We have learned that they are carrying 10 pieces of luggage between them. I am requesting that an Institute stationwagon and driver be made available to us for this trip.

I hereby request your permission to charge this service to the School's Visitor's Fund. It is estimated to be about $60; possibly less.

Sincerely yours,

Shing-Tung Yau

		Approve	Disapprove
Professors	Bombieri	X	___
	Borel	X	___
	Harish-Chandra	X	___
	Selberg	X	___

Please return your vote to Miss Underwood.

October 27, 1980

Director's Office
Institute for Advanced Study

In order for Sabina's records to be complete, it is requested that a letter be addressed to Professor L, K. Hua informing him that his grant will be $400 per week up to four weeks and housing during his current visit.

Professor Hua's office is Fuld 216. He is living at 85 Einstein Drive. His grant and rent are to be charged to the School of Mathematics Visitors Fund. (Refer to School Minutes, page 707, item 4, 10/6/80.)

Thank you,

710-05-0-31-0001-01

School Administrative Officer

October 20, 1980 - 1:40 PM

4. It was agreed to offer Professor L. K. Hua a grant of $400 per week and housing during his visit from October 23, 1980, up to four weeks. (Reference invitation issued by the Director on January 30, 1980.) [Professor Bombieri will telephone.]

Dr. Hejhal, University of Minnesota, telephoned the following message from Mr. Goetze, Springer-Verlag:

Professor Hua will be leaving Minneapolis, Minn., on Thursday, October 23, at 10:55 a.m. (Central Time) and will be arriving at Newark at 2:06 p.m. on U. S. Air (old Allegheny Airlines), Flight 8. Professor Hua will be accompanied by two assistants.

Copies to: Prof. Remmert
Miss Underwood

L. K. Hua

4. It was agreed to offer Professor L. K. Hua a grant of $400 per week and housing during his visit from October 23, 1980, up to four weeks. (Reference invitation issued by the Director on January 30, 1980.) [Professor Bombieri will telephone.]

School Minutes p. 707 10/6/80

REQUEST FOR INVITATION/HOUSING FOR SHORT-TERM ~~MEMBER~~ VISITOR

Date Sept. 29, 1980

TO: Mrs. Mary Wisnovsky

FROM: School of Mathematics

85 Einstein

Name of ~~Member~~ Visitor Professor L.-K. Hua

Address Academia Sinica

Peking, Peoples' Republic of China

Affiliation

Date(s) of Visit October 23 - November 20, 1980

Housing requested for:

a) dates October 23 - November 20, 1980

b) No. of persons 3

c) account to be charged 710-05-0-31-0001

Director to send invitation yes____ not necessary XX

If yes, please include below whether member will receive stipend/honorarium, etc., and amount, as well as any other pertinent information.

C Olmsdirwood
(signature)

PLEASE SUBMIT IN DUPLICATE

(609) 734-8100

September 9, 1980

Professor L.-K. Hua
c/o Department of Mathematics
Yale University
New Haven, Connecticut 06520

Dear Professor Hua:

We are very much looking forward to your visit here.

In connection with reserving an apartment for you during your stay will you let us know as soon as you are able the exact date of your arrival please? It would be well to let us know what size accommodations you will need. We have one- and two-bedroom apartments as well as one three-bedroom apartment which might be available at the time of your visit.

Looking forward to hearing from you, I am

Sincerely yours,

School Administrative Officer

Harry Woolf
Director
The Institute for Advanced Study
Office of The Director
Princeton, New Jersey 08540
U.S.A.

Beking
Feb. 20, 1980
LK/zhou

Dear Professor Woolf:

I am most grateful for your kind letter of Jan. 28, 1980 to invite me for a two or three weeks' visiting stay in your department.

As you know, I am involved in some administration work , so I ~~favour~~ hard to consult with my colleagues in details, however I believe that the decision will be most likely favourable.

I am looking forward to meet my old colleagues and to learn from you again.

Thank you very much once again for your kindness.

With best regards,

Yours sincerely

L.K.Hua

cc: Allen Rowe
Mary Wisnovsky
Caroline Underwood

January 30, 1980

Dr. L. K. Hua
Mathematics Institute
Academia Sinica
Peking,
PEOPLE'S REPUBLIC OF CHINA

Dear Dr. Hua:

On the recommendation of the Faculty in the School of Mathematics, I am pleased formally to invite you to visit the Institute for Advanced Study for one or two weeks during the fall or spring term of academic year 1980-81. The term dates are: first term, Monday, September 22, 1980 to Friday, December 19, 1980; second term, Monday, January 5, 1981 to Friday, April 3, 1981. The Institute will defray the expenses of your stay.

We look forward with pleasure to having you with us for a visit, and we would find it most helpful to have a response to our invitation at your earliest convenience.

Sincerely yours,

Harry Woolf

L. K. Hua

18. It was agreed to invite L. K. Hua to visit for one or two weeks during the fall or spring term of 1980-81. It is understood that we will defray his expenses. [The Director will write.]

School Minutes p. 693 1/14/80

Columbia University in the City of New York | *New York, N.Y. 10027*

DEPARTMENT OF MATHEMATICS Mathematics Building

cc: Dir

To Professors:

P. T. Bateman
Felix Browder
P. X. Gallagher
F. W. Gehring
Heisuke Hironaka
Nathan Jacobson
Mark Kac
W. E. Kirwan
J. A. Nohel
Atle Selberg
H. N. Shapiro

January 4, 1980

Dear Colleagues:

I received a letter from L. K. Hua from which I gather that he may be in the US next academic year and would very much like to visit the places mentioned in the enclosed tentative itinerary (which does not include California.) If you are still interested, I believe that an official invitation should be sent to him sometime in January or February. His address is Mathematics Institute, Academia Sinica, Peking, Peoples Republic of China. I assume (but do not know) that he will be travelling with his daughter-in-law who is his physician. I think that conditions should be spelled out, but dates may be kept flexible.

If you write to him, please let me know.

Cordially yours,

L. Bers

Lipman Bers

LB:mg
Enc.

Columbia University in the City of New York | *New York, N.Y. 10027*

DEPARTMENT OF MATHEMATICS Mathematics Building

TENTATIVE ITINERARY FOR ACADEMICIAN L. K. HUA

New York

Princeton

Washington

New Haven

Cambridge

Michigan

Chicago

Urbana

Wisconsin

(Sm) L.K. Hua

C O P Y

[POSTMARK HONGKONG] 3 March, 1950

Dear Dr. Oppenheimer:

I beg to inform you and the friends of school of mathematics about my safety arrival at Hong Kong. I shall stay here for ten days and then go to Peking straightly. Thanks to the efficiency workers in China, now we are able to go to Peking directly by train.

Dr. Yu Da-Wei asked me to introduce him to you. You might know that he was the minister of communication and the deputy minister of national defence etc. Besides he is a good scholar, his special line was mathematical logic. He was graduated from Harvard and his thesis was published in Mathematisch Annalen (with the name David Yule.) He told me that he will visit your institute at the near future. Please introduce Prof. Gödel to him.

My address is:

c/o Miss Wu Lan
P.O. Box 1783
Kowloon, Hongkong.

She will forward the mails to my Peking address. My Peking address is

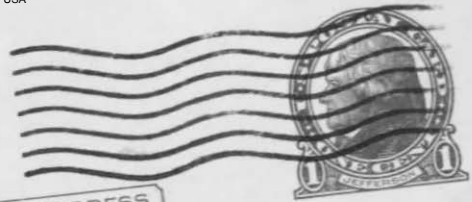
Dept. of Math.
Tsing Hua University
Peking, China.

Please give my regards to Mrs. Oppenheimer, as well to friends of the school of mathematics.

Yours

(Signed) L. K. HUA

Profs. Gödel ✓
Einstein ✓
Morse ✓
v.Neumann ✓
Siegel ✓
Veblen ✓
Weyl ✓
Montgomery ✓
G.Blake



THIS SIDE OF CARD IS FOR ADDRESS

Dr. P. T. Bateman,
Institute for Advanced Study
Princeton, N. J.

This is to inform you that my address is now

Loo-Keng Hua
Department of Mathematics
Tsing Hua University
Peking, China

Since the importation of mathematical journals into China is so uncertain, our library and I would very much appreciate it if you would make every effort to send us reprints of your papers.

If you have trouble reaching me at the above address, you can write to

Lowell Schoenfeld
Department of Mathematics
University of Illinois
Urbana, Illinois

(Sm) L. K. Hua

January 17, 1950

Dear Professor Hua:

I hear with great regret that you are going back to China. I can readily understand your desire to return at this critical stage. I have no doubt you wish to take part in the formation of the new sympathies. I am sure you will be an able interpreter of American sentiments towards China, relying on the fact that we want nothing more than a strong and independent China which can work out its own destinies and develop its own great talents.

As far as books are concerned, you can rely upon me to help you all I can, to give you all my reprints available and copies of my two latest books. If there are some of these which you do not have and which you wish to be burdened with, I can send them to you at once. I have no doubt my colleagues will do the same. The principal problem is that of communications.

Please give my warmest regards to my former pupil Kiang, and to his wife. I suppose the chances of their coming to America now again are very remote until the political situation settles down. I am more than thankful that Acheson has taken the action he has with regard to Formosa, and that we are not plunging in with the idea of throwing our military weight around. You of course have got to be very careful in anything you do and say, and I suppose you may not be able to write altogether candidly to us after you have once reached China. But one thing will always be clear,- that we shall always be jointly interested in the major development of mathematics and science, and that we shall remain firmly attached to you and your colleagues (particularly Professor Chiang) as tested friends.

My best wishes and hopes go with you.

Sincerely yours,

Marston Morse

Professor Loo-Keng Hua
Mathematics Department
University of Illinois
Urbana, Illinois
MM:GB

(Hua) L. K. Hua

UNIVERSITY OF ILLINOIS
DEPARTMENT OF MATHEMATICS
URBANA, ILLINOIS

Jan., 15, 1950.

Dear Miss Blake:

I beg to inform you that my address is changed to

Department of Mathematics
Tsing Hua University
Peking, China.

If you have difficulty to get in touch with me by the above address, please use the following one:

c/o P. O. Box. 1783
Kowloon, Hong Kong.

I shall leave Urbana at 27 of January.

Please give my regards to Professors and friends in the institute.

Yours sincerely

L. K. Hua

Copies sent Mrs. Leary & DeO
Profs. Morse ✓
Siegel ✓
Veblen ✓
Weyl ✓
v Neumann ✓

(SM) L. K. Hua

October 11, 1948

Dear Mr. Standish:

Replying to your inquiry of October 4, addressed to the Registrar of Princeton University, Professor Loo-Keng Hua who was a temporary member of this Institute (which is distinct from Princeton University) from September 1946 to June 1948, is now in the Mathematics Department of the University of Illinois, Urbana, Illinois.

Very truly yours,

Secretary, School of Mathematics

Mr. E. D. Standish
U.S. Immigration and
Naturalization Service
Thousand Islands Bridge, N.Y.
Via Clayton, N.Y.

(Sm) Hua

8, Sept, 48

Dear Miss Blake,

I am very sorry to have missed you on my visit to Princeton. I trust your vacation is interesting and enjoyful.

Now I am living at

706 W. Nevada Street
Urbana, Ill.

My letters can either be forwarded to this address or to the Dept. of Math. of university of Ill. as well.

Thank you very much for your kindness which you kindly extended to me during last two years and for the trouble you took to forward my letters.

With best wishes

Yours very sincerely

L. K. Hua

Form 2865

Post Office Department, United States of America
Administration des Postes des États-Unis d'Amérique

(To be filled in by the office of origin)
(A remplir par le bureau d'origine)

Registered article letter (1) (2)
Envoi recommandé

Parcel insured for $ ~7 (2)
Colis avec valeur déclarée de

Mailed at the post office of PRINCETON N.J.
déposé au bureau de poste d

on 7-22 19 48 under No. 698
le *sous*

Mailed by M Inst Adv Study
expédié par M

and addressed to M Lo Keng Hua.
et adressé à M

at London Eng.
à

(1) Indicate in the parenthesis the nature of the article (letter, print, etc.).
Indiquer dans la parenthèse la nature de l'envoi (lettre, imprimé, etc.).

(2) Strike out the indications not applicable.
Biffer les indications inutiles.

Return Receipt
Avis de réception

C 5

Postmark of the office returning the receipt
Timbre du bureau renvoyant l'avis

(To be filled in by the sender, who will indicate below his complete address)
(A remplir par l'expéditeur qui mentionnera ci-dessous son adresse complète)

M Inst Adv Study
M

(Street and number)
(Rue et numéro)

PRINCETON N.J.

at
à

(Place of destination, in large characters)
(Lieu de destination, en gros caractères)

UNITED STATES OF AMERICA
États-Unis d'Amérique

POSTAL SERVICE
Service des postes

5—11654

The undersigned declares that the article described on the other side was duly delivered
Le soussigné déclare que l'envoi mentionné d'autre part a été dûment livré

on _____, **19**____
le *19*

SIGNATURE[1] L. Renny

Postmark of the office of destination
Timbre du bureau destinataire

of the addressee:
du destinataire:

_____

_____

of the agent of the office of destination
de l'agent du bureau destinataire

_____

_____

61⅓
1.13
12

[1] **This receipt must be signed by the addressee, or, if the regulations of the country of destination so provide, by the agent of the office of destination, and returned by the first mail direct to the sender.**
Cet avis doit être signé par le destinataire, ou, si les règlements du pays de destination le comportent, par l'agent du bureau destinataire et renvoyé par le premier courrier directement à l'expéditeur.

U. S. GOVERNMENT PRINTING OFFICE 5—11654

Form 3806 (Rev. Dec. 1944)

698

(POSTMARK OF

Receipt for Registered Article No. _____

Registered at the Post Office indicated in the Postmark

Fee paid 20 *cents* *Class postage* 12

Declared value 2911.5 Surcharge paid, $_____

Return Receipt fee 5 Spl. Del'y fee _____

Delivery restricted to addressee:

in person _____, or order _____ *Fee paid* _____

(Accepting employee will place his *initials* in space indicating restricted delivery.

POSTMASTER, per _____

MAILING OFFICE)

PRINCETON, N. J. JUL 23 1948 REGISTERED

The sender should write the name of the addressee on back hereof as an identification. Preserve and submit this receipt in case of inquiry or application for indemnity.

Registry Fees and Indemnity.—Domestic registry fees range from 20 cents for indemnity not exceeding $5, up to $1.35 for indemnity not exceeding $1,000. The fee on domestic registered matter without intrinsic value and for which indemnity is not paid is 20 cents. Consult postmaster as to the specific domestic registry fees and surcharges and as to the registry fees chargeable on registered parcel-post packages for foreign countries. Fees on domestic registered C. O. D. mail range from 40 cents to $1.40. Indemnity claims must be filed within one year (C. O. D. six months) from date of mailing.

U. S. GOVERNMENT PRINTING OFFICE 16—20305-1

Hua Loo Keng

Letter from Prof. Hua
from Wanhsien
Director of Research &
Development
Ministry of Coal. Despatched
forwarded July 22 Registered
Return Receipt Requested RB

(3hr) Hua

Recd. June 15

June 10, 1948

c/o Miss M. Whyte
Visitors' Dept
British Council
56 Portland Place
London W. 1.

Dear Miss Blake:

Thank you very much for those letters from China which were forwarded by you to me. I arrived here yesterday afternoon. (It was the morning by your time). The British Council treated me well, they made a very good plan for me. Today I visited six different places at London. Tomorrow I shall go to Manchester, and then Cambridge Bristol, etc. I shall return to U.S.A. at the end of August. I believe I shall have a very busy time, as busy as I was in Russia.

I was told that the address at the head of the letter can reach me

better. Please forward my letters accordingly. I am sorry I forgot to leave some postage to you to forward the letters of which the postages are not enough to go abroad. Please put the extra stamps on, I shall pay you as soon as I came back to Princeton.

London is changed, I hardly recognize at the first glance that it is the London which I knew.

Regards to my freinds at the Institute. Really I appreciate hundreds of times what you kindly did me.

Yours very sincerely

L. K. Hua

(Sm) L K Hua

INSTITUTE FOR ADVANCED STUDY
Princeton, New Jersey

School of Mathematics.

Full name: LOO-KENG HUA

Arrival date:

Departure date: June 6/48
Flying to Eng. June 8/48

Princeton address:

Telephone:

Permanent address:

Date and place of birth: 11 Oct., 1910

Married or single: M.

Citizenship: Chinese

Number of children accompanying you:

If foreign, under what kind of visa did you enter the United States?

Visa No: Nonquota No. 4698
Place and date of issue: May 25 1948 Montreal
Expiration date of visa: none

Date and port of entry to United States: May 25, St. Albans, Vt.

Name of ship:
Name of airline:
Expiration date of entry permit:

Name and address of person, outside of Princeton, to be notified in case of emergency:

Project or field of work at Institute: Mathematics

Academic degrees: (Give name of college or university and year conferred)

Fellowships: (Give full name, dates and place of study)

All positions held: (Please give dates and state if on leave of absence)

Professor of Tsing Hua University, Peiping, China.

Honors and Societies:

Publications: (Please give title and reference in full, with Vol. No., year and page numbers. Use other side of sheet.)

(Please fill out in duplicate and send copy to Director's Office.)

(3 m) Hua

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

JOSEPH L. EGAN
PRESIDENT

1201

SYMBOLS

DL = Day Letter
NL = Night Letter
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

PA156

KP.NB494 8 # CNT CS MONTREAL QUE 25 117P 1948 MA 25 PM 1 54

MISS BLAKE=

INSTITUTE FOR ADVANCED STUDY PRINCETON NJER=

PLEASE TELL PROFESSOR WEYL I GOT VISA FINALLY=

HUA.

Prof Annie ✓
& Weyl ✓

TELEPHONE No. 2580
TELEPHONED TO Adele
TIME 1:15 PM
BY HE TO BE
ATTEMPTS TO DELIVER

WEYL HUA.

WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

May 18/48

This letter to cover additional statements required:

1) that he has been a member of Faculty (No)

or

2) that his research has been advanced, as distinguished from student's research

3) that he has directed research

4) that his research has been of value to American students

(Shu) Hua

May 19, 1948

Mr. Martin Clausen
Chief, Princeton Township Police
Princeton, New Jersey

My dear Mr. Clausen:

This is to certify that Professor Loo-Keng Hua has been a Member of the Institute for Advanced Study since September 24, 1946.

