



# Kac (Mark) papers

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## Summary Information

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<b>Repository:</b>	Rockefeller Archive Center
<b>Creator:</b>	Rockefeller University
<b>Creator:</b>	Rockefeller Institute for Medical Research
<b>Creator - aut:</b>	Kac, Mark
<b>Title:</b>	Mark Kac papers, Rockefeller University Faculty
<b>ID:</b>	FA170
<b>Date [inclusive]:</b>	1939-1984
<b>Physical Description:</b>	25.83 Cubic Feet 61 boxes
<b>Physical Description:</b>	61 boxes.
<b>Language of the Material:</b>	English

### Preferred Citation

Information regarding the Rockefeller Archive Center's preferred elements and forms of citation can be found at <http://www.rockarch.org/research/citations.php>

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## Biographical/Historical note

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Mark Kac was born in Poland in 1914. His family was forced to evacuate to Moscow following World War I. Once there, his father, who had been a professor of philosophy at the University of Leipzig, made a living tutoring students in the family's one-room apartment. Kac began studying mathematics at the early age of 5, listening in on his father's lectures. Upon returning to Poland, he was taught by a French governess as a child, learning Russian, French, Hebrew and Polish. At 15 he entered the Lycée of Krzemieniec, studying Latin and Greek as well as mathematics, physics and chemistry. He next entered the Jan Kasimir University of Lvov where he was taught by Hugo Steinhaus, was awarded a doctorate in 1937, and learned English.

In 1938 Kac came to the United States on a scholarship to Johns Hopkins University. From 1939 to 1943, Kac served as an instructor at Cornell University. From 1943, the year he became a citizen, he served as an assistant professor, being promoted to full professor in 1947. In 1961 Kac came to Rockefeller

University, where he spent twenty years, after which he spent the rest of his career at the University of Southern California.

Kac pioneered the modern development of mathematical probability, in particular its applications to statistical physics. This was an introduction of probabilistic methods in number theory, which he developed along with Paul Erdős. The method of quantization now in use involves the Feynman-Kac integral, developed along with Richard Feynman. He published a classic text *Statistical Independence in Probability, Analysis and Number Theory* in 1959. His most famous work is a paper he wrote for the *American Mathematical Monthly* in 1966 titled "Can One Hear the Shape of a Drum?" For this work, Kac received the Chauvenet Prize from the Mathematical Association of America in 1968 for the most outstanding expository article on a mathematical topic. In 1978 he won the George David Birkhoff Prize in Applied Mathematics, a joint prize of the American Mathematical Society and the Society for Industrial and Applied Mathematics.

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## Arrangement note

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Arranged in chronological and alphabetical order.

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## File Plan note

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Former Classification: I 450 K11

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## Administrative Information

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### Publication Statement

Rockefeller Archive Center

15 Dayton Avenue  
Sleepy Hollow 10591  
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URL: <http://www.rockarch.org>

## Revision Description

Paper finding aid converted to EAD/XML by AureXus in 2010. Imported into the Archivists' Toolkit by Becky Robbins. 2010 September 14

## Conditions Governing Access note

This collection is open for scholarly research, with select materials restricted as noted.

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## Controlled Access Headings

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- Statistics
- Statistical physics
- Physics
- Mathematics
- Medical education
- Rockefeller University
- Rockefeller Institute for Medical Research
- Kac, Mark

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## Physical Characteristics and Technical Requirements

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Materials requiring specialized equipment for access (film, audio, video, slides) may be closed to research dependent on availability of the applicable equipment

Brittle or damaged items, or materials otherwise in need of preservation care, may be closed to researchers at the discretion of the RAC Head of Archival Services/Head of Reference.

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## Collection Inventory

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### Correspondence, 1940-1981

Physical Description: 14.52 Cubic Feet

## Scope and Contents note

Includes both personal and professional correspondence.

## Arrangement note

Arranged in alphabetical order by correspondent's last name; some in chronological order.