Professor Hua is one of the most distinguished mathematicians at the Institute. He has lectured here, at Princeton University, and at many other American universities. Since we understand that you wish to have a letter for identification purposes, I presume this will suffice, but if you wish anything further we would be glad to give you whatever is necessary.

Yours sincerely,

(Mrs. John D. Leary)
Aide to the Director

Copy: Miss Blake

(SM) Hua

Air mail

May 18, 1948

To Whom It May Concern:

This is to testify that Professor LOO-KENG HUA has been a member of the School of Mathematics of the Institute for Advanced Study from September 1946 to date. During this time he has very successfully participated in all the scientific activities of our school.

Scientific knowledge grows by the thinking of the individual solitary scientist and by the communication of ideas from man to man. Dr. Hua has contributed to the store of mathematical ideas by the advanced research work in higher mathematics which he has pursued at the Institute. Teaching and learning, the communication of ideas, is performed at the level of our Institute not only by courses of lectures and seminars, but also by individual lectures on selected topics, and by continuous discussion of problems. As a mature Professor of Mathematics of wide experience, Hua has been of great value in this respect to our whole group, especially to the younger members, by the stimulus which he has provided. There is no doubt that many American students of mathematics have greatly benefited from contact with him and from the inspiration he has given them during his stay at the Institute.

Hermann Weyl
Professor of Mathematics

HW:CB

Mailed Special Delivery
to Hua, Manhattan Towers
/ St, Montreal

Copy sent Mrs. Leary

May 17, 1948

The American Consul
Montreal
Canada

Dear Sir:

This is to certify that Professor Loo-Keng Hua has been a member of the Institute for Advanced Study for two Terms, 1946-1947 and 1947-1948.

Professor Hua is a very eminent mathematician who, besides continuing his own researches while at the Institute, has lectured at several seminars here and has given lectures at numerous universities throughout the United States. During the past academic year he has also lectured three hours a week at Princeton University. Before coming to this country Professor Hua held a professorship at Tsing Hua University.

Yours sincerely,

Robert Oppenheimer
Director

Copy: Miss Blake ✓

(Sru) Hua

BROWN UNIVERSITY

PROVIDENCE 12, RHODE ISLAND

March 1, 1948

Professor Hermann Weyl
Institute for Advanced Study
School of Mathematics
Princeton, New Jersey

Dear Professor Weyl:

Dean Richardson has referred to me for reply your letter of February 12 with reference to Professor Hua. I have become somewhat acquainted with Professor Hua and hold him in the highest esteem. I wish that we had a place for him here next year but as things stand at present it looks as though there would be no possibility of our issuing an invitation to him.

Please accept the appreciation of both Dean Richardson and myself for your kindness in calling our attention to this matter.

Yours sincerely,

C. R. Adams

CRA/bcd

(Hua) Hua

February 24, 1948

Dear Professor Langer:

Thanks for your letter of February 20 concerning the possibility of a Visiting Professorship for Professor Hua in your Department. Hua's financial situation is not an easy one. He will have to support his family in China, and since sending dollars to China at the official rate of exchange may prove a very costly business, he even dreams of bringing his family over to this country. Considering this situation, and also the high standing of Hua as a mathematician, I should think of $6,000 as a minimum salary which your administration ought to offer him for a Visiting Professorship. Would there be some prospect that such a professorship might be extended for one or two more years?

I think I ought to be frank with you and tell you that I know of at least one other university that is interested in securing Hua's services. He really is a very good man!

Sincerely yours,

Hermann Weyl

Professor R. E. Langer
Mathematics Department
306 North Hall
University of Wisconsin
Madison 6, Wis.
HW:GB

(Sm) Hua

February 24, 1948

Dear Stone:

Thanks very much for your reply about Hua. I did not know that you were in Princeton the very day on which my letter was sent. Otherwise I could have discussed the matter with you personally.

It wasn't I who wrote you about Dr. H. S. Joachim, and I know nothing of a man by that name. So I am sorry that I can give no help to you in this matter.

Sincerely yours,

Hermann Weyl

Professor Marshall H. Stone
Mathematics Department
University of Chicago
Chicago 37, Illinois
HW:GB

(Hua) L K Hua

February 24, 1948

Dear Professor Widder:

I am sorry that I feel unable to give you an appraisal of George Mackey's mathematical work. It is not in my line, and I know practically nothing of it.

Thanks for your reply concerning Loo-Keng Hua. I talked to him about the possibility of a Benjamin Peirce Instructorship. From his reaction it was clear to me that the prospect of being admitted to Harvard under conditions so favorable to research work attracted him. But he faces a difficult financial situation since he has to support his family in China. I also know that one or two other universities are interested in him and I should not be surprised if, in case this results in definite offers with salaries adequate to a Visiting Professorship, he would prefer to accept such offers. Under these circumstances could you wait a little time for a definite reply?

Sincerely yours,

Hermann Weyl

Professor David V. Widder
Mathematics Department
Harvard University
Cambridge 38, Mass.
HW:GB

(Stu) L K Hua

February 23, 1948

Dear Cairns:

I think I ought to tell you that as a result of a little advertising by Weyl and myself, Hua is being considered very seriously by two or three other universities. I am sending you this word in order to relieve you of any obligation that you might feel.

Yours sincerely,

Oswald Veblen

Professor Stewart S. Cairns
Mathematics Department
Syracuse University
Syracuse 10, N.Y.
OV:GB

(52m) L K Hua

February 23, 1948

Dear Brahana:

I enclose a list of Professor Loo-Keng Hua's publications as promised.

I have just had a conversation with Dr. Irving Reiner. He has been offered a stipend here at the Institute for the next academic year, but he tells me that he would rather continue his work with Professor Hua. Therefore if Hua is appointed at Illinois, Reiner would like to apply for a teaching position in your Department. I told him that this was a good idea and that I thought it would not prejudice his chances of returning to the Institute at some time in the future. He is going to write to you, and also ask Hua to do the same.

Reiner makes a good impression personally so that I judge he should be a good teacher. Hua will be able to speak at first hand about his scientific work. But the fact that we were prepared to carry him for a second year can be taken as evidence in his favor.

Yours sincerely,

Oswald Veblen

Professor H. R. Brahana
Mathematics Department
University of Illinois
Urbana, Illinois
OV:GB

Publications of Loo-Keng Hua

On the hypergeometric functions of higher order, Tohoku Math.J. 39 (1934), 253-263
On the representation of integer by circulant, Tohoku Math.J. 39 (1934), 316-321
On pseudo-periodic function, Tohoku Math.J. 40 (1935), 27-33
Note on Pell's equation, Tohoku Math.J. 40 (1935),p.36
Note on diophantine equation two circulants, Tohoku Math.J. 40 (1935), 34-35
On a certain kind of operations connected with linear algebra, Tohoku Math.J. 41 (1935), 222-246
A proof of Hadamard's theorem, Tohoku Math.J. 41 (1935), 247-248
Waring's problem for cubes, Calcutta Math.Soc.Bull. 26 (1935), 139-140
On an easier Waring-Kamke problem, Tsing-Hua Univ.Sci.Repts. A-3 (1935), 247-260
On Waring theorems with cubic polynomial summands, Math.Ann. 111 (1935), 622-628
On Waring's problem with polynomial summands, Amer.J.Math. 58 (1936), 553-562
On Waring's problem with polynomial summands, Chinese Math.Soc.Jour. 1 (1936), 23-61
Note on boundedly convergent power series, Tsing-Hua Univ.Sci.Repts. A-3 (1936), 345-351
A problem in the additive theory of numbers of several variables, Math.Ztschr. 41 (1936), 708-712
The representation of integers as sums of cubic function $(x^3+ 2x)/3$, Tohoku Math.J. 41 (1936), 367-370
The representation of integers as sums of the cubic function $(x^3+ 5x)/6$, Tohoku Math.J. 41 (1936), 356-360
On Waring's problem, Tohoku Math.J. 42 (1936), 210-225
An easier Waring-Kamke problem, Lond.Math.Soc.J. 11 (1936), 4-5
(With S.S.Shu) On Fourier transforms in LP in the complex domain, MIT J.Math.Phys. 15 (1936), 249-263
On a generalized Waring problem, Lond.Math.Soc.Proc.(2) 43 (1937), 161-182
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A problem in the additive theory of numbers of several variables, Lond.Math.Soc.J. 12 (1937), 256-261
A generalization of an easier Waring-Kamke problem, Lond.Math.Soc.J. 12 (1937), 262-264
On Waring's problem, Quart.J.Math.Oxford Ser.9 (1938), 335-346
Some results in the additive theory of number, C.R.(Doklady) Acad.Sci. URSS (N.S.) 18 (1938), p.4
Some results in the additive prime number theory, C.R.(Doklady) Acad.Sci URSS (N.S.) 18 (1938), p.3
On an exponential sum, Lond.Math.Soc.J. 13 (1938), 54-61
On the representation of numbers as the sums of the powers of primes, Math.Ztschr. 44 (1938), 335-346
Some results in the additive prime number theory, Quart.J.Math.Oxford Ser.9 (1938), 68-80
On Tarry's problem, Quart.J.Math.Oxford Ser.9 (1938), 315-320
On Waring's problem for fifth powers, Lond.Math.Soc.Proc.(2) 45 (1939), 144-160
A remark on the moment problem, Lond.Math.Soc.J. 14 (1939), 84-86
On a lemma due to Vinogradow, C.R.(Doklady) Acad.Sci.URSS (N.S.) 24 (1939), 419-420
(With H.F.Tuan) Some "Anzahl" theorems for groups of prime-power orders, Chinese Math. Soc.J. 2 (1940), 313-319
On Waring's problem with cubic polynomial summands, Indian Math.Soc.J. 4 (1940), 127-135
On a generalized Waring problem II, Chinese Math.Soc.J. 2 (1940), 175-191
On a theorem due to Vinogradow, Quart.J.Math.Oxford Ser.11 (1940), 161-176
On a system of diophantine equations, C.R.(Doklady) Acad.Sci.URSS (N.S.)27 (1940), 312-313
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Sur le problème de Waring relatif à un polynome du troisième degré, C.R.Acad.Sci.Paris 210 (1940), 650-652

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Sur une somme exponentielle, C.R.Acad.Sci.Paris 210 (1940), 520-523
(With H.F.Tuan) Determination of groups of odd-prime-power order p^n which contains a cyclic subgroup of index p^2, Tsing-Hua Univ.Sci.Repts. A-4 (1940), 145-154
(With S.H.Min) On the number of solutions of certain congruences, Tsing-Hua Univ.Sci. Repts. A-4 (1940), 113-133
On Waring's problem with cubic polynomial summands, Tsing-Hua Univ.Sci.Repts. 4 (1940), 55-83
A note on the class number of ternary quadratic forms, Lond.Math.Soc.J. 16 (1941), 82-83
On diophantine approximation, C.R.(Doklady) Acad.Sci. URSS (N.S.) 32 (1941), 395-396
On the number of partitions of a number into unequal parts, AMS Trans. 51 (1942), 194-201
The lattice-points in a circle, Quart-J.Math.Oxford Ser. 13 (1942), 18-29
On the least solution of Pell's equation, AMS Bull. 48 (1942), 731-735
On the least primitive root of a prime, AMS Bull. 48 (1942), 726-730
(With S.H.Min) On a double exponential sum, Acad.Sinica Sci.Record 1 (1942), 23-25
(With S.H.Min) An analogue of Tarry's problem, Acad.Sinica Sci.Record 1 (1942), 26-29
On some problem of the geometrical theory of numbers, Acad.Sinica Sci.Record 1 (1942), 19-21
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On the distribution of quadratic non-residues and the Euclidean algorithm in the real quadratic fields.I. AMS Trans. 56 (1944), 537-546
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On the theory of automorphic functions of a matrix variable. I.Geometrical basis, Amer.J.Math. 66 (1944), 470-488
On the theory of automorphic functions of a matrix variable. II.The classification of hypercircles under the symplectic group, Amer.J.Math. 66 (1944), 531-563
(With W.T.Shih) On the lack of an Euclidean algorithm in $R(\sqrt{61})$, Amer.J.Math. 67 (1945), 209-211
Geometries of matrices. I.Generalizations of von Staudts theorem, AMS Trans. 57 (1945), 441-481
A remark on a result due to Blichfeldt, AMS Bull. 51 (1945), 537-539
Geometries of matrices. I.Arithmetical construction, AMS Trans. 57 (1945), 482-490
On the theory of Fuchsian functions of several variables, Ann.Math.(2) 47 (1946), 167-191
Orthogonal classification of Hermitian matrices, AMS Trans. 59 (1946), 508-523
On the extended space of several complex variables. I.The space of complex spheres, Quart.J.Math.Oxford Ser. 17 (1946), 214-222
Geometries of matrices. II.Study of involutions in the geometry of symmetric matrices, AMS Trans. 61 (1947), 193-228
Geometries of matrices. III.Fundamental theorems in the geometries of symmetric matrices, AMS Trans. 61 (1947), 229-255
On the extended spaces of several complex variables, Acad.Sinica Science Record 2 (1947), 5-8

Book: Additive Prime Number Theory, Moscow.

(Hua) Hua

THE UNIVERSITY OF WISCONSIN
MADISON 6

DEPARTMENT OF MATHEMATICS
306 NORTH HALL

20 February 1948

Professor Hermann Weyl
Institute for Advanced Study
School of Mathematics
Princeton, New Jersey

Dear Professor Weyl:

Professor MacDuffee has shown me your letter of February 12th to him on the subject of a visiting professorship for Hua. We have discussed this and feel, in the Department, that we would like very much to have Professor Hua with us for a year.

In order that I may approach the University administration on this it would be necessary for me to have some pretty definite idea of the salary that would be appropriate and that Hua would expect. Could you drop me a line on that subject? I would appreciate it. My best regards to you.

Sincerely yours,

R. E. Langer

R. E. Langer, Chairman
Department of Mathematics

REL:nl

THE UNIVERSITY OF CHICAGO
CHICAGO 37 · ILLINOIS
DEPARTMENT OF MATHEMATICS

February 20, 1948

Professor Hermann Weyl
Institute for Advanced Study
Princeton, New Jersey

Dear Professor Weyl:

Thank you for your letter about Professor Hua. He has many friends and admirers here in Chicago, and we would certainly welcome an opportunity to have him spend some time here. However, I do not foresee any immediate possibility of inviting him.

I believe that you wrote me some time last year about a Dr. H. S. Joachim. If you did, I have misplaced the papers concerning him. It now appears that I would find some information concerning him of value. I therefore venture to ask you to tell me anything you may know concerning him. He seems to have been much interested in relativity and quantum theory, and has been associated with various German and Swiss industrial concerns up until 1933, when he went to England.

Thanking you for any help you can give me in the latter connection, I am

Sincerely yours,

Marshall H. Stone

Marshall H. Stone,
Chairman

MHS/mv

HARVARD UNIVERSITY
CAMBRIDGE 38, MASS.

DEPARTMENT OF
MATHEMATICS

February 20, 1948

Professor Hermann Weyl
Institute for Advanced Study
Princeton, New Jersey

Dear Professor Weyl:

I have now discussed with the Department of Mathematics your letter of February 12th about Professor Loo Keng Hua. We have nothing to offer him that would match his professional rank. All of our Benjamin Pierce Instructorships have not yet been filled. Do you suppose he would be interested in one of them? The salary is $3500. Let us know if he would like to be considered an applicant. It is conceivable that the title could be changed to Visiting Lecturer for a person of his rank, but I see no possibility of changing the salary.

Sincerely yours,

D. V. Widder

D. V. Widder
Chairman

(Sm) L. K Hua

February 20, 1948

Dear Brahana:

I have just received your letter and talked it over with Professor Hua, who will be glad to accept the Visiting Professorship which you suggest. I think the arrangement will be a mutually satisfactory one. I will send on a list of his publications, and also ask one of my other colleagues, probably Professor Siegel, to send in a letter of recommendation.

With best greetings,

Yours sincerely,

Oswald Veblen

Professor H. R. Brahana
Mathematics Department
University of Illinois
Urbana, Illinois
OV:GB

(Sm) Hua

THE UNIVERSITY OF WISCONSIN
MADISON 6

CYRUS COLTON MacDUFFEE
PROFESSOR OF MATHEMATICS
202 NORTH HALL

February 19, 1948.

Professor Hermann Weyl
Department of Mathematics
Institute for Advanced Study
Princeton, New Jersey.

Dear Professor Weyl:

Thank you for your letter regarding Professor Hua. I have turned it over to Professor Langer, who is Chairman of the Department.

I have no idea whether the University will be able to make Professor Hua an offer, but I may say that the first reaction of the Department was that of interest.

Very sincerely yours,

C C MacDuffee

CCM/js

(Sm) Hua

STANFORD UNIVERSITY

DEPARTMENT OF MATHEMATICS

STANFORD UNIVERSITY, CALIFORNIA

February 18, 1948

Professor H. Weyl
Institute for Advanced Study
Princeton, New Jersey

Dear Professor Weyl:

Thank you very much for your letter of February 12. We were of course in contact with Professor Hua and as you know a position has been offered to him at Stanford. This was in April, 1947. We were extremely sorry that this matter did not materialize mainly because of his health condition. We are even more sorry that nothing can be done about it at the present moment since all our vacancies have been filled in the meantime.

Don Spencer tells me that Hua was offered a position at Syracuse. I hope much that this will be satisfactory for him.

Thanking you again for your information, I am

Very truly yours,

G. Szegö

G. Szegö

UNIVERSITY OF ILLINOIS

February 17, 1948

Professor Oswald Veblen
The Institute for Advanced Study
School of Mathematics
Princeton New Jersey

Dear Professor Veblen:

It was a great pleasure to hear from you directly, and the pleasure was increased by your having a prospect for me.

I have also received from Weyl, through Baer, a letter about Professor Hua. I am ready to recommend him for a Professorship at $6 000 if you think that is reasonable and that he would accept. The appointment would be for one year, and my intention would be to recommend renewal for one or two years thereafter. The title would be Visiting Professor. We would expect him to teach one graduate class and an intermediate class probably made up largely of senior and graduate Engineers.

I take it he knows the difficulties of the Immigration regulations, and also the proper procedures to follow. We, of course, will lend all the aid we can.

If the prospect I have described interests him I would like one more letter of recommendation, and I would like a list of his more important publications.

I thank you again for your letter, and we send our best wishes to you and Mrs. Veblen.

Yours very truly,

H. R. Brahana

H. R. Brahana
Acting Head of the
Department of Mathematics

HRB:ZG

HARVARD UNIVERSITY
CAMBRIDGE 38, MASS.

DEPARTMENT OF
MATHEMATICS

February 17, 1948

Professor Hermann Weyl
School of Mathematics
The Institute for Advanced Study
Princeton, New Jersey

Dear Professor Weyl:

Thank you for your letter about Dr. Hua. I shall bring it to the attention of our Department at the earliest opportunity. I have met Hua, and from what I know of him, I concur in your high opinion.

Sincerely yours,

D. V. Widder

D.V. Widder
Chairman

(Sm) L.K. Hua

February 12, 1948

Dear Brahana:

I have just been talking with Halmos, who told me that you are seriously looking for men to carry on the work of your Department. I would like to suggest Professor Loo-Keng Hua who has been here at our Institute for two years, and has during the present year given a course in analytic number theory in Princeton University. I understand that this course has been very well received by the graduate students, and Hua tells me that he now feels that he could deal successfully with classes of American undergraduates. He has of course plenty of experience in teaching in his own country.

Hua is a man of attractive personality, and is unquestionably one of the two best Chinese mathematicians, the other one being Shiing-Shen Chern who was here earlier for a couple of years and is now in charge of the Institute of Mathematics of the Academia Sinica at Shanghai.

It is undesirable for Hua to return to China at the present time, largely because he did scientific work for the Chinese Government during the war. At that time he enjoyed the rank and emoluments of a general. But as things are now, if he went back it would be dangerous for him to refuse to do this kind of work, and on the other hand if he engaged in it it would be disastrous for his scientific work. Therefore it would be better for him to stay for at least a couple of years longer in the United States. I understand that the Chinese Government is sympathetic to his staying here, but is not in a position, on account of its financial situation, to give him or anyone else any pecuniary support. Therefore he ought to find a teaching position in an American university. I think that this affords an unusual opportunity to secure the services of a really first-rate mathematician, for Hua can be classified as first-rate among the mathematicians of the world.

I append a few additional data on a separate sheet. If you need it we could supply a bibliography of his publications.

With best greetings,

Yours sincerely,

Professor H. R. Brahana
Mathematics Department
University of Illinois
Urbana, Ill.

OV:GB

Oswald Veblen

(3 2m) Hua

February 6, 1948

Dear Cairns:

Thanks very much for your kind letter of January 27. I have passed on the essential information to Hua. Hua is now preparing to bring his family over. But in view of the action of your Department he and we have made no further efforts to find a temporary position for him in this country. The objections of your Administration could be countered by proposing him for a Visiting Professorship for two or even three years instead of one year. But of course I do not know whether your Department would wish to go that far. No doubt such an arrangement for a longer time would suit Hua! While he has been staying with us he has proved very cooperative. At the moment he is collaborating very closely with a number-theorist from Cornell, Reiner, who came here right after taking his Ph.D.

There is a new development concerning Chandrasekharan of which I have to inform you. I have talked to him of the possibility of his serving as my assistant during the next year, and it is clear that he would be very glad indeed to accept that position. We now have here a group of people, including Pleijel from Lund, Chandrasekharan and Minakshisundaram, who are working in the same field and in whose work I am deeply interested. Even so, I would not have made this move if I did not feel that it is somewhat uncertain whether Chandrasekharan would accept an offer from your Department of the type which you had under consideration. If he has to teach he may prefer to go back to India. I also know that an offer is pending for him from the Tata Institute for Fundamental Research in India. He is now in full swing in his research work and I think he deserves to be given the opportunity to continue in it, untrammeled by other duties, for another year; and I hope to learn much from him! So I hope you will not consider this unfair interference with your plans. It is clear from what he says that he felt quite grateful to you for considering him for a position at Syracuse.

We all look forward to seeing you here in a short time. With best regards,

Sincerely yours,

Professor Stewart S. Cairns
Mathematics Department
Syracuse University
Syracuse 10, N.Y.

Hermann Weyl

HW:GB

LOO-KENG HUA

Born October 11, 1909, Kiangsu, China

Citizenship - Chinese

Married;

Positions held:

Tsing Hua Univ. - Professor 1938-date (On leave)
Institute for Advanced Study - Member 1946-date
Princeton Univ. - Lecturer 1947-8

February 12, 1948

This is to let you know that Professor Loo Keng Hua would be available for a position in this country next year. He himself would like to stay on for one, or preferably for two or three more years, and I think he could be of considerable service to American mathematics and to our mathematicians. On a separate sheet I am sending you a few biographical data about him.

He has been with the Institute for the last two years, and in this his second year he is also teaching at Princeton University. He is a man simply brimming with ideas. He has done a number of excellent things in analytic number theory; most of this work is along Vinogradoff's lines. Right after the war he was invited to Moscow. During the closing years of the war he duplicated some of Siegel's research on automorphic functions of several variables (symplectic geometry). He has published about 70 papers on a great variety of subjects; I could send you a list if you care.

In his younger years he suffered from a lack of good judgment in discriminating between important and trivial results; a trait so often found in people of gushing productivity. Since I can watch him he has improved considerably in this respect; and anyhow among his papers there is a high percentage of first-rate contributions to mathematics. During his stay at the Institute Hua has worked on what he calls geometry of matrices, on automorphisms of the symplectic group, and has collaborated with Dr. Reiner (from Cornell) on generators of the modular and other groups. He also collaborated with Vandiver on problems in the direction of Waring's problem. Moreover he has improved a number of Vinogradoff's results. You see from this that Hua is ready to cooperate with other people. Indeed, he has been one of the most stimulating elements in our group here at the Institute and Princeton University.

Personally he is a very pleasant man. As a consequence of an infection contracted many years ago one of his legs had been partly crippled. But he has been operated on last summer and fortunately he is now nearly back to normal. Maybe it is superfluous to mention all these things because you know him. I am sending a number of similar letters to other mathematicians for information.

Sincerely yours,

Hermann Weyl

HUA, LOO KENG

Born October 11, 1909

Married (wife and children in China)

Member of Academia Sinica

Position: Professor, Tsing Hua University since 1938

The attached letter was sent out as follows:

Original to Professor Francis D. Murnaghan
Mathematics Department
Johns Hopkins University
Baltimore, Maryland

Carbon to Professor Hans A. Rademacher
University of Pennsylvania
Philadelphia, Pennsylvania

Carbon to Professor Cyrus C. MacDuffee
~~Hunter College~~ Math. Dept.
~~695 Park Avenue~~ Univ. of Wis.
~~New York, New York~~ Madison 5, Wis.

Carbon to Professor T. H. Hildebrandt
University of Michigan
Ann Arbor, Michigan

Original to Professor Marshall H. Stone
Mathematics Department
University of Chicago
Chicago 37, Illinois

Carbon to Professor Oystein Ore
Hall of Graduate Studies
Yale University
New Haven, Connecticut

Carbon to Professor T. Y. Thomas
Swain Hall
University of Indiana
Bloomington, Indiana

Carbon to Professor Reinhold Baer
University of Illinois
Urbana, Illinois

Original to Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Massachusetts

Carbon to Dean R. G. D. Richardson
Brown University
Providence, Rhode Island

Carbon to Professor Richard Brauer
Department of Mathematics
University of Toronto
Toronto 5, Canada

Original to Professor D. V. Widder
~~Cambridge Junior College~~
~~Cambridge 38, Massachusetts~~ Math. Dept.
Harvard Univ.
Cambridge 38, Mass.

Carbon to
Professor Gabriel Szego
Mathematics Department
Stanford University
Berkeley, California

Carbon to
Professor Walter Leighton
Mathematics Department
Washington University
St. Louis, Missouri

(52m) Hua

SYRACUSE UNIVERSITY
SYRACUSE 10, NEW YORK

DEPARTMENT OF MATHEMATICS

January 27, 1948

Professor Hermann Weyl
School of Mathematics
Institute for Advanced Study
Princeton, New Jersey

Dear Professor Weyl:

I wish to thank you for your letter of January 23 concerning both Hua and Chandrasekharan.

The research group in our department recommended to the administration that Hua be offered an appointment as Visiting Full Professor for one year at a salary of $7000. So far we have not received a definite decision in the matter, and the indications are somewhat unfavorable. However, I have not given up hope that a favorable decision may be reached, and I will surely use your statement regarding the arrangements Hua would have to make to remain here in order to expedite a decision.

The administration is impressed with Hua's abilities and with the distinction which his appointment here would bring to the department. However, doubts were expressed that he would have time to attract students to himself during a limited stay as Visiting Professor, and the question was raised whether it might not be something of an expensive luxury to make such an appointment. In particular, I was asked to supply a sort of total picture of our departmental plans indicating the role which Hua would play.

As far as Chandrasekharan is concerned, he likewise would be considered for a visiting professorial rank, perhaps that of Assistant or Associate Professor, since he is comparatively young; and there has been no tendency to regard these two mathematicians as alternative possibilities, since our program would provide a place for both of them.

I think it would be a good thing for Hua to be informed of the state of affairs, and I am wondering whether you would either be willing to show him this letter or to pass on to him the essential information for me. I expect to visit Princeton about February 18 and perhaps will have something more definite on the subject at that time.

Very sincerely yours,

Stewart S. Cairns

S. S. Cairns, Chairman
Department of Mathematics

SSC:hf

(Sm) L. K. Hua

January 23, 1948

Dear Cairns:

Loo Keng Hua, with whom I had corresponded a long time before he came to this country, and in whom I take a special interest since he joined the Institute, confided to me that he is under consideration for a job at your university. If I understood him correctly the decision now lies with your Administration, and he seemed to be worried a little that nothing has happened for the last two months. Has his appointment run into a snag with the Administration? If Hua is to stay in this country after his term at the Institute expires he has to make early preparations, changing his visa, etc. It is only natural that he is also desirous of bringing his family over. Of course this is none of my business, and if you are not in a position to say anything definite about the state of affairs please ignore my inquiry altogether.

Hua certainly is a very good man. He is simply brimming with ideas. When he first came here I had the impression that he somewhat lacked the power of discriminating between what is good and profound, and what is more or less trivial, and he also had considerable difficulty in organizing his material. But it seems to me that also in these respects he has improved considerably.

I should find it hard to compare him and Chandrasekharan. Hua has a mathematical talent of sturdier type as it were, and perhaps surpasses Chandrasekharan in originality. But they are both men of considerable creative power.

With best regards,

Sincerely yours,

Professor Stewart S. Cairns
Mathematics Department
Syracuse University
Syracuse, 10, N.Y.
HW:GB

Hermann Weyl

(Hua) Hua

October 2, 1947

Dear Dr. Hua:

The Institute has very many more people than were provided for in its original plans. It is my hope that in the future we may be able to take care of everyone comfortably, and without crowding.

For this reason, your present room assignment will probably have to be changed at the end of this semester. We hope that should this be the case your work will not be adversely affected and that you will not be seriously inconvenienced. We appreciate very much your willingness to accord your plans with conditions which were not of your own making.

Yours sincerely,

Robert Oppenheimer

Dr. Loo-Keng Hua
School of Mathematics

Copy to: Miss Trinterud
Miss Blake

(IAS) ~~S.S.Chern~~
L.K.Hua
~~Laopoldo Nachbin~~

C O P Y

Consular Section - U.S. Embassy - Rio de Janeiro - July 24, 1947

Dear Professor Veblen:

There is a possibility, still in the nebulous stage, that we may be able to invite someone to Chicago on an arrangement similar to that we made (very successfully, I believe) with Marcel Riesz. My thoughts turn at once to L.K.Hua and Chern, either of whom could contribute a great deal to our graduate progtam. Can you throw light on the immediate plans of either Hua or Chern? At the moment, I obviously cannot stimulate anticipations by any kind of direct inquiry. I know that both would welcome further stays in the U.S.; but I have heard that Chern may receive some kind of invitation from Columbia, an arrangement with which I ought not to interfere — and I am not informed of Hua's plans at all.

I am having an interesting time here though lecturing and sightseeing do not give me much time to work. There is one really excellent young mathematician (25) here named Leopoldo Nachbin — born and raised in Brazil but of Austrian parentage. He is turning out real mathematics, mostly on topological lattices and related topics. As soon as his position in the Faculty is secure, he should come to the U.S. for a year or two. I think Chicago may be able to help — I would be glad to make him a visiting lecturer (he is an excellent expositor, even in English) if I can make the necessary arrangements with the University, but then travel expenses would have to be picked up somewhere.

* * * * * * *

(Signed) MARSHALL STONE

(Sm) L. K. Hua

THE INSTITUTE FOR ADVANCED STUDY
Founded by Mr. Louis Bamberger and Mrs. Felix Fuld
PRINCETON, NEW JERSEY

July 15, 1947

Francis H. Styles, Esq.
American Consulate General
Shanghai, China

Dear Mr. Styles:

I send you my warmest thanks for your admirably clear letter of June 21st. I shall see to it that Professor Hua follows your instructions to the letter.

If by any chance you should see Mrs. Hua, I should be grateful if you would give her a personal message. Dr. Hua had some kind of illness which resulted in a very serious deformity of one of his legs. We sent him to the Johns Hopkins Hospital for an operation and I am happy to say that this has been completely successful. He walks around on crutches at the moment but we are promised that it will only be a matter of a very short time until he will be able to walk in a perfectly normal manner.

Yours sincerely,

Frank Aydelotte
Director

Copy to Professor Hua
Miss Blake

(3m) Hua

THE INSTITUTE FOR ADVANCED STUDY
Founded by Mr. Louis Bamberger and Mrs. Felix Fuld
PRINCETON, NEW JERSEY

July 6, 1947

TO WHOM IT MAY CONCERN:

I should like to support the request of Professor Loo-Keng Hua that he be granted a re-entry permit when he returns from attending a mathematics meeting in Toronto in September 1947. Professor Hua is a mathematician of great ability. He is a research student at the Institute for Advanced Study and is at the same time teaching part-time in the Department of Mathematics of Princeton University. It is a great advantage to him to be able to attend this mathematics conference in Toronto but I have advised him that he should make certain of having a re-entry permit before he leaves the United States.

FRANK AYDELOTTE
Director

Subscribed and sworn to before me
this 6th day of July, 1947

Notary Public of the State of New Jersey

Copy to Miss Miller
Miss Blake

(5m) Hua

THE INSTITUTE FOR ADVANCED STUDY
Founded by Mr. Louis Bamberger and Mrs. Felix Fuld
PRINCETON, NEW JERSEY

July 8, 1947

Ministry of Foreign Affairs
China

Dear Sirs:

I should like very strongly to support the request of Professor Loo-Keng Hua for permission for his wife and daughter to come to the United States.

Professor Hua is a very eminent mathematician. He has been very successful in his researches in the School of Mathematics of the Institute for Advanced Study and he is this year teaching part-time at Princeton University. He receives a stipend of $2,000 from the Institute and $2,000 from the University, making $4,000 in all. He is consequently in a position to support his family comfortably. I hope very much that his request that they be allowed to come to this country can be granted.

Believe me,

Yours very sincerely,

Frank Aydelotte
Director

Subscribed and sworn to before me
this 8th day of July, 1947

Notary Public of the State of New Jersey

Copy to Miss Miller
Miss Blake

Mr. Peck ✓
Prof. Veblen ✓

(52) L.K. Hua

5 June, 1947.

Dear Miss Blake,

I beg to inform you that I shall leave the Hospital on 7 June. Thank you very much for the trouble you taken to forward the letters to me. Since I ~~am~~ still cannot walk well and have some pains in my joint, I am going to live with my friend until to the end of this month. My address is:

415 Massasoit Ave.
E. Providence, R. I.

Trouble you once more. Please forward my letters to ~~this~~ previous address.

Thank you once more, I am

yours sincerely

L. K. Hua

In Reply Refer to
File No. 811.11
DJD:mw

THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

AMERICAN CONSULATE GENERAL

Shanghai, China, June 21, 1947/

Mr. Frank Aydelotte, Director,
The Institute for Advanced Study,
Princeton, New Jersey.

Sir:

The receipt is acknowledged of your letter of May 28, 1947, requesting assistance in securing a visa for Mrs. Loo-Keng Hua, the wife of Professor Hua.

In reply you are advised that the immigration laws provide for the issuance of non-quota visas to the wives and unmarried minor children under 18 years of age of alien professors who have been lawfully admitted to the United States under section 4(d).

It is suggested that you advise Professor Hua to request the Immigration and Naturalization Service, Philadelphia, Pennsylvania, to forward to the American Consulate located in the district where Mrs. Hua resides verification of his lawful entry into the United States as a professor under section 4(d).

Mrs. Hua should then appear personally at such American Consulate to make application for a visa, at which time she will be required to furnish satisfactory evidence of adequate financial resources to cover her transportation and living costs and a valid passport issued by the government to which she owes allegiance.

Very truly yours,

For the Consul General:

FRANCIS H. STYLES

Francis H. Styles
American Consul

Copy to Miss Blake
Dr. Aydelotte

Original to Professor Hua

From Blakers Copy —

June 13, 1947

Dear Professor Hua:

I was delighted to receive your letter as I was to hear via Dr. Peck about your progress, also to know that you enjoyed meeting my friends, the MacGregors.

Yes, I am holding rooms for you and Dr. Shu in the Dormitory (6 B Cook Road). This is the apartment next to Dr. Peck and you will have the use of the living room there. Dr. Peck tells me that you will not mind climbing the stairs. Should this prove to be a difficulty, please let me know and we will try to arrange something else. If your wife comes, no doubt, one of the small apartments could be diverted for your use. Please let me know as soon as you hear that your wife is coming. The Dormitory would not be suitable for her in my opinion.

Please let me know if you prefer the large front room in 6 B which corresponds to Dr. Peck's, or whether you prefer the smaller one facing south and the morning sun?

If you change your plan of arrival from early July (does that mean the first week?) I shall also be glad to know it.

Dr. Peck tells me that you will be swimming and riding a bicycle soon. That is certainly good news.

With my very best wishes, I am

Very sincerely,

Bernetta A. Miller
Director's Office

Professor Loo-Keng Hua
415 Massasoit Avenue
East Providence, R. I.

(Gru) Hua

THE INSTITUTE FOR ADVANCED STUDY
Founded by Mr. Louis Bamberger and Mrs. Felix Fuld
PRINCETON, NEW JERSEY

June 5, 1947

Dr. Loo-Keng Hua
Ward Thayer 2
Johns Hopkins Hospital
Baltimore 5, Maryland

Dear Dr. Hua:

I am very pleased to hear from Professor Lefschetz of your appointment as part-time lecturer in Princeton University for the year 1947-1948 at a stipend of $2,000 per year. While our usual rule is that stipends from the Institute cannot be received by people who are receiving remuneration for outside teaching, I am glad to say that on the recommendation of the School of Mathematics we propose to waive this rule partially in your case and to fix your stipend at the Institute at $2,000 for the next academic year.