Title/Description	Instances	
undated	box 1	folder 1
1943-1960	box 1	folder 2
1943-1960	box 1	folder 3
1943-1960	box 1	folder 4
1943-1960	box 1	folder 5
1948	box 1	folder 6
1948	box 1	folder 7
1950s	box 1	folder 8
1950s	box 1	folder 9
1960s	box 1	folder 10
1960	box 1	folder 11
1961	box 1	folder 12
1962-1964	box 1	folder 13
1968-1970	box 2	folder 1
1970s	box 2	folder 2
1970s	box 2	folder 3
1974	box 2	folder 4
1975-1976	box 2	folder 5
1978-1984	box 2	folder 6
1978-1984	box 2	folder 7
1980s	box 2	folder 8
1980s	box 2	folder 9
1980-1981	box 2	folder 10
A	box 3	folder 1
A	box 3	folder 2
Ablowitz, Mark J.	box 3	folder 3

Aleman, Ricardo	box 3	folder 4
Alfred Jurzykowski Foundation	box 3	folder 5
Amassian, Vahe Eugene	box 3	folder 6
American Board of Arts and Sciences	box 3	folder 7
American Association for the Advancement of Science	box 3	folder 8
American Mathematical Society	box 3	folder 9
American Mathematical Society	box 3	folder 10
American Mathematical Society	box 4	folder 1
B	box 4	folder 2
B	box 4	folder 3
B	box 4	folder 4
Baclawski, Kenneth P.	box 4	folder 5
Barany, George	box 4	folder 6
Barcilon, Victor	box 4	folder 7
Barrett, Wayne	box 4	folder 8
Benguria, Rafael	box 4	folder 9
Biographies and Bibliographies	box 4	folder 10
Blum, J.R.	box 5	folder 1
Boehm, George	box 5	folder 2
Boltzmann Symposium	box 5	folder 3
Borowski, Zbigniew	box 5	folder 4
Brookhaven National Laboratory	box 5	folder 5
Burton, Yuri	box 5	folder 6
C	box 5	folder 7
C	box 5	folder 8
C	box 5	folder 9
Cannon, John T.	box 6	folder 1
Case, Kenneth	box 6	folder 2
Catastrophe Theory	box 6	folder 3
Catholic University of America	box 6	folder 4
Chern, S.S.	box 6	folder 5
Chudnovsky, Gregory V.	box 6	folder 6

Chudnovsky, Gregory V.	box 6	folder 7
Chudnovsky, Gregory V.	box 6	folder 8
Chudnovsky, Gregory V.	box 6	folder 9
Chudnovsky, Gregory V.	box 6	folder 10
Cohen, Daniel	box 7	folder 1
Cohen, E.G.D.	box 7	folder 2
Cole and Jaffe	box 7	folder 3
Committee of Concerned Scientists	box 7	folder 4
Conner, Howard E.	box 7	folder 5
Cornell University	box 7	folder 6
Cornell Visiting Fellowship	box 7	folder 7
D	box 7	folder 8
D	box 7	folder 9
Davies, E. Brian	box 8	folder 1
Demetrius, Lloyd A.	box 8	folder 2
Demetrius, Lloyd A.	box 8	folder 3
Denmark	box 8	folder 4
Department of the Navy	box 8	folder 5
Dole, Vincent P.	box 8	folder 6
Donaghey, Robert M.	box 8	folder 7
Drobot, Adam Thomas	box 8	folder 8
Dyson, Freeman	box 8	folder 9
E	box 8	folder 10
England	box 9	folder 1
Erdős, Paul	box 9	folder 2
Eskin, Grisha	box 9	folder 3
F	box 9	folder 4
F	box 9	folder 5
F	box 9	folder 6
Farinholt, Larkin H.	box 9	folder 7
Feinberg, Jerry M.	box 9	folder 8
Filler, William	box 9	folder 9