With warmest good wishes, I am

Yours sincerely,

Frank Aydelotte

Copy to Professor A. W. Tucker
Professor Marston Morse
Professor Oswald Veblen
Miss Miller
Miss Blake

(52m) L. K. Hua

F.Aydelotte to M.Morse June 5/47

I am glad that you agree with Veblen and me that Hua should have $2000 from the Institute in addition to his $2,000 from the University and that we should give him permission to give this instruction.

(Shu) Hua

THE INSTITUTE FOR ADVANCED STUDY
Founded by Mr. Louis Bamberger and Mrs. Felix Fuld
PRINCETON, NEW JERSEY

June 4, 1947

MEMORANDUM FOR PROFESSORS VEBLEN AND MORSE:

Lefschetz is very anxious to appoint Hua as lecturer in mathematics next year with a stipend of $2,000 and raises the question whether we would allow Hua at the same time to receive his full stipend at the Institute. This seems to me very questionable but I should be glad to have your advice. We have always gone on the principle that our stipends demanded that a man should give his full time to research and the only exceptions we have made have depended upon entirely exceptional circumstances.

FRANK AYDELOTTE

Enc.

Copy to Miss Blake

(Prof. Veblen suggests reducing Hua's stipend to $2000, making total $4000. June 4/47)

PRINCETON UNIVERSITY

Princeton New Jersey

Department of
Mathematics

June 2, 1947

Dear Dr. Aydelotte:

Referring to our telephone conversation of this afternoon, I wish to inform you that our Department has appointed Dr. Hua as Lecturer in Mathematics for the year 1947-1948 at a stipend of $2000 per annum. Frankly, it is our feeling that this stipend of $2000 is worth while if it cumulates with his regular Institute stipend without decreasing it but would be much less desirable for him were it to have the effect of decreasing his Institute stipend.

I shall be leaving Wednesday, June fourth, to spend the summer in Mexico. I would suggest that you take up anything that has to be done along this line with Professor A. W. Tucker.

Yours sincerely,

S. LEFSCHETZ

S. Lefschetz

Dr. Frank Aydelotte
Institute for Advanced Study
Princeton, New Jersey

SL:mrh
cc: Professor A. W. Tucker

(Hua) L.K. Hua

THE INSTITUTE FOR ADVANCED STUDY
Founded by Mr. Louis Bamberger and Mrs. Felix Fuld
PRINCETON, NEW JERSEY

May 28, 1947

The American Consul
Shanghai
China

Dear Sir:

I am writing to ask your friendly assistance in securing a visa for admission to the United States for Mrs. Loo-Keng Hua. Dr. Hua has been a member of the School of Mathematics of the Institute for Advanced Study during the past year and has been re-elected to this position for the academic year 1947-1948 with a stipend of $7,000. He is most eager to bring his family to the United States and indeed he ought to do so. I hope very much that Mrs. Hua may be granted a visa which will enable her to enter.

This request has particular urgency because of the fact that Professor Hua has recently been compelled to undergo a serious operation at the Johns Hopkins Hospital. I am glad to say that it now appears that the operation has been completely successful but naturally it would be a great satisfaction to him to have his family here during the period of his convalescence.

Dr. Hua is a distinguished scholar in the field of mathematics. His work here has added appreciably to American mathematical research and I am sure that the experience in research which he has gained in this country will be of value to him eventually as a professor of mathematics in China.

Believe me,

Yours very sincerely,

Frank Aydelotte
Director

Copy to Dr. Loo-Keng Hua
Ward Thayer 2
Johns Hopkins Hospital
Baltimore 5, Maryland

Mrs. Loo-Keng Hua
Academia Sinica
Shanghai, China

Miss Blake

(Sh) L.K. Hua

April 14, 1947

Professor L. K. Hua
Care of Thayer
Johns Hopkins Hospital
Baltimore 5, Maryland

Dear Professor Hua:

On the recommendation of the Faculty of the School of Mathematics, it gives me great pleasure to report to you that your stipend for the academic year 1947-1948 has been increased to $3,000. We very much hope that this will make it possible for you to bring your family to the United States.

With kindest regards, I am

Yours sincerely,

Frank Aydelotte

Copy to Miss Miller
Miss Blake

(Sm) L. K. Hua

April 12, 1947

MEMORANDUM FOR PROFESSOR VEBLEN:

Hua has just been in to see me. He goes to Johns Hopkins tomorrow and he hopes to bring his family over to the United States next year. Apparently the United States Government will consent to this only if he has a prospective income of $3,000. We have awarded Hua a stipend of $2,500. Under the circumstances I think we ought to increase it to $3,000 and if I receive favorable reports from a majority of members in the School of Mathematics, I shall be glad to make that increase and notify Hua in his hospital in Baltimore.

FRANK AYDELOTTE

Copy to:

Professor Einstein
Professor Morse
Professor von Neumann
Professor Weyl

Miss Blake
Miss Miller

(Hua) L K Hua

March 12, 1947

Dear Cairns:

Before Professor L. K. Hua came to this country I had an extended correspondence with him and I read quite a number of his papers. I think there is little doubt that he and S. S. Chern are the two foremost Chinese mathematicians. Therefore it seems natural to compare them. Now it is clear that it is difficult for anybody to stand against such a truly noble man of great charm and talents as Chern, and indeed I would say that Hua is the less harmonious personality of the two. Nor has he gone through the classical Chinese education with its great formative power, as Chern did. Also, in his mathematical work Hua is of a more eruptive type than Chern. He works at enormous speed and is a prolific writer. While not everything is first rate, his papers are certainly full of original, even brilliant, ideas. In that respect, in the wealth of ideas, he even may exceed Chern. It makes him a very stimulating man to have around. He is cooperative and communicative and has a pleasant personality. We are all fond of him here and consider him a very valuable member of our group.

Sincerely yours,

Hermann Weyl

Professor S. S. Cairns
Mathematics Department
Syracuse University
Syracuse 10, N.Y.
HW:GB

Reply to Cairns letter filed in (HW)

Prof. Hopf ✓
Veblen ✓
Morse ✓
v. Neumann ✓

GB

(3 Cm) Hua

March 4, 1947

Dr. Loo-Keng Hua
Institute for Advanced Study
Princeton, New Jersey

Dear Dr. Hua:

On the recommendation of the Faculty of the School of Mathematics it gives me great pleasure to offer you membership in the Institute for the academic year 1947-1948 with a stipend of $2,500. I am greatly pleased to say in addition that a grant of $500 has been made to help you out in your expenses for the present term. I take this occasion to congratulate you on the high quality of the scientific work which you are doing at the Institute and the great satisfaction which it gives us all to have you here.

With warmest good wishes, I am

Yours sincerely,

Frank Aydelotte

FA:jer

Copy to Miss Miller
Miss Blake

To be returned completed by Febr. 12/1947

SCHOOL OF MATHEMATICS

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, N. J.

Application for Stipend for 1947/48

Full Name LOO-KENG HUA. Date of birth Oct., 11, 1909

Present address 19 Bank Street, Princeton, N. J. Place of birth Kintan, Kiangsu, China.

Permanent address Academia Sinica, Shanghai, China. Citizenship Chinese

Married or unmarried? Married

Degrees received when and where? Children? 4

B.A. _____

M.A. _____

Ph.D. _____

Major subject Theory of Numbers.

Minor subjects Theory of Matrices. Functions of several complex variables.

Have you held any fellowships or scholarships before?- Which, when, and for study where?

Fellowship of China Foundation, 1936-1938. Cambridge, England.

Former and present teaching positions (with dates)

Assistant of National Tsing Hua University (1932- 1934)

Lecturer " " " " " (1934- 1936)

Full Professor " " " " " (1938 ~~-1945~~) On leave

Recommenders (preferably professors under whom candidate has studied, whom applicant should ask to send directly to professors of the School of Mathematics, Institute for Advanced Study, Princeton, N.J., confidential information about the candidate's character and scientific abilities):

(Over)

Thesis and other published papers (give titles and exact references; and send copies if possible):

Outline (in not more than 200 words) previous and intended research:

(Hua) Hua

C O P Y

January 17, 1947

Dear Frank:

Several questions concerning stipends for the second term have come up in our School during the vacations. Most of them can wait until you return except this one. Leslie G. Peck was sent here by Courant to work under Siegel. He got no stipend from us but did a certain amount of teaching at the University. He seems to be a very talented young man. We should like to give him $750 for the second term, mainly for the purpose of helping Hua to edit a book in English. This would enable him to drop his teaching at the University during the second term and he will have to make his decision before the new term begins on February 2nd.

It would be a very good thing if we also could help Hua a little bit financially. He has turned out to be a very valuable member of our group and if Siegel returns in time, Siegel, Hua and Peck would make an excellent team.

Our financial status is not too clear. The stipends for our School now allocated amount to $33,850, excluding $1,500 set aside for Halperin and the $5,000 offered to Kramers. I hope the latter sum will not have to come from the regular stipend fund. Is not Kramers a sort of substitute for Pauli? And I understand the Jimmy Alexander will be on leave of absence for next term. For the moment I should like to know only whether we can go ahead with Peck.

It seems practically sure now that Kramers will come. Of course we are all very glad about that. Dirac and Henry Whitehead are sailing tomorrow.

Cordially yours,

Hermann Weyl

Dr. Frank Aydelotte
Highland Park Florida Club
Lake Wales, Florida

Copies to Miss Miller
" Blake

(Shu) Hua

October 24, 1946

Professor Loo-Keng Hua
Institute for Advanced Study
Princeton, New Jersey

Dear Professor Hua:

On the recommendation of the Faculty of the School of Mathematics it gives me great pleasure to invite you to membership in the Institute for the academic year 1946-1947, and to say that we are very happy indeed to have you here as a member of our Institute group.

I apologize for my oversight in not having written you a letter earlier. We were all of us so occupied with the various details connected with your journey to Princeton that this completely slipped my mind.

With kindest regards, I am

Yours sincerely,

Frank Aydelotte

FA:jsr

Copy to Miss Blake
Miss Miller

(Sm) Hua

October 22, 1946

Officer in Charge
Immigration and Naturalization Service
U. S. Department of Justice
San Francisco, California

Gentlemen:

I regret that through pressure of work I have neglected to report to you the arrival of Professor Loo-Keng Hua at the Institute for Advanced Study on September 24, 1946. Professor Hua entered the United States at San Francisco under Government Official Visa No. 199 issued at Shanghai, China, August 5, 1946. Professor Hua is a member of the School of Mathematics of the Institute and is engaged in post-doctorate research in higher mathematics. He was born on October 11, 1909 in Kiangsu, China and his Princeton address is 11 Bank Street. Inquiries concerning Professor Hua may be addressed to Dr. Wellington Kuo, Chinese Embassy, Washington, D. C.

Yours very truly,

Jane S. Richardson
Assistant Secretary

Copy to Miss Blake

From School Math. MINUTES Oct.14/46:

It was stated that Professor Loo-Keng Hua has not yet been formally notified of his admission as a member of the Institute. Such admission was authorized. (This is for Dr. Aydelotte's attention.)

(Sw) Hua

Prop: Alexander ✓
Einstein ✓
Siegel ✓
Morse ✓
✓ Hermann
Veblen ✓

G. Blaha

1, Sept.
~~20, Aug.~~ 1946.
Academia Sinica
Shanghai.

Dear Professor Hermann Weyl,

It is beyond of my ability to describe my happyness as my long time dream can be fully realized. Now I finished all necessary process to come to U.S.A., my ship will set forth on Sept. 2. If everything according to plan, I shall arrive at Princeton before the end of Sept. and at that time I shall meet you, the world greatest mathematician, honourable teacher of our age.

As I am a lame, if possible, I hope to have a "working room" in the Institute.

I am rather disappointed as I heard that Professor Siegel will go back to Göttingen. I hope I am not too late to be a student of him.

With best wishes,

Yours respectfully

L. K. Hua

(Sm) L. K. Hua

國立中央研究院
ACADEMIA SINICA
CHUNGKING. CHINA

Feb. 16, 1946

Dear Professor Weyl,

I am invited by the Institute of Mathematics of the Academy of USSR to pay a short visit to USSR. The Academia Sinica also encouraged me to take this trip. I shall start tomorrow, and I shall come back in the middle of May. If everything is in order, it is very possible, I shall come to U.S.A. in June or July. My address in Moscow is:

c/o Chinese Embassy
13 Kropotkinskii Pereulok,
Moscow, USSR.

Any alternations in my papers submitted to you can be performed without a further consultation owing to the uncertainty of my address.

With best wishes,

Yours respectfully,

L. K. Hua

(Sm) L K Hua

Feb. 2, 1946.

Tsing Hua University
Kunming, China.

Dear Professor Weyl,

Today is the new year day of our lunar calendar. First of all let me express my best wishes to you.

Herewith a paper "On the Theory of Automorphic Functions of a matrix variable IV" is submitted. I hope, if possible, it will appear in Amer. Jour. of Math.

I was told that Dr. Chern will come back pretty soon. It is a good news to me. I can well image that this year I shall realize my dream to be a pupil in the Princeton school. This plan was delayed for a long time by the war-work and the shortage of member of our department. To the first problem, I now have received an understanding from our Minister of War. To the second problem, Dr. Chern's kind returns would be a resolution of it.

Looking forward, this year may be very hopeful, in my mathematic career.

I am

Very respectfully yours,

L. K. Hua

(S.M.) LOO-KENG HUA

March 4, 1946

According to information received from Chern, Loo-Keng Hua will come to Princeton probably in the second half of April, 1946.

H.WEYL

Mistake - see letter Hua to H.W. received later

(945) Hua

29 March 1945
Dept. of Math.
National Tsing Hua University.

Dear Professor Weyl,

Thank you earnestly for your sympathy about my situation. I am hardly skillful enough to express my gratitude to you. I am a mathematician, at the same time I am a citizen and a member of my family. As a mathematician, it is certainly a great loss to delay the visit to your world famous Institute. As a citizen, I have to do my duty for my country although I am lame. As a member of family, I cannot let them to stay in an uncertain condition. Within a month, our food-price increases four times. I don't know whether we can stand a so cruel test. But I determined to stay over the worst period.

It is a great pity that Chern did not tell me a single word about Siegel's interesting course about automorphic functions of several variables. I am really very anxious to know something about this great development. I hope, if any, I shall have a chance to read his lecture notes. If the lecture notes are not approved by the ordinary air mail. The following method may reach me safely:

Vice Minister David Yule,
Minister of War
c/o Chinese Ambassador resident in U.S.A.

Dr. Yule is one of my best freind, he will be kind enough to take the trouble to bring the notes to me. Please ask Tuan to do this, if necessary.

My recent work is greatly delayed owing to war works. I was very unwise to trust somebody to revise my mathematical M.S. from drafts. Now I shall patiently do everything myself in spite of the slowness. I hope you will find, in the near future, I am not so careless as before. (Perhaps you have found that I am not so careless in my M.S. about additive prime number theory.)

Now third paper of "automorphic functions of a matrix variable" is ready. In it, I established that, in the elliptic space of any signature of symmetric matrix-variable, there is no auto. functs. other than rational.

My physical condition seems to be from bad to worse. Influenza attacks me continuously for more than three month. I am very tired but I cannot get rid of it.

Thank you for the trouble you taken from my little note on geometry of nos. I agree with you about your revision completely.

I like very much about the inequality on partition which you proved simply.

With best wishes,

I am yours very sincerely

L. K. Hua

(943) Hua

February 23, 1945

Dear Professor Hua:

From your letter of November 29, 1944, we learned to our great regret that after all you have not been able to arrange for a visit to the Institute during this academic year. So we must postpone our hopes for better times to come. You need not apologize. I understand very well the difficult situation in which you find yourself, and I can imagine that your family are happy that you will now stay with them during these times of hardship and uncertainty.

Siegel gave us an awfully interesting course on automorphic functions of several variables during the first term. I am sure you would have enjoyed it! Did Chern report to you about it?

Your little note, "A remark on a result due to Blichfeldt", I have submitted to the Bulletin of the American Mathematical Society for publication. I see now in which sense your is the best possible choice. After discussing the matter with Chern and Tuan, we agreed to change the last three lines, the meaning of which didn't seem particularly clear, to the following:

"This would be true however were chosen within the limits $1 \leq \quad \leq 2$; our special choice approaches the best possible for (and $s = 0$) and is sharp enough to beat Blichfeldt's record by a slight margin, even for small n."

I hope you approve. I told the editor that proofs could be read here by Tuan and me. That is all right, isn't it?

With all good wishes for the future,

Sincerely yours,

Hermann Weyl

Professor Loo-Keng Hua
Mathematics Department
Tsing Hua University
Kunming, Yunnan, China
HW:GB

(945) Hua

February 17, 1945

Dear Albert:

Loo-Keng Hua is evidently a very gifted mathematician, probably the most gifted Chinese besides Chern. He has plenty of ideas. But he is also most uncritical. At least 80 per cent. of the vast material which he has sent me during the last two years in an almost continuous stream, was quite superficial. His "life-will to get some honor from international recognition" (of which he once wrote me) hastens him on and endangers the soundness of his work.

We invited him to the Institute in the spring of 1943, nearly at the same time as Chern. He had expressed a desire to come here to work under Siegel, and indeed nothing could have been of greater importance to him mathematically. Of course we realized that the stipend we offered him would be insufficient unless funds were made available by his government or university for his traveling expenses and the maintenance of his family in China during his absence. We offered to contact the State Department if the Chinese authorities wished us to do so, and in due time made a request for transportation on his behalf to the American Transport Command in Karachi, India. Chern arrived in the summer of 1943. But Hua treated the invitation in a somewhat dilatory manner, and remained curiously vague about any steps taken by him. Three times we agreed to defer the invitation. In the meantime the most glorified stories about it found their way from the Chinese into the American press. Finally I had to write Hua (September/October, 1944) that for budgetary reasons we were forced to terminate the appointment, which now was for the year 1944-45, if he did not make use of it before the beginning of our second term. I added, "If you cannot come this academic year and wish to come later, please let me know as soon as you are fairly sure about the time when you can make it. Of course no definite promise for such a future appointment could be made now, nobody knowing the demands likely to be imposed on the Institute's funds by the end of the European war." He wrote back November 29, 1944, that he had not yet succeeded in making the necessary arrangements with his government, and therefore had to give up the idea of coming; he consoled himself with the thought, "To stay with my country and my family at the most critical time gives me a great mental comfort, which is rather important in the oriental psychology." See the date of your letter (returned herewith, with that from our State Department). The whole correspondence has indeed been a lesson to me in "oriental psychology". Poor fellow! How he bungles his own affairs.

Anyhow after these antecedents I feel naturally hesitant to recommend renewal of our invitation right now. Nor would that seem to meet Dr. Hua's wishes. However, in view of the encouraging reply of the State Department, of which I am keeping a copy, I shall discuss the matter with Dr. Aydelotte when he returns to Princeton within the next two weeks.

Could you not persuade your university to invite Hua?

With best regards,

Cordially yours,

Hermann Weyl

Professor A. Adrian Albert
Mathematics Department
University of Chicago
Chicago, Illinois
HW:GB

The University of Chicago
Department of Mathematics

February 6, 1945

Professor H. Weyl
The Institute for Advanced Study
Fuld Hall
Princeton, New Jersey

Dear Professor Weyl:

Enclosed is a letter from L. K. Hua asking me to write a letter to the State Department recommending that he be invited to visit this country. Enclosed is also a reply to a letter of recommendation which I wrote to Dr. Ross G. Harrison of the National Research Council and which he transmitted to the State Department.

The State Department indicates that it might be possible for the Department to arrange to bear the cost of travel for Hua if the Institute for Advanced Study were to renew its offer to him. I think that Hua is an excellent mathematician and worthy of every consideration. I should be very pleased if the Institute succeeds in bringing him to this country.

With best regards, I am

Very cordially yours,

Adrian Albert

A. A. Albert

a/m

cc: W. R. Peck

L.K.Hua to A.A.Albert, Nov,20/44

"I did some war work. The government may permit me to have a refreshment for visiting the Allies. I wish to come to U.S.A. But there is still no appropriate chance. The Institute for Advanced Study offered a $1500-stipend for me. But it is very insufficient for me and my family. State Department invites several Chinese Profs. to visit U.S.A. I rather like and admire their opportunity, and hope to follow suit. But I don't know "how". Please, just for trial, if you don't mind, to write a letter for recommendation to the State Dept. Certainly, a chance, if any, from your university, my respectful place, will honour me greatly."

C O P Y

DEPARTMENT OF STATE

WASHINGTON

January 30, 1945

Dear Professor Albert:

Your letter of January 2 addressed to Dr. Harrison of the National Research Council has been referred to me for reply.

In your letter you state that Professor Loo-Keng Hua of Kunming has indicated to you that Chinese professors are being invited by the Department of State and that he would like to come. It may be that he is not aware that the Department extends its invitations not to individuals but to institutions and that the institution is asked to appoint one of its own professors as its representative to come to the United States as a guest of the Department. In response to the Department's invitations the universities in Kunming have already appointed representatives, but Professor Hua is not among them. In accordance with the policy governing this program, there would be no possibility of the Department's naming him individually to come to this country under this arrangement.

The Department has in the past in a few cases paid traveling expenses to this country for Chinese professors or instructors whose services were desired by American universities. In each case, however, the Department has required an official letter from the university stating that all his expenses while in the United States would be guaranteed by the institution concerned. The monthly stipend and duration of the obligation should be specifically stated. If the Institute for Advanced Study would care to renew its offer to him and to so inform the Department officially, it might be possible for the Department to arrange to bear the cost of his travel to this country and return.

Please let me know whether you are interested in carrying this matter further.

Sincerely yours,

(Signed) WILLYS R. PECK
Willys R. Peck
Acting Assistant Chief
Far Eastern Branch
Division of Cultural Cooperation

(45) Hua

November, 29, 1944,

Dept. of Mathematics.
Tsing Hua University,
Kunming, Yunnan, China.

Dear Professor Weyl,

It is beyond of my linguistic ability to express my obligation and respectness to you. It is a very nice teaching to me, I will try my best to learn it. Your three letters arrived successively and Dr. Aydelotte's letter amid them. The delay for answering due to the following three reasons.

The first one is to wait a definite answer from my government and university whether I can be released from my present position, which nearly wears me out. Rather unfortunately, I received no complete answer yet. Thus I am obliged to give up the plan to come to Princeton. It means certainly a great loss to me. It is an incompensatory loss to me! No doubt, it will inference my life-career on Mathematics. Nevertheless, I am not completely disappointed. To stay with my country and my family at the most critical time gives me a great mental comfort, which is rather important in the oriental psychology.

Please bring my deepest apology to the Institute for they offered me twicely their kindness but I am still unable to manage myself to accept it.

A short visit to some place delays also the answering. I hope the visit is not in vain from certain (not my personal) point of view.

The third reason is that I am not quite understand what you said at the beginning of p. 3 of the MS of " ...Blichfeldt's..." I thought over and over, and I tried my best to write a revision of the note (enclosed with), but I am still doubt whether it meets your objection or not.

I rather like the "inequality on partitions" and yours simple proof. It seems to be a pity to have no application of it. Williamson's papers are not available here. Such particular trouble makes Chinese mathematicians headache. Some of them give up reseach for this very reason.

Owing to the present condition, I determined a plan to stay in China for a longer time. Please do help me. Please ask Prof. Siegel to give me a list of important references in the theory of automorphic functions. It will be a great help to me, if some reprints or lecture notes, as you indicated in one of your letters, can arrive at me. Please tell me also a way for learning continuous groups.

Let me thank you once more, please bring my best regards to Professor Siegel and Dr. Aydelotte,

I am

Yours most obedient pupil,

L. K. Hua

Loo-Keng Hua.

November 7, 1944

Dear Mr. Warfel: Re CU

I wish to acknowledge receipt of the two manuscripts by Loo-keng Hua entitled "A new type of convex bodies" and "A remark on a result due to Blichfeldt". I have been in continuous correspondence with Professor Hua for considerable time, and had previously received copies of these papers directly from Kunming last August. In my reply to Professor Hua I explained to him in detail why I do not find the first paper acceptable for publication, and made suggestions for alterations in the second paper. Only after I have his answer can the question of the journal be decided, to which the second paper should be submitted for publication.

May I add the remark that the Institute for Advanced Study is not a part of Princeton University, but a separate research institution?

Sincerely yours,

Hermann Weyl

Mr. Harry R. Warfel, Chief
Book and Publication Section
Division of Cultural Cooperation
Department of State
Washington, D.C.
HW:GB

ADDRESS OFFICIAL COMMUNICATIONS TO
THE SECRETARY OF STATE
WASHINGTON, D. C.

DEPARTMENT OF STATE
WASHINGTON

In reply refer to
CU

November 4, 1944

My dear Dr. Weyl:

The enclosed manuscripts by Loo-keng Hua entitled "A New Type of Convex Bodies" and "A Remark on a Result Due to Blichfeldt" are submitted to you in the hope that they may be found deserving of publication in one of the American journals of mathematics.

The author, in indicating that he wishes his manuscripts sent to you, has not specified the journal for which he thinks them most suitable. Any suggestions you are able to make regarding an appropriate destination for Mr. Hua's articles will be appreciated.

Sincerely yours,

Harry R. Warfel

Harry R. Warfel
Chief, Book and Publication Section
Division of Cultural Cooperation

Enclosure:

Two manuscripts.

Herman Weyl, Ph.D.,
Institute of Advanced Study,
Princeton University,
Princeton, New Jersey.

(923) Hua

October 17, 1944

Dear Professor Hua:

Your manuscript "On the equivalence of symplectic matrices" has been received. The fact that each element of the unitarily restricted group is conjugate to a diagonal element was proved in my paper on representation of semi-simple Lie groups, Mathematische Zeitschrift 24 (1926), 330-331, and plays quite a decisive role in that theory. To the proof given there I prefer the simple and direct one which I am wont to give in my lectures, and which is reproduced in "The Classical Groups", Princeton, 1939, p. 217. The problem of symplectic equivalence of symplectic transformation (without unitary restriction) has been solved, even in an arbitrary field of characteristic $\neq 2$, by John Williamson in the Am. Jour. Math. 59 (1937), 599-617. In the preceding volume 58, p. 141, he treated the more familiar case of an infinitesimal symplectic transformation. The finite case would be immediately reducible to the infinitesimal one by means of Cayley's transformation if the eigenvalue -1 (or +1) could be excluded.

I knew only the Williamson paper in vol. 58 when I wrote up the enclosed account of the simple proofs of your two theorems 1 and 2, chiefly with the intention of showing you once more how you should improve the editing of your papers, but also for my own information. Your Theorem II enables one to split into "primary components", and it seems to me that that is its main use; this is the reason why I added §4. It was only afterwards that I discovered the Williamson paper in vol. 59 which seems to make everything else superfluous.

Whether under these circumstances it is still worth while to publish your propositions about symplectic involutions in a separate paper I do not know; certainly not in its present form.

Even if all the contents of your paper had been new, you would have made it hard for a conscientious editor to accept it for publication. Thinking your ideas over until they assume their simplest and most adequate form, complete formulation of the propositions, a well-planned notation, terminology and arrangement, correct references, etc.,- all these things require much more care than you seem to be willing to bestow on them. But I won't repeat my preachings on these points.

Dr. Aydelotte has sent you a certificate of the sort you asked for in the first paragraph of your letter of September 6 that accompanied your manuscript.

Professor Loo-keng Hua
Tsing Hua University
Kunming, China
HW:GB

Sincerely yours,

Hermann Weyl

October 9, 1944

Dear Professor Hua:

I hope the enclosed statement, which I am sending you in duplicate, will satisfy the need explained in your letter of September 6 to Professor Weyl.

Sincerely yours,

Frank Aydelotte, Director

Professor Loo-keng Hua
Tsing Hua University
Kunming, China
FA:GB

October 9, 1944

Dear Professor Hua:

I hope the enclosed statement, which I am sending you in duplicate, will satisfy the need explained in your letter of September 6 to Professor Weyl.

Sincerely yours,

Frank Aydelotte, Director

Professor Loo-keng Hua
Tsing Hua University
Kunming, China
FA:GB

October 9, 1944

To Whom It May Concern:

As Director of the Institute for Advanced Study, I wish to confirm that Professor Loo-keng Hua has been invited to join our School of Mathematics as a temporary member for the academic year 1944-1945, with a stipend of $1,500. This academic year extends from September 18, 1944, to May 5, 1945; but in view of the difficulties of transportation, the year of Professor Hua's residence in Princeton will be considered to begin on his arrival if he arrives before the beginning of the second term on January 29, 1945. The invitation, however, will expire in case Professor Hua does not make use of it before that date.

Very sincerely yours,

Frank Aydelotte, Director

(945) Hua

Airmail

October 2, 1944

Dear Professor Hua:

From a letter which I wrote you on September 26, 1944, I repeat the following passage because I want to make sure that you receive the message it contains:

> "I am very sorry to learn from all these letters that you and your family have not been well, and that for this and other reasons you must further delay your visit to Princeton. This is really a pity because I feel you could greatly benefit by collaboration with Professor Siegel. It would be good if you could arrive before the second term of our academic year opens; that is, January 29, 1945. Otherwise you would no longer be able to avail yourself of our offer of a stipend for the academic year 1944-45. We should have to close the case for this year, but of course we should stand prepared to consider your appointment for another year if you care to apply for it again."

You will readily understand that some such action on our part is unavoidable for budgetary reasons, because we cannot hold over indefinitely the money reserved for your stipend. If you cannot come this academic year and wish to come later, please let me know as soon as you are fairly sure about the time when you can make it. I shall then take up the matter again. In general our invitations are for one academic year, running from the middle of September to the beginning of May. Of course no definite promise for such a future appointment could be made now, nobody knowing the demands likely to be imposed on the Institute's funds by the end of the European war.

Here is what the referee has to say about your paper "On automorphic functions V":

"In its present form the manuscript is not ready to print. It contains a lot of (more or less unessential) mistakes in text and formulas. Even in the bibliography on p. 49 one finds at least ten erroneous quotations.

The paper does not quite hold what the title, 'General Theory' promises. In the main it follows the line of Giraud's book. A number of items however are new, namely Theorem 2 (discontinuous = properly discontinuous), the introduction of the invariant metric in §6, and the determination of the exponent of absolute convergence for Poincaré's series in §12. But the main difficulty of the general theory, the uniformization of parabolic corners of the fundamental domain, has not been attacked.

Some details:

Page 3, middle: here it should be said that the matrix U is unitary.

Page 9, at the bottom: this automorphic function is too narrow on the one hand because it is necessary to admit poles, but too wide on the other hand nothing being said about the behavior at the parabolic boundary points.

Pages 10-11, more briefly in words: One defines

at the origin and transfers this to all points

by the motions of the group.

From the bottom of page 17, to page 21: These geometric considerations lack partly in stringency, partly in clarity; e.g., why are the sides n-1-dimensional? They could be some horrible point-sets.

Page 26, first formula, change k into -k.

" " middle: Siegel's proof presupposes

Page 27, first formula: contains some error.

Page 28, formula mid-page: replace by the reciprocal value.

Page 29, second formula: -k instead of k.
" " line 10: 'rational function' instead of 'polynomial'.
Page 36, middle: the proof for VI can be simplified as follows:

where singular, then and thus also the equation

would have a solution contrary to assumption.

Page 41, line 5 from the bottom, and page 45, line 6: exponent missing."

May I myself add the following observations? It seems to me that your general theory has not yet reached the stage where it is ripe for publication. The main points, uniformization of the parabolic corners and Verzerrungssatz, cannot be settled at present -- and the confession that "they are beyond the author's abilities" does not belong in a printed paper anyhow. What you have does not go very much beyond a general program. Siegel has published nothing about the subject for the simple reason that he sees no way of overcoming the main obstacle, the parabolic corners. My suggestion would be that you write up in concise form the metrization, the determination of the exponent of convergence for the Poincaré series by means of the (unproved) Verzerrungssatz, and the verification of the latter for the symplectic group. But all emphasis should be laid upon the concrete examples, the special groups for which you can actually carry through your program. I gather that this will be the subject of papers that are to follow. Have you any instructive examples for compact fundamental domains where you can work out the algebraic relations in detail? I wonder whether it would not really be best to print the general program as a sort of introduction to a paper (not yet existing) in which you carry the theory through for some specialized groups?

Dear Professor Hua, we here in Princeton really wish to help you. You have no doubt a lot of interesting material, but you must do your part and prepare your manuscripts much more carefully. Give some thought to the notations, which you are apt to choose too haphazardly, and check all the formulas! Could you not wait a few weeks before you send your manuscript out, and think yourself about how to improve the presentation? You cannot expect that other people will busy themselves with revising and even rewriting your manuscripts. Your friends here are glad to correct your English, but you yourself must see to it that the mathematics is in good shape, free of mistakes, and arranged in a reasonable and readable way.

If you wish I will return manuscript V, but I suppose you have a copy at home. If you rewrite it you can change the title yourself, and maybe offer the revised manuscript directly to the Annals of Mathematics.

October 4, 1944

I tried to prepare for the printer your little note "A remark on a result due to Blichfeldt", and started to make linguistic corrections in ink. But when I came to the last part I realized that the argument there is still in a very unsatisfactory state and then I added the criticisms in pencil and made an entirely new draft. I am sending you both the corrected manuscript and this new draft, because they will give you a clear indication of what I am driving at when I urge you to bestow more care on the editing of your material. I am willing to submit the revised draft to the Bulletin of the American Mathematical Society, though I should be much happier if the question about the monotony of as function of k could be settled beforehand.

Sincerely yours,

Professor Loo-keng Hua
Tsing Hua University
Kunming, China
HW:GB

Hermann Weyl

(Hua) Aj - Hua

September 26, 1944

Dear Professor Hua:

Let me first acknowledge the receipt of three letters from you, one dated June 29, and the other two written in July. The first was accompanied by two notes, "A remark on a result due to Blichfeldt" and "A new type of convex bodies". Part V of your paper on "Automorphic functions of a matrix variable" is now in the hands of a referee. We shall see what to do about the title and where to publish it. The most recent news I have had of you came via Tuan, who is now working with Artin.

I am very sorry to learn from all these letters that you and your family have not been well, and that for this and other reasons you must further delay your visit to Princeton. This is really a pity because I feel you could greatly benefit by collaboration with Professor Siegel. It would be good if you could arrive before the second term of our academic year opens; that is, January 29, 1945. Otherwise you would no longer be able to avail yourself of our offer of a stipend for the academic year 1944-45. We should have to close the case for this year, but of course we should stand prepared to consider your appointment for another year if you care to apply for it again.

I read your paper on "A new type of convex bodies" and found a simpler proof for your decisive lemma on conjugate partitions. I enclose it, although I noticed afterwards that your main problem to which you apply this lemma has a trivial solution. This is my point: Let X be any lattice matrix $\neq 0$ satisfying the inequality

(1) $$XQX' \leq rI$$

($Q > 0$ n-rowed, X consisting of m rows $\xi_i = (x_{i1}, \cdots, x_{in})$ $(i = 1, \cdots, m)$.

(1) implies

$$\xi_1 Q \xi_1' \leq r, \quad \cdots, \quad \xi_m Q \xi_m' \leq r,$$

hence the existence of a lattice vector $\xi \neq 0$ such that

(2) $$\xi Q \xi' \leq r$$

Vice versa (2) implies (1) for $X = \begin{pmatrix} \xi \\ 0 \\ \vdots \\ 0 \end{pmatrix}$

Thus the problem (1) is reduced to the classical one (2) referring to ordinary ellipsoids and Minkowski's and Blichfeldt's values

$$r^n = \left(\frac{4}{\pi}\right)^n \cdot \Gamma^2\left(1 + \frac{n}{2}\right) \cdot d(Q), \qquad r^n = \left(\frac{2}{\pi}\right)^n \cdot \left(\frac{n}{2} + 1\right)^2 \cdot \Gamma^2\left(1 + \frac{n}{2}\right) \cdot d(Q)$$

hold also for (1). The latter is essentially sharper than your Theorem 4. Under these circumstances I shall make no attempt to get this paper of yours published, but I will try to take care of the other note.

Dr. Chern will collect some reprints and lecture notes and send them to you. He probably will write directly to you about it.

Still hoping to have you with us soon,

Sincerely yours,

Hermann Weyl

Professor Loo-keng Hua
Tsing Hua University
Kunming, China

(925) Hua

letter to Calcutta
Jan. 7, 44

6 Sept., 1944
Tsing Hua University
Kunming, China.

Rec'd office Oct. 2/44

Dear Professor Weyl,

At the final stage for the preparation to come to Princeton, I found a new difficulty. The Minister of Foreign affairs asks for an official evidence from the Institute. It should include the status (Temporary Member) and the amount of stipence (¥ 1500).

Herewith a paper submitted to entitled "On the equivalence of symplectic Matrices". Please publish it at any Jour. in Amer, if possible.

At the end of this month, I will pay a visit to some field work, not very far from the front. There I may find something to do as the duties of a citizen in the war. It will take me two or three weeks leave.

Here the opinion of most people is that the European war will be ended pretty soon. It seems to be very probable that I am forced to arrive at Princeton after the war.

Yours very sincerely

L. K. Hua

(985) Hua

July
7 ~~Sept.~~, 44

Tsing Hua University
Kunming, China.

Dear Professor Weyl,

Thank you and the referee heartily, I feel greatly obliged to you and the referee about the trouble for examing my papers. I will rewrite them as you suggested. Too much materials make me dazzled, just like a poor man, once becomes rich, does not know how to settle his property. your suggestion inspired me greately indeed - I will take off all the materials which have independent interests and have no direct connections with the theory of automorphic functions.

In order to carry out this plan, may I reqiut you, firstly, to change my paper V into an independant title. If possible, publish it in a jornal other than A. J. M.

I asked for leave to my government, but so far received no definite instruction.

Hereafter, I may sent you may papers through the States Deptartment and National Library of Peiping. Then, I may obtain some honorarium, which seems to be badly needed for my family. Certainly, according to the regulation, any discussion will not be through the Library.

Please bring my best regards to Prof. Siegel,

With best wishes

Yours very sincerely

L. K. Hua

(965) Hua

29 June 44,
Tsing Hua University
Kunming, China.

Dear Professor H. Weyl,

Herewith I submit two papers on the geometry of numbers. Please form them at any Jour. in U.S.A. Thanks the microfilm which brings me your paper on geometry of nos. After 1½ hour reading, I become faint like seasick. Thus I dare not read it again. May I trouble you to put the reference at the end of the paper "a new type of convex bodies".

The Institute of Math, Academia-Sinica, has gotten a permission of tonage to carry books into china by air. May I request you to give me some of your reprints and lectura-notes (in any respect). If possible, please pass them to Dr. S.S. Chern. It will be also greatly gratified if you will extend this idea to other Mathematicians.

Please write my name on the cover.

Did I tell you before? I did some works on the theory of Modular functions of associative alg. Now, it is half-way. Your technique on the geometry of numbers help me greatly.

(403) Hua

Air Mail

June 5, 1944

Dear Professor Hua:

This is to acknowledge receipt of your manuscript, "The theory of automorphic functions of a matrix variable, V -- A general theory of automorphic functions".

On May 22 I wrote you another letter about Parts III and IV and the changes the arrangement of material will have to undergo according to the referee's opinion, before it can be published.

Both Siegel and I shall be away from Princeton from now until the middle of September.

Sincerely yours,

Hermann Weyl

Professor Loo-keng Hua
Tsing Hua University
Kunming, China
HW:GB

(1+W)Aj – Hua

Lieber Weyl!

In Teil III wird folgende Aufgabe behandelt: Es sei $\mathfrak{H}$ eine $2n$-reihige hermitische Matrix; man untersuche die Gruppe $\Gamma(\mathfrak{H})$ aller symplektischen Matrizen $Z = \begin{pmatrix} A & B \\ C & D \end{pmatrix}$ mit komplexen Elementen, welche der Gleichung $Z' \mathfrak{H} \bar{Z} = \mathfrak{H}$ genügen.

Nach einem Satz aus Teil II genügt es, $\mathfrak{H}$ in der Form (1) [reellen Fall] oder (2) [komplexen Fall] anzunehmen. In den Paragraphen 2 bis 8 wird eine ziemlich umständliche rationale Parameterdarstellung von Z angegeben (mit analogen Ausnahmen wie bei der orthogonalen Gruppe); sie wird aber weiterhin im Text nicht gebraucht. In den Paragraphen 9 bis 12 wird für den reellen Fall gezeigt, dass $\Gamma(\mathfrak{H})$ eine gewisse Faktorgruppe $\Gamma(\mathfrak{H}_0)$ besitzt, wo $\mathfrak{H}_0$ lauter einfache Elementarteiler hat; die Formeln sind recht kompliziert und an einer Stelle (p. 17) durch Figuren beschrieben. Die übrigen Paragraphen 13 bis 19 handeln von $\Gamma(\mathfrak{H}_0)$ und sind einfacher Natur.

Vermutlich wird der Verfasser späterhin, wenn er zu den automorphen Funktionen und ihren Gruppen kommt (wenn er dazu kommt), nur den einfachen Fall $\mathfrak{H} = \mathfrak{H}_0$ gebrauchen; sodass also für diesen Zweck die Arbeit auf etwa ein Drittel des Umfangs reduziert werden könnte. Die in den früheren Paragraphen (2 bis 12) behandelten Fragen könnten von unabhängigem algebraischen Interesse sein, wenn die Resultate durchsichtig wären oder die Methode lehrreich; in der vorliegenden Fassung erscheinen sie mir nicht befriedigend.

In Teil IV wird das Problem der symplektischen Äquivalenz untersucht: Es seien Z und U symplektische Matrizen; wann hat die Gleichung $XZ = UX$ eine symplektische Lösung X?

Die Paragraphen 1 bis 7 sind leicht und einwandfrei (bis auf den sprachlichen Ausdruck; aber wer selber pferdlos reitet, soll nicht die Kleppen anderer mit Steinen bewerfen). In Paragraph 8 soll der wichtige Satz (Theorem 18) bewiesen werden, dass jede symplektische Abbildung einen Fixpunkt hat, d.h., dass die Gleichung $(z_1, z_2)^T = \mathfrak{M}(z_1, z_2)$ eine komplexe Lösung (z_1, z_2) vom Range n unter der Nebenbedingung $z_1 z_2' = z_2 z_1'$ besitzt; $\mathfrak{M}, z_1, z_2$ sind n-reihige Matrizen. Dazu wird zunächst mit Hilfe des Brouwerschen Fixpunktsatzes gezeigt, dass diese Behauptung für den speziellen Fall $\mathfrak{C} = \overline{\mathfrak{B}}$, $\mathfrak{D} = \overline{\mathfrak{A}}$ gilt, und dann wird in einem Nebensatz (p. 14, Zeile 4 v.u.) behauptet, hieraus folge die allgemeine Richtigkeit durch eine Kontinuitätsmethode. Man gebe den Topologen, was den Topologen ist; aber mir ist unklar, wie man das durchführen kann; andererseits kann man natürlich den direkten Beweis für die Existenz des Fixpunktes rein algebraisch erbringen, ohne besondere Schwierigkeiten. Hat man einmal einen Fixpunkt, so braucht man für die weitere Reduktion von T nur noch den parabolischen Fall zu behandeln, d.h., $\mathfrak{C} = 0$. Diesem Fall sind dann 20 Seiten gewidmet (pp. 18 bis 38), und in der Mitte entschuldigt sich der Verfasser zweimal, dass der Beweis schwer zu lesen ist.

Für die Theorie der automorphen Funktionen ist nun aber die Äquivalenz im Reellen von Bedeutung. „Owing to the lengthy treatment, the author will give the solution in a later occation" (p. 2). Also muss der Wert von Teil IV vom algebraischen Gesichtspunkt aus betrachtet werden, und die vorliegende Fassung erscheint mir unbefriedigend.

Carl Siegel

1944 Mai 16

(9as) 1hua

April, 24, 1944,

Tsing Hua Universite,

Kunming, Yünnan, China.

Dear Professor Weyl:

I was very happy to receive your latter dated March 3, 1944. It is a very lucky mouth for me! The one is your message that my paper II was accepted for publication and that the Institute will reserve the stipence for me. The other is that the success of my war work has attracted a great appreciation from my government. A position was offered to me, special Member of the National Resources commitee, of which the rank is just below the Minister of the Board of Ecomomy. Nevertheless, yesterday I wrote to the Minister to express that I should like to release from my present work to come to your Institute better than to hold such a high position.

It seems to be almost certain that I shall be able to come to Princeton during the vacation. Please let me know the addresses of you and Professor Siegel during the vacation.

Last three months was months of hardest works. I did works 14 hours a day (with pour food and pour light), for otherwise, the war work would prevent the progress of my researches. Your kind advise about work and health impressed me deeply. From now on, I shall take your advise seriously. To this point, I shall trouble you by the following opinion from a humble Chinese.

 April, 24, 1944.

Beside my intransic love on mathematics, there are several reasons which make me work hard. As you know, China is a backward country, in particular, backward in Science. To build up a new China is necessary to promote the Science in China to the world lever. I will do my share and my best toward this aim.

Personally, I was a shop boy. Owing to the poverty of my familly, I did not finish my middle school education. I learnt mathematics in my father's shop which is very small with capital at 500 yuand. At that time, I worked usually 16 hours a day. It makes me the present habit. One of my life-will is to get some honour from international recognition. I believe, some international appreciation will also give the Chinese a confidence on Science. Such a confidence is very urgent for our present infant stage.

My poor English prevent me to explane more. I beg your pardon to trouble you by such a non-sense talking.

The fifth paper has been typed, now is in serious checking. It will posted in the next weak.

With best regards,

Sincerely yours,

L. K. Hua

Loo-keng Hua.

(923) Aydelotte
Hua

April 24, 1944

Dear Aydelotte:

At our last meeting on April 8, 1944, our School of Mathematics voted to record that a stipend of $1500 for Professor Loo-keng Hua was being held open for another year and that funds originally allocated to cover the offer would be transferred to the next year.

We also voted to recommend a stipend of $500 to Dr. Ning Hu, provided the stipend of $1000 which Dr. Hu now receives from his own university is continued. Dr. Hu will inform you directly as soon as that is settled. In case his home university should not continue his stipend, we shall have to reconsider the case.

Sincerely yours,

Hermann Weyl

Dr. Frank Aydelotte
HW:GB

correct (923) Hua

(943) Hua

March 3, 1944

Dear Professor Hua:

I was very sorry to learn from your letter of January 2, 1944, that you will be unable to come to the Institute during the present term. I have discussed the matter with our Director, Dr. Aydelotte, and you can be assured that you will be just as welcome to us the next academic year as you would have been in this. The stipend which we can offer you would be the same.

I hope you and the Chinese authorities on which you depend will understand our situation. We are a private institution that receives no support from the Government and we have to rely entirely on our own means. We realize of course that the $1500 which we offer you is inadequate when measured against your scientific work. But we simply can do no more. We hope, however, that your Government or University will see to it that you can afford to come, and that the war work of which you write will not hold you up too long. As I said before, we shall be very glad to have you with us.

Dr. Aydelotte sent you a letter in duplicate, under date of January 7, c/o Chinese Consulate General, Steven's Court, Park Street, Calcutta, India, which you would have to present to the American Transport Command at Karachi, India, asking permission for you to travel on an Army transport plane over the portion of the journey for which there is no commercial service available.

The Institute is on vacation from the beginning of May until about September 20. I shall be away most of the time, and I think there is very little chance that Siegel will be here during the summer. That should not prevent you from arriving here in the summer if that is convenient for other reasons, but if you have a free choice I should think the best plan would be to come here in September.

I wish to acknowledge receipt of your manuscript "On the theory of automorphic functions of a matrix variable, III. Structure of the group of automorphs of a hypercircle", and the enclosed letter of January 5. I passed it on to Dr. Tuan, who will revise it, and I shall show it to Professor Siegel. Part II has been definitely accepted by the American Journal of Mathematics for publication, and you will be informed in due time whether it can also accept your present paper. Proof reading will be done here by your Chinese friends, and we shall send you a copy as soon as the paper is out.

 March 3, 1944

In your letter you announce six more papers within the next half year. I am sorry it will hardly be possible for the American Journal to print all these papers, so I shall have to try to farm them, or part of them, out to other journals. But I hope that you can see to this yourself once you are here. Would it not be better for your health if you didn't work so terribly hard and allowed yourself a little more time?

With best regards,

Sincerely yours,

Hermann Weyl

Professor Loo-keng Hua
Tsing Hua University
Kunming, China
HW:GB

(943) Hua

Copy for Miss Blake

January 7, 1944

Dear Professor Hua:

Professor Weyl and Professor Chern have suggested that it might be helpful if I furnished you with a letter to the American Transport Command at Karachi, India, asking permission for you to travel on an Army transport plane over the portion of the journey for which there is no commercial service available. I am accordingly sending you such a letter in duplicate.

I hope this letter will be helpful to you and that we may have the pleasure of having you with us for at least part of the second term.

Yours sincerely,

FRANK AYDELOTTE, Director

Professor Loo-keng Hua
c/o Chinese Consulate General
Steven's Court
Park Street
Calcutta, India

Copy for Miss Blake

January 7, 1944

Commanding Officer
Americen Transport Command
Karachi, India

Dear Sir:

The bearer of this letter, Professor Loo-keng Hua of Kunming, China, is an eminent Chinese mathematician, who has been designated by his government to pursue advanced research for a year in the United States. Professor Hua has been elected a member of the Institute for Advanced Study for the present academic year and has been awarded a research stipend. He plans to come from China to the United States by air.

I am informed that for part of the journey there is no commercial air line available and that this part must be made, if at all, in an Army transport plane. Because of Professor Hua's eminence in his field and the importance of the work which he is planning to undertake here, I venture to request from you an authorization for Professor Hua to be allowed to travel on an Army transport plane over this portion of his journey.

I should greatly appreciate any assistance you may be able to render to Professor Hua.

Yours very sincerely,

FRANK AYDELOTTE, Director

Jan. 2, 1944.

Dear Professor Weyl,

Your letter dated Oct. 7, 1943 was received when I was in the Central training Corps at Chungking. The President of the Corps is is the President of my Country. The President is very kind to decorate me as one of the higher officers in the Corps. Then I met dozens of Ministers and Vice-ministers. They all expressed that your kind appreciation of my works would be considered as a justification of their attitude and as a recognization of the scientific standing in China.

The aim to enter the Corps is two sided. One of them is to obtain a facility to go abroad. But when I finished the work, I found that it is impossible to arrive at Princeton within the limit of "better half", which was mentioned in your letter. I was greatly disappointed. I am obliged to give up the hope to come immediately.

My country put a good deal of war works before me. I solved some of them and passed some of them to specialists. I do not like to be a war-quitter. Thus I will come to Princeton after my work arrived at a better end which seems to be the summer. In the due time, I hope the Institute would kindly reconsider the situation.

Dr. W. Y. Chang knows best, he is doing researches and learning Modern Techniques at Princeton. He, my honourable patriotic colleague, will be my representative and you may consult him all about me.

I hope my papers shall be published as quick as possible, and Dr. Tuan will take the trouble to read the proofs. Part III will be sent out within the month.

With best wishes and happy new year

Yours very sincerely,

L. K. Hua

Miss Blake: Dec. ?/43

I think Hua knows the conditions of the Institute fairly well, including the period of our academic year.

Since the chance of his coming here is very large, do you think it advisable to send to the American Transport Command airport in Karachi, India a letter from our Institute?

S. S. Chern

(343) Hua

Recd Dec 27/43 (Air Mail Registered)

November 1, 1943
Tsing Hua University
Kunming, China.

Dear Professor Weyl:

Thank you very much for your letter dated Sept. 27, 1943. Tomorrow I shall set forth for Chungching to make sure about the possibility for coming to Princeton, since my government offered a goodwill to me. I hope that this trip will realize my long-dreamed intention.

I wrote, at the middle of June, a letter in which an enquiry is made about how much of the stipence may be awarded if I cannot arrive at in time. Now I am still urgently waiting for an answer.

I did express in one of my previous letter that the changes in my MS. as Professor Siegel and my friend Tuan suggested are accepted cordially and that Tuan will take the trouble to read the proof-sheets. Owing to the difficult communication, I shall take this oportunity to express further that any paper, which was sent or will be sent to you, can be changed according to your and Professor Siegel's undoublful opinion. I believe Tuan will be kind enough to read my proof-sheets. My only request is that I may have a copy of the proof-sheet for the sake of references. This is why the paper III-V are delayed to be sent out.

It is a comfort to me for getting the news that my MS on the Additive Prime Number Theory reached you safely. After having accepted it for publication in Russian, I heard nothing (in particular about copyright) from the USSR Academy. I did not receive any correspondance from Professor Vinogradow for years. Letter to his lodging was returned as undelivery.

If the chance is not too bad, before the beginning of the second term, I shall arrive at Princeton.

With best wishes,

Yours very sincerely

L. K. Hua

COPY Harris Hancock to O.Veblen Oct.22/43

Prof. L. K. Hua of the National University of Tsing Hua, Kunming, China, has written to me about going to Princeton, and I have strongly advised him to go. Besides, You, Einstein, Weyl, etc., he will come in contact with many great mathematicians there, and I shall ask you please be on the outlook for him and I beg you to offer him the courtesies and civilities that you are able to render a foreigner. Since he was in Cincinnati some ten years ago he has turned out some 30 to 50 articles and published them in the Royal Russian Journal, Royal Chinese journal, besides journals of England, America, etc. He may be in the same class of Hardy's Indian friend. We are right now more than friendly with the Chinese and I beg that you will do what you can for Prof. Hua.

C O P Y

October 7, 1943

Dear Professor Hua:

I have your letter erroneously dated as of October 10, but probably sent on August 10. I deeply regret the delay of my message of May 10. I had been told that if sent by diplomatic mail it would probably reach you within a fortnight. Instead, it took much longer than ordinary air mail! But I hope the damage is not irreparable, and we should all feel very glad if you can still manage to come. Pending your efforts we will hold for you the full amount, $1500, of the stipend offered to you for the year 1943-44, and only if it becomes clear that the better part of our term (September 20 to May 6) will be spent before you can get here, may the case have to be reconsidered. Our Director, Dr. Aydelotte, will be glad to furnish you with the same documents as he did Professor Chern, and send a similar letter to the Commanding Officer of the United States Military Transport Service at Cairo, Egypt, as soon as we hear that you have been definitely appointed by your Government to spend a year at the Institute.

I hope my previous letter of September 27 will reach you in due time. It seems fairly certain now that the American Journal will find the revised Part I of your paper acceptable for publication, and we shall then print it before Part II. I still wait for your instruction about proofreading, but it would be far better for you to come yourself and do the proofreading!

Chern informed him of definite acceptance

Sincerely yours,

Hermann Weyl

Professor Loo-keng Hua
Tsing Hua University
Kunming, China

(945) Hua

October 7, 1943

Dear Professor Hua:

I have your letter erroneously dated as of October 10, but probably sent on August 10. I deeply regret the delay of my message of May 10. I had been told that if sent by diplomatic mail it would probably reach you within a fortnight. Instead, it took much longer than ordinary air mail! But I hope the damage is not irreparable, and we should all feel very glad if you can still manage to come. Pending your efforts we will hold for you the full amount, $1500, of the stipend offered to you for the year 1943-44, and only if it becomes clear that the better part of our term (September 20 to May 6) will be spent before you can get here, may the case have to be reconsidered. Our Director, Dr. Aydelotte, will be glad to furnish you with the same documents as he did Professor Chern, and send a similar letter to the Commanding Officer of the United States Military Transport Service at Cairo, Egypt, as soon as we hear that you have been definitely appointed by your Government to spend a year at the Institute.

I hope my previous letter of September 27 will reach you in due time. It seems fairly certain now that the American Journal will find the revised Part I of your paper acceptable for publication, and we shall then print it before Part II. I still wait for your instruction about proofreading, but it would be far better for you to come yourself and do the proofreading!

Sincerely yours,

Hermann Weyl

Professor Loo-keng Hua
Tsing Hua University
Kunming, China
HW:GB

Aug. 10. 1943,
Tsing Hua University,
Kunming, China.

Dear Professor Weyl,

It is a great comfort to me for hearing, from your letter dated May 10 (which takes three months to reach me), that the Institute has increased the amount of the stipence offered to me up to $1500. I will try my best to come. But the first decision and the delayed arrival of the second decision made me in a very unfortunate position. To be frank, I did give up my intension to come as I heard the message in comparing with that of my fellow colleage. I was disappointed. I did not make any attempt for getting help from my government. Now, the good news gives me a thread of light. But on the other hand, a bad one is accompanied with it. That is, the exchange rate is raised considerably. I must request a help from my government as twice as that if I did a week ago (in order to get the same amount of U. S. Currency). God bless me, fortune seems to be intentionally against me!

Nevertheless, I shall try my best to reach the object for which I am longing.

Now I shall make an enquiry that, if I cannot arrive at in time, how much could I get from the stipence?

Owing to the inconvenient communication, you, Prof. Siegel and Tuan may make any change in my M S.

Thank you heartily,

Yours very sincerely,

L. K. Hua.

(945) Hua

September 27, 1945

Dear Professor Hua:

I have received your two letters of July 18 and July 24. The first was accompanied by a note from Professor Vinogradow of which we have taken due notice and which I now return to you. The second letter contained the revised form of the manuscript of your paper "On the theory of automorphic functions of a matrix variable I -- Geometrical basis". In the manner customary in this country, I have turned it over to a referee, and as soon as his report is in I shall let you know whether the American Journal will accept it for publication. If this should be the case, I shall try to have it published before your second paper, and then it would probably be wise to rechange the title of that paper into its original form.

I hope you have in the meantime received my letter from Colorado dated July 30, and I hope that, also with respect to the new paper, you agree to such changes in the manuscript as your friend Tuan and Professor Siegel deem advisable. Let me know at your earliest convenience how to proceed with the proofreading.

The English manuscript of your treatise on "Additive prime number theory" arrived. I have looked into it, though only somewhat perfunctorily, and find it very interesting indeed. But before making any inquiries about having it published in this country, I ought to know whether the USSR Academy, after having accepted it for publication in Russian, doesn't have the copyright for it. I should hesitate to do anything about it without Vinogradow's knowledge and consent. In the meantime I am holding the manuscript here in safekeeping.

Professor Chern arrived here more than a month ago, after an interesting journey. I understand from him that there is very little chance of seeing you here during this academic year. But our correspondence seems to indicate that you never received our second invitation, dated May 10, which we sent you through the Chinese Embassy in the diplomatic mail. I therefore enclose a copy of that letter.

With best wishes for the progress of your work and for yourself,

Sincerely yours,

Professor Loo-keng Hua
Mathematics Department
National Tsing Hua University
Kunming, Yunnan, China
HW:GB

Hermann Weyl

(948) Hua

[Registered mail]

C O P Y

Estes Park, Colo., July 30, 1943

Professor Loo-Keng Hua
Mathematics Department
National Tsing Hua University
Kunming, Yunnan, China

Dear Professor Hua:

I am very sorry to learn from your letter of May 24, which arrived in Princeton on July 6, that you find it impossible to accept the invitation of our Institute as extended to you by my letter of April 14. However that letter was followed by another dated May 10 and by courtesy of the Chinese Ambassador forwarded to China by diplomatic mail, in which I informed you that the amount of the stipend had been increased from $1000 to $1500. I have not yet received an answer to this modified invitation.

But it is clear to me that without funds from other sources to defray your traveling expenses and to sustain your family in China, this increase of our stipend will not help you very much. I still hope you will be able to find ways and means to come. However, if you have to give up the plan, you should not feel too sad about it. Because of the exigencies of war, there will be very few people working at the Institute next year; its present activity can not compare with what it used to be and probably will be again in normal times. (True, Siegel is likely to be with us next year, but may have gone later.) Although I can make no commitments now, I feel pretty sure that we shall not give up the idea of having you with us at some later time, if our present attempt fails.

* * * * * * *

I wish to thank you for sending us the impressive list of your papers and the brief summary of your mathematical achievements. Hoping to hear from you soon again and with my best wishes for your future work and life

Yours sincerely

Hermann Weyl

(945) Hua

18 July, 1943.

Dear Prof. Weyl,

Herewith I enclosed, as an evidence, a letter from Prof. Vinogradow about my booklet on Additive-Prime-Number theory. Its manuscipt was sent to you by air about 1½ month ago.

The booklet was expected to be published in Russian (language), but the war delayed the action.

Yours very sincerely,

L. K. Hua

P.S. I shall be greatly delighted, if there is any chance to publish it (in English) in U.S.A. Please pass the letter back, as the authorities of the Institute acknowledge the fact.

L. K. Hu.

P.S. It is the booklet to award The First National Prize (1941) of China for me.

L.K.H.

C O P Y of Ms. letter

Undated. Postmark illegible

Dear Prof. Loo-keng Hua!

I found your book excellent. It can be printed in USSR. Scientific books in USSR are edited usually in the russian language, though your book perhaps may be edited by us in a foreign language. The translation in the russian language may be of corse made in Moscow. But if you wish edit your book in English or in an other foreign language I shall try to get a permission for this purpose.

Yours very sincerely

(Signed) J. VINOGRADOW

(IAS) Hua

15A Graduate College,
Princeton, New Jersey.
July 13, 1943.

Professor Hermann Weyl,
Hayden Bungalow No. 19,
Estes Park, Colorado.

Dear Professor Weyl:

I had finished reading Hua's paper sometime ago, but I have waited to see whether Hua will be here soon, then he can make the necessary changes himself. Now there is no prospect of Hua's arrival in the recent future, I decide to mail the manuscript to you. I shall be responsible for all the changes which I have made.

I got a letter from Hua a few days ago, which he wrote when he got my letter telling him of the original offer. In his letter he asked me to express earnestly his deepest gratitude to you. He also said that with only $8/000$ it would be impossible

for him to come, since he would have to get both the travelling expenses and the support of his family from some other sources.

I hope that the increased offer will make things possible for him to come. As soon as his decision to this offer reaches me, I will write to you again.

I know Hua's situation very well. I know how he works to his best in a quite impossible situation as he is now. I know how he hopes anxiously to come here to continue his work, especially because you and Professor Siegel are here. Only his financial burden is heavy, even much heavier than Chern's and mine, so he has quite a difficulty to arrange his things. I think, Chern will be here before the end of this year.

Very sincerely yours,

Hsio-Fu Tuan

(?AS) Hua
Recd. ~~when?~~ with may 24/43 letter?

List of papers*.

-1934-

On the hypergeometric functions of higher order, Tohokû Math. Jour. 39, 253-263.

On the representation of integers by circulant, Tohokû Math. Jour. 39, 316-321.

Note on Pell's equation, Tohokû Math. Jour. 40.

Note on the Diophantine equations equating two circulants, Tohokû Math. Jour. 40, 34-35.

On Pseudo- periodic functions, Tohokû Math. Jour. 40, 27-33.

-1935-

Waring's problem for cubes, Bull. of Calcutta Math. Soc. 24, 139-140.

An easier Waring-Kamke problem, Jour. of London Math. Soc. 11, 4-5.

On a certain kind of operations connected with linear algebra, Tohokû Jour. of Math. 41, 223-246.

On Waring's theorems with cubic polynomial summands, Math. Annalen 111, 622-628.

On an easier Waring-Kamke problem, Science Report of National Tsing Hua University, 3, 247-359.

-1936-

On the representation of integers by the sums of seven cubic functions, Tohokû Math. Jour. 41, 361-366.

The representation of integers as sums of the cubic function $(x^3-2x)/3$, Tohokû Math. Jour. 41, 367-370.

Note on boundedly convergent power series, Science Reports of Tsing Hua University, 3, 345-351.

On Waring's problem with polynomial summands, Amer. Jour. of Math. 58, 553-562.

On Waring's problem, Tohoku Math. Jour. 42, 210-225.

A problem on the additive theory of numbers of several variables, Math. Zeits. 41, 708-712.

On Waring's problem with polynomial summands, Jour. of Chineses Math. Soc. 1, 23-61.

On Fourier transforms in L^p in the complex domain, Jour. of Math. and Phys, 15, 249-263, cooperated with S. S. Shu.

*The list is incomplete in two senses. (i) it does not contain the papers written in Chinese (about 25 in number) and (ii) Owing to the shortage of reference, a complete examination is impossible.

-1937-

On a generalized Waring Problem, Prod. London Math. Soc. 43, 161-182.

A generalization of an easier Waring-Kamke Problem, Jour. London Math. Soc. 12, 262-264.

A problem in the additive theory of numbers of several variables, Jour. London Math. Soc. 12, 257-261.

On the representation of integers as the sums of the k-th powers of primes, Comptes Rendus de l'Acad. des Science de l'URSS, 17, 167-168.

-1938-

Some results in the additive ~~th~~ prime number theory, Comptes Rendus de l'Acad. des Sciences de l'URSS, 18, 3.

Some results in the additive theory of numbers, Comptes Rendus de l'Acad. des Sciences de l'URSS, 18, 4.

Some results on Waring's problem for small power, Comptes Rendus de l'Acad. des Sciences de l'URSS, 18, 527-8.

On the representation of numbers as the sum of the powers of primes. Math. Zeits. 44, 335-346.

On Waring's problem, Quarterly Jour. of Math. 9, 199-202.

On Tarry's problem, Quarterly Jour. of Math. 9, 315-320.

Some results in the additive ~~the~~ prime number theory, Quarterly Jour. of Math. 9, 68-80.

On an exponential sum, Jour. of London Math. Soc. 13, 54-61.

- 1939.-

On Waring's problem for the fifth power, Proc. of London Math. Soc. 45, 144-160.

A remark on the moment problem, Jour. of London Math. Soc. 14, 84-86.

On a generalized Waring's problem II, Jour. of Chinease Math. Soc. 2,

On an exponential sum, Jour. Chinese Math. Soc. 2,

-1940-

Sur une somme exponentielle, Comptes Rendus, 210, 520-523.

Sur la probleme de Waring relatif a un polynom du troisiere degre, Comptes Rendus, 210, 650-652.

On partition of a number into unequal parts, Trans. of Amer. Math. Soc.

Dertermination of the groups of odd power order p , which contains a cyclic subgroup of index p , Coorperated with Tuan, Sciences Reports of Tsing Hua University, 4, 145-154.

On the number of solutions of a certain congruences, Coorperated with Mr. Ming, Sicience Re ports of Tsing Hus Univ. 4, 485- .

On Waring's problem of cubic polynomial summands I, Jour. of Indian Math. Soc.

On Waring 's problem of cubic polynomial summands II, Science report of the National Tsing Hua University,

The lattice points in a circle, Quarterly Jour. Math.

On a theorem due to Vinogradow, Quar. Jour. of Math.

-1941-

The lattice points in a sphere , A publication of Yunnan univ.

On the theory of vectorial form modular forms of the positive dimensions,

On a character sum, Science Record of the Chinese Acad.

Additive prime number theory. (~~The Accepted~~ ~~As Tract~~ accepted for publication by the Acad. of Science of USSR.) Wins the First National Prize, 1942.

- 1942-

On the order of primitive root of a prime, Bull. of Amer. Math. Soc.

On the non-existance of Euclidean Algorithms in a quadratic field I, II.

On the order of the least solution of the Pell's equation, Bull. of Amer. Math. Soc.

Almost periodicity and the additive theory of numbers.

On the theory of Authomorphic function of the n-th order I_ Geometrical basis.

~~-1943-~~

On the theorey of Authomorphic Functions of the ~~n-th order~~

II Classification of Hypercircles.

-1943-

On the Theory of automorphic functions of the n-th order.

II. Classification of Hypercircles.

III. Structure of the group of authomorphs of a hypercircle.

IV. Studies of Involutions and Transformations.

Theory of automorphic function of matrix variables. Lecture Notes of Hua's seminar, now it competes its 320 pages.

An account of Hua's works up to 1943.

1. Waring's problem with polynomial summands.

a) The author extended the theory of Hardy-Littlewood to the case including all integral-valued polynomials without exceptions. The previous results of Landau, Dickson and James all bear certain restriction on the coefficients.

b) A very short paper in Quar. Jour. of Math. contains an elegent improvement of Hardy-Littlewood's results, namely, the asymptotic formula of the number of solutions of

$$N = x_1^k + \cdots + x_s^k, \qquad x_\nu \text{ integer} \geq 0$$

holds for $s \geq 2^k + 1$. For $3 \leq k \leq 20$, it is the recordable result up to the present.

2. Goldbach Problem.

It was proved almost at the same time, by Chudakoff, Estermann, van der Corput and the author that almost all even integers are sums of two primes. But the author's result is more general, say, he proved that almost all integers, with certain congruent condition, are sums of p_1 and p_2^k where p_1 and p_2 are primes and k is a natural number.

3. Tarry's problem.

The author proved that the system of Diophantine equations

$$x_1^h + \cdots + x_s^h = y_1^h + \cdots + y_s^h, \qquad 1 \leq h \leq k,$$
$$x_1^{k+1} + \cdots + x_s^{k+1} \neq y_1^{k+1} + \cdots + y_s^{k+1}$$

has a solution, if

$$s \geq (k+1)\left(\left[\frac{\log \frac{1}{2}(k+2)}{\log(k+1) - \log k}\right] + 1\right) \sim k^2 \log k.$$

The method is elementary, although it was stated by Prof. Wright that there seems no elementary way to improve his result. (Cf. Maitland-Wright's paper Q. J. of Math. 7(1936) and 8(1937)).

4. Additive prime number theory.

It is rather difficult to give an account* of the theory. Three years hard work is contained in a booklet which was accepted for publication by Prof. Vinogradow. The tract contains all original works which are improvements, justifications and developments of the theory initiated by Vinogradow and the author.

* The MS. with a supplemented abstract will be submitted.

5. Character sums.

The author found a very easy result on character sums which has a great deal of applications, we mention three of them:

a. The least solution of Pell's equation, the result obtained is better than that of Schur and Landau.

b. The least primitive root, mod p, the result obtained is better than that due to Vinogradow.

c. Euclidean algorithms in quadratic field. The author has arrived at a numerical bound, unfortunately it is still beyond the ability of calculation. (P:S. $R(\sqrt{61})$ is not Euclidean).

6. Exponential sums.

Let $f(x)$ be a polynomial with integer coefficients

$$a_0 x^k + \cdots + a_k, \qquad (a_0, \cdots a_{k-1}) = 1$$

then

$$\sum_{x=1}^{q} e^{2\pi i f(x)/q} = O(q^{1-\frac{1}{k}+\varepsilon}),$$

where the constant implied by O depends on k and ε only.

The result has many applications:

a) Justify a key point of Vinogradow's theory of simultaneous diophatine equations.

b) Major arc of Waring's problem.

c) Uniform distributions.

7. Groups of prime power orders.

The contributions may be concluded in the following three heads:

a) Introducing a "Pseudo base".

b) The author detailed Hall's enumeration primciple, the formulay so obtained is more suitable for eastablishing "Anzahl" theorem.

c) The author solved the "Anzahl" theorem of a type, for $k=1$ we have the result due tb Miller and for $k=2$ we have the result due to Kolakoff.

8. Circle problem.

Let $\pi(r)$ denote the number of lattice points in the circle

$$x^2+y^2 \le r.$$

Let ϑ be the least number such that

$$\pi(r) - \pi r = O(r^{\vartheta})$$

The result obtained by the author is that $\vartheta \le 13/40$. The previous record $\vartheta \le 15/46$ is due to Titchmarsh and the record of Vinogradow $\vartheta \le 19/59$ is erroneous.

9. Shere problem.

Let ϑ be the least number such that the number of lattice points in the sphere

$$x^2+y^2+z^2 \le a^2$$

is equal to

$$\frac{4}{3}\pi a^3 + O(a^{\vartheta})$$

The history of the constant may be summarized by the following table:

ϑ	2	$\frac{5}{3}$	$\frac{3}{2}$	$\frac{43}{29}$	$\frac{7}{5}$
	substantially due to Gauss	Pfeiffer	Landau	Walfisz	Vinogradow

The present author established

$$\vartheta \le \frac{4}{3}.$$

10. Fourier transforms in the complex domain.

The paper, cooperated with Mr. S. S. Shü, initiated a study of Fourier transforms of L^p in the complex domain, as $p=2$, the corresponding theory was created by Paley and N. Wiener. The initiation seems to have attracted some notice from Professors Plancherel, Polyá and Mr. Boas.

11. Double Exponential Sums.

Let $f(x,y)$ be a polynomial of two variables of the k-th degree, then

$$\sum_{x=1}^{p}\sum_{y=1}^{p} e^{2\pi i f(x,y)/p} = O\left(p^{2\left(1-\frac{1}{k}\right)}\right).$$

The treatment is far more difficult than the single-variable-correspondance. In order to realize the difficult, one may comparatively imagine "how to extend Weyl's sum to two variables". Two trial was made by Vinogradow and Titchmarsh, the former is failed and the latter successes in a certain sence of "quadratic nature". Thus the further development of the results of the subject seems to be useful in the study of additive theory of numbers of several variables, diophantine approximations and uniform distributions of several variables, etc.

The result is obtained in a cooperation with Mr. Ming. With him, they solved the p-adic Tarry's problem completely.

12. Theory of Modular forms.

a) The author obtained an explicite formula for the number of partitions of integers into unequal parts. There introduced a method which is applicable to automorphic forms of a subgroup of modular group and of dimension 0.

b) Vectorial modular forms. Let

$$V(z)=(f_1(z),\ \cdots,\ f_n(z))$$

be a vector of functions. If

$$V(z)=\gamma\, V((az+b)(cz+d)^{-1})\,(cz+d)^{-\lambda},$$

then we say V(z) is a vectorial modular form. The corresponging results of Rademacher and Zuckermann are obtained. The publication of the results is delayed owing to the incompleteness for the case $\lambda=0$.

The advantage of vectorial form is that it includes the study of the automorphic functions whose group is a sub-group of modular groups.

13. Symplectic geometry.

The author has a detailed treatment of the symplectic geometry. Almost all the results analogous to the theory of projective geometry of two variables in the complex domain are generalized. It is rather difficult to give a short summary. Among which the author selects the following result as a representative.:

Every transformation having the properties:

(i) one-one continuous,

(ii) carrying symmetric matrix to symmetric matrix.

(iii) keeping arithematic distance of two points invariant,

(iv) keeping strict harmonic range invariant,

is symplectic or anti-symplectic.

The author determined also all symmetrical space under the symplectic group.

14. Automorphic functions.

The fundamental difference between the author's theory and Prof. Siegel's theory is that one is more geometrical and the other is more arithmetical.

Apart from those results obtained by th Prof. Siegel, the author treat also fully the complex simplectic group, say,

$$Z_1 = (AZ+B)(CZ+D)^{-1},$$

$$A\bar{B}' = B\bar{A}', \quad C\bar{D}' = D\bar{C}', \quad A\bar{D}' - B\bar{C}' = I$$

The results of that type have some interesting applications in the arithmatical theory of Hermitian forms.

(929) Hua

Prof. Hua had not yet received Prof. Weyl's letter of May 10/43 offering $1500

24 May, 1943.
Dept. of Math.
Tsing Hua University
Kunming, China.

Recd. July 6/43 Air mail Registered

Dear Professor Weyl,

Thank you ever so much for your letter dated 14 April. I feel very honour to be invited to be a temporary member of the School of Mathematics. I am very regretted that owing to several reasons the present condition makes me impossible to come.

As I told you before, my present condition is desperately poor and I have a familly of six members. There are three points ought to bear in mind: (i) about my familly, (ii) about the journey and (iii) about the living at Princeton. The first one may be solved partly and temperatly by our university. The stipence seems to be hardly to meet the third purpose. Thus, to make an afford to solve (ii) seems to be prematine.

In the near future, I shall sent you a MS. of my tract which was accepted for publication by Vinogradow in the acad. of USSR. and which is the only copy in my hand. It may be useful for the future reference of the institute. It may be a loud speaker of my works.

I ought to confess that I was too sentimental. As I heard Prof. Siegel is

living at Princeton, I forgot all and made a requist to you for coming and without giving any reference of my past deed. For this reason, besides the MS. of the tract, I shall write a report of my pevious results to you. If the Institute would re-consider the situation, I should be greatly delighted.

I am so upset, as I find no way to come. It is my object for a long time to be a pupil of you. My altitute to mathematics is not narrow minded, and I wish to understand the most fruitful parts of mathematics from mathematical philosophy to applied mathematics. For I believe that the mathematical development in China should have a good start, too technical or two narrow minded beginning would prevent the development in the future.

In your letter there is no news about my paper II which was posted at the beginning of Feb. III and IV were ready for a long time. I wish to sent them out as soon as I hear that II is safely arrived. My point of view is quite different from that of Prof. Siegel. Apart from I, there is no dublication of our results. The title of II, III, IV are respectively

II. Classification of hypercircles,

III. Structure of the group of automorphs of a hypercircle,

IV. Studies of Involutions and transformations.

Copy filed (I+W) Ag - Hua

The main difference between our results is that after we arrived at our common object, he went into the possibility of construction of all automorphic (or better Fuchsian) functions and I remains there to determine all the possible symmetric spaces (not necessary bounded) under the symplectic group. (I just learn this terminology from Prof. Siegel's quotation of Cartan's paper). And then I develope the theory into three branches, they are analogous to "Klein's regular polygone", "Elliptic function" and "Fuchsian functions".

Had recd. Siegel referred to and Apr. 9/43 to Board of Economic Warfare

As I found that most of the references given by Prof. Siegel were not available here, I feled so discomfort and disappointed. In particular Cartan's admirable paper is badly needed. Nevertheless, I shall still go on my researches, since, I believe, in the future, some body will give me a fair criticism, in which my circumstances will be taken into account.

I closing, I must express my cordial thanks to you and Dr. Aydelotte for offering me the tempory member of the School of Mathematics, and I am regretted very much for the inacceptance of the kind invitation with stipance $1000.

With best wishes

Yours very sincerely,

L. K. Hua

(1943) Hua

CHINESE EMBASSY
WASHINGTON, D.C.

May 17, 1943

Mr. Hermann Weyl,
The Institute of Advanced Study,
School of Mathematics,
Princeton, N. J.

Daer Mr. Weyl:

I am directed to acknowledge the receipt of your letter of May 10th addressed to the Ambassador together with a letter to be forwarded to Professor Hua Loo-keng at Chungking.

I take pleasure in informing you that the enclosure has been transmitted to the desired destination.

Yours very truly,

CCL/
B/2812

Chu Chi Lok
Attaché - Stagiaire

EXTRACT FROM LETTER OF MAY 10,1943, FROM L.K.HUA TO H.WEYL [filed (HW) A.J.-Hua]

"it seems better to explain that I am a disabled man with one incurable leg. On the other hand, my economic condition is in deadlock, thus a traveling expense seems to be necessity.

(445) Hua

May 10, 1945

Your Excellency:

The School of Mathematics of the Institute for Advanced Study, desirous of promoting closer relations with Chinese mathematics, recently invited Professors Chern Shiing-shen and Hua Loo-keng, both of Tsing Hua University, to join our School as temporary members during the next academic year, September 1945 to May 1944. I wonder whether, in the interest of accelerating the necessary negotiations and arrangements, you would do us the favor of forwarding the enclosed letter to Professor Hua by diplomatic mail, after having taken cognizance of its content?

The negotiations with Professor Chern are a little more advanced, and Professor Chern expects to leave China for this country in July or August.

Respectfully yours,

Hermann Weyl

His Excellency Wei Tao-ming
Chinese Embassy
Washington, D.C.
HW:GB

(945) Hua

May 10, 1943

Dear Professor Hua:

I hope you have received my letter of April 14 offering you a stipend of $1000 in our School of Mathematics for the academic year 1943-44. I am glad to inform you now that I have been authorized by the members of our School and the Director of the Institute to increase the amount of the stipend offered you to $1500.

Even so it is clear that you will have to find funds from other sources to defray your traveling expenses and sustain your family in China while you are away.

I take this opportunity to acknowledge receipt of your manuscript "On the theory of automorphic functions of the n-th order II -- Classification of hypercircles", of the two accompanying letters to Professor Siegel and myself, and of your letter of March 15. As I told you before, it seems impossible to publish the preceding Part I because it duplicates results Siegel recently obtained in his paper on "Symplectic Geometry". However, the results of Part II of your paper seem to be new and interesting, and I expect that the American Journal of Mathematics will accept this part for publication if you consent to such changes by your friend Tuan and Professor Siegel, linguistic as well as mathematical, as they deem advisable.

In reply to your letter of March 15, I regret that the limited resources of our Institute do not make it possible to offer you more than the stipend mentioned above. But I wish to repeat how glad we should be to welcome in our midst a mathematical scholar of your distinction, and I hope that you will succeed in making the necessary arrangements.

Very sincerely yours,

Hermann Weyl

Professor Loo-keng Hua
Mathematics Department
National Tsing Hua University
Kunming, Yunnan, China
HW:GB

Copy sent Ambassador Wei Tao-ming

(1943) Hua

Air mail

April 14, 1943

Dear Professor Loo-keng Hua:

I am authorized by our School of Mathematics and the Director of our Institute, Dr. Aydelotte, to invite you to join us as a temporary member of the School of Mathematics during the academic year 1943-44, and to offer you a stipend of $1000 for the year.

Our academic year consists of two terms, running from September 20 to December 18, and from January 31 to May 6. During this time you would be expected to reside in Princeton. Our Institute is a research institute, and we hope by this invitation to give you an opportunity to continue your research work in contact with the groups of mathematicians assembled in Princeton. You would be able to attend such lectures and seminars as are given in the Institute and in the Mathematics Department of Princeton University, and you would have access to both the Institute's and the University's library facilities.

We realize of course that the amount offered you is not sufficient to finance your journey and your stay in Princeton. What we hope is that a supplementary stipend from your Government or your University will make it possible for you to come. Should the Chinese authorities feel it necessary to apply to our State Department for help in overcoming transportation or other difficulties, please let me know,- we might be able to support their move in Washington.

I told Dr. Tuan about this invitation and asked him to write you in detail about living conditions in Princeton. We have also invited Dr. S. S. Chern for next year, and you may wish to confer with him about the journey if you decide to come.

Our whole group of mathematicians will be delighted to welcome in our midst a Chinese scholar of your distinction.

I take this opportunity to acknowledge receipt of your recent letter containing corrections to your paper "On the theory of automorphic functions of the n-th order, I.Geometrical base." I hope that in the meantime you have received my earlier letter in which I told you that the main body of your results had been anticipated by Siegel. We have made an effort to send you by air mail reprints of the two relevant papers by Siegel, but I am not sure of our success. It is likely, though not absolutely sure, that Professor Siegel will be at the Institute during the next year.

Yours sincerely,

Hermann Weyl

Professor Loo-keng Hua
Mathematics Department
National Tsing Hua University
Kunming, Yunnan, China
HW:GB

(948) Hua

Send Duplicate copies

April 9, 1943

Board of Economic Warfare
Technical Data License Division
252 Seventh Avenue
New York, New York

Gentlemen:

Please examine the attached technical data for exportation.

LICENSE NO.: None
CONSIGNEE: Professor Loo-keng Hua
Mathematics Department
National Tsing Hua University
Kunming, Yunnan, China
ULTIMATE CONSIGNEE: Same as above

NATIONALITY OF CONSIGNEE: Chinese

BUSINESS OF CONSIGNEE: University professor

BUSINESS RELATIONSHIP WITH CONSIGNEE: None. Fellow research-workers in mathematics.

NUMBER OF PACKAGES: 1

SUBJECT: 2 mathematical reprints by Carl Ludwig Siegel of Institute for Advanced Study:
"Symplectic Geometry", published in American Journal of Mathematics, vol. 65, Jan. 1943, pp. 1-86
"Note on Automorphic Functions of Several Variables", published in Annals of Mathematics, vol. 45, October 1942, pp. 613-616

Rec'd. by Hua - Kunming May 24/43

NEED: Mathematical research in China

SECRECY: The data has not been declared secret, confidential or restricted by any officer or agency of the United States.

Very truly yours,

HW:GB

(Professor Hermann Weyl)

P.S. In case it should not be possible to send this by Air Mail, please return to me and advise what can be done. H.W.

BOARD OF ECONOMIC WARFARE

~~WASHINGTON, D.C.~~

OFFICE OF EXPORTS

TECHNICAL DATA LICENSE DIVISION
252 Seventh Avenue
New York, New York

April 8, 1943
FO-1-KSK

Professor Hermann Weyl
The Institute for Advanced Study
Princeton, New Jersey

Re: Your Letter 4/7/43

Dear Professor Weyl:

Either the reprints, or microfilm copies of them, may be forwarded to China in the following manner:

Prepare the data for mailing, placing it into a stamped, addressed envelope, left open. Submit it to this office, together with a cover letter following the attached sample. We will examine the data, and upon approval, place it in the mail.

Your reprints are herewith returned.

Very truly yours,

L. L. Horch

L. L. HORCH, Manager
New York Office
By: L.L.

Enclosures

April 7, 1945

Mr. E. W. Fowler
Technical Data Division
Board of Economic Warfare
~~207 West 24th Street~~
New York City

Dear Mr. Fowler:

Professor Wolfgang Pauli has mentioned you as a person who might be able to help us with the following problem. We should like to send to

Professor Loo-keng Hua
Mathematics Department
National Tsing Hua University
Kunming, Yunnan, China

the enclosed reprints, or microfilm copies, by Professor Carl L. Siegel of this Institute. These reprints, on "Symplectic geometry" (American Journal of Mathematics 65 (1943), 1-86), and "Note on automorphic functions of several variables"(Annals of Mathematics 43 (1942), 613-616) deal with problems on which Professor Hua also has recently been working.

Can you advise me what steps should be taken to obtain the Censor's approval before making the microfilms or paying the considerable Air Mail postage? We shall be very grateful for any assistance you can give.

Sincerely yours,

HW:GB

(Professor Hermann Weyl)

(IAS) Loo-keng Hua

Professor Alexander ✓
Einstein ✓
Morse ✓
Veblen ✓
Weyl

March 24, 1943

In my opinion the two outstanding Chinese mathematicians are Chern and Loo-keng Hua (National Tsing Hua University, Kunming). The latter has made a number of profound contributions to the Hardy-Littlewood-Vinogradoff line of analytic number theory, and in a manuscript which he recently sent me duplicated a considerable part of Siegel's results in his big paper on symplectic geometry. It would be of the greatest value to him to get into closer contact with Siegel; but whether or not that can be done, I consider him and not Chuan-Chih Hsiung as the best second candidate from China.

HERMANN WEYL

15, March, 1943.

Dept. of Math.,
Tsing Hua University
Kunming, China.

Dear Prof. Weyl,

I was told that letters with scientific correspondence is extremely difficult for the censors and then some delay is caused. Thus it seems to be desirable to write you a letter without mentioning of Math.

In my previous letter, I expressed my willingness to come to Princeton to do researches under the inspiration of you and Prof. Siegel.

Now I am going to describe my situation more precisely. I have a family of six members and I am in desperate condition. Thus the travelling expanse (for one) is badly needed and it is better to get a job than a fellowship. (Certainly a high-paid fellowship with travelling expanse may also meet the purpose).

My occupations are:

Reader on Math. of National Tsing Hua University, 1932-1936

Research following of the China Fundation, 1936-1938. (at that time, I did researches at Cambridge, England).

Professor on Math. of National Tsing Hua University, and the Southwest associate university), 1938-present.

Member of institute of the Acadamia Sinica.

First prize of Science of the ministry of Enducation of in China, 1941.

A breif account of my math. works is ~~submitted~~ submitted. (The following word is to the censor: if you find some difficulty with the account on mathematics, please take it off).

Finally, I should like to take the opportunity to express one of my believeness, through my poor English prevents me to do it properly. The old country is on the way for recovery, Science is extremely needed. Thus any help to the young scientists would mean a great help of the reconstruction of the country, and any influence to the young scientists would mean an influence to the history of science in China. The aim for my intension to come to Princeton is not for the personal sake, but for my country. On the country's name, I wish to have a thorough training on Mathematics, and then to develop mathematical science in China along a right way, which seems to be a part of reconstruction.

With best wishes

Yours very sincerely,

L. K. Hua.

(To the censor, if you find any difficulty about this page please take it off without delaying the delivery of the letter).

My work on Math. may be summarized breifly as the following:

1. Additive prime-number theory. I wrote a booklet (about 130 pages) containing original results, and was excepted for publication by Prof. Vinogradov in Acad. of U.S.S.R.

2. Tarry's problem. A record is kept.

3. Exponential Sums. Let $f(x)$ is a poly. of the k-th degree with integer coefficients. Then

$$\sum_{b=1}^{q} e^{2\pi i f(x)/q} = O\left(q^{1-\frac{1}{k}+\varepsilon}\right)$$

where the constant implied by O depends only on k and ε. A great deal applications was obtained.

4. Fourier transforms in the complex domain. (In the corporation with Mr. Shiu). The paper seems to have attracted some attention.

5. Theory of finite groups.

Solved a type of "Anzahl" theorem, the particular cases was obtained by Miller and Kolahoff. A detailed paper is publish in China, and a breif account was sent you before.

6. Character sums and applications

e.g. Euclidean algorithms, least solution of Pell's equation and Primitive root, etc.

7. Lattice point problems.

Two records are kept: (i) Circle problem and (ii) Sphere problem.

8. Modular form of dimension zero.

9. Some studies on "axiomatic treatment of the theory of inequalities", "non-associative algebras" and "almost periodic functions with descripancy" are obtained, but none of them arrive at a stage for publications.

A correction to paper II.

P.7. line 6 read $Z=(A\overline{W}+B)(C\overline{W}+D)^{-1}$* for $\overline{W}=(AZ+B)(CZ+D)^{-1}$.

At the end of the page add a footnote:

* The correspondence may be established by putting

$$Z=-Z_1^{-1}Z_2, \qquad \overline{W}=-\overline{W}_2^{-1}\overline{W}_2.$$

L. K. Hua

(XCS (H-W) Hua

AMERICAN MATHEMATICAL SOCIETY

TEMPLE R. HOLLCROFT
ASSOCIATE SECRETARY

WELLS COLLEGE
AURORA, N.Y.

April 2, 1940

Professor Hermann Weyl
The Institute for Advanced Study
Princeton, New Jersey

Dear Professor Weyl:

Thank you very much for the two abstracts of Dr. L. K. Hua. The two papers will appear by title on the program of the Washington meeting with Dr. Hua introduced by you. I shall send Dr. Hua a copy of the program together with a letter of appreciation and thanks for his abstracts.

I agree with you that we should not be too meticulous in cases of this kind in which an attempt is being made to carry on research under conditions more adverse than those of us, who (so far) have been sheltered, can realize.

There is no hard and fast rule against formulas in abstracts. Formulas are inadvisable, however, from both the author's and the reader's point of view, since the abstracts are printed in undisplayed form, and the formulas must be "strung along" just as sentences, breaking at the end of a line - often in incongruous places.

It will be a pleasure to see you again - this time in Washington.

Yours sincerely,

T. R. Hollcroft

T. R. Hollcroft.

TRH/cp

(HW) Hua

COPY

Apr 2/40

Dr. L. K. Hua
National Southwest Associated University
Kunming, Yunnan, China

Dear Dr. Hua:

It is a great pleasure to receive two papers from you for the program of the Washington Meeting. It is encouraging to all mathematicians to know that you are carrying on research in mathematics in the face of great difficulties.

I shall be glad to receive abstracts of additional papers for presentation to the Society at future meetings. Enclosed are copies of the Washington Meeting program, the announcement of the Summer Meeting, and a pamphlet about the Society.

With kindest regards and best wishes.

Yours sincerely,

T. R. Hollcroft.

TRH/cp