Flexner Colloquium	box 9	folder 10
Fox, Ronald	box 10	folder 1
Fox, Ronald	box 10	folder 2
Fox, Ronald	box 10	folder 3
G	box 10	folder 4
G	box 10	folder 5
Gallavotti, Giovanni	box 10	folder 6
Gates, D.J.	box 11	folder 1
Gaveau, Bernard	box 11	folder 2
Geneva Conference	box 11	folder 3
General	box 11	folder 4
"George"	box 11	folder 5
Ginn and Company	box 11	folder 6
Glickfield, Barnett W.	box 11	folder 7
Ginn and Company	box 11	folder 6
Glickfield, Barnett W.	box 11	folder 7
Glimm, Jim	box 11	folder 8
Grossberg, Stephen	box 11	folder 9
Grunbaum, Francisco	box 11	folder 10
Gusack, Russel	box 11	folder 11
H	box 12	folder 1
H	box 12	folder 2
Harper, Larry	box 12	folder 3
Hersh, Reuben	box 12	folder 4
Hetnarski, Bogumil	box 12	folder 5
Holsztynski, Wlodzimierz	box 12	folder 6
Hrbacek, Karel	box 12	folder 7
Humboldt Foundation	box 12	folder 8
IBM	box 12	folder 9
IBM	box 12	folder 10
Invitations	box 13	folder 1
Joint Projects Committee for Mathematics	box 13	folder 2

Institut de la Vie	box 13	folder 3
Institut de la Vie	box 13	folder 4
Institut de Mathématiques	box 13	folder 5
Institute of Mathematics Statistics	box 13	folder 6
J	box 13	folder 7
Jaffe, Arthur	box 13	folder 8
Kannai, Yakar	box 13	folder 9
K	box 14	folder 1
K	box 14	folder 2
Kendall, David G.	box 14	folder 3
Kafer, Jack Carl	box 14	folder 4
Klein, Martin J.	box 14	folder 5
Klein, William	box 14	folder 6
Knight, Bruce	box 14	folder 7
Kochen, Manfred	box 14	folder 8
Krein, Mark G.	box 14	folder 9
Kripke, Saul	box 14	folder 10
L	box 14	folder 11
L	box 15	folder 1
L	box 15	folder 2
Ladik, Jr., John F.	box 15	folder 3
Laks, Mitchell	box 15	folder 4
Levy, Sanford	box 15	folder 5
Lewis, John	box 15	folder 6
Liepins, Gunnar	box 15	folder 7
Lin, Ta-Feng	box 15	folder 8
Lipset	box 15	folder 9
Lowell-Putnam Examination	box 15	folder 10
Luttinger, Joaquin	box 15	folder 11
M	box 15	folder 12
M	box 16	folder 1
M	box 16	folder 2

Martin, Donald Anthony	box 16	folder 3
Martin-Lef, Anders	box 16	folder 4
Mayr, Ernst	box 16	folder 5
MIT General	box 16	folder 6
MIT Press	box 16	folder 7
McArthur Foundation	box 16	folder 8
McGraw-Hill Book Company	box 16	folder 9
McKean, Henry P.	box 16	folder 10
McLaughlin, David	box 17	folder 1
McVoy, Eugene J.	box 17	folder 2
Mielniczuk, Wieslaw	box 17	folder 3
Miscellaneous	box 17	folder 4
Miller Institute for Basic Research in Science	box 17	folder 5
Montroll Symposium	box 17	folder 6
Muthuswamy, Bhaskav	box 17	folder 7
N	box 17	folder 8
N	box 17	folder 9
National Academy of Science (NAS)	box 18	folder 1
NAS	box 18	folder 2
NAS	box 18	folder 3
NAS Committee on Human Rights	box 18	folder 4
National Science Foundation (NSF)	box 18	folder 5
NSF	box 18	folder 6
Ndumu, Martin Ngu	box 18	folder 7
Neuroscience Research Program	box 18	folder 8
Norman, Frank	box 18	folder 9
NATO Scientific Committee	box 19	folder 1
NATO Scientific Committee	box 19	folder 2
Northwestern University	box 19	folder 3
Norton, Karl K.	box 19	folder 4
"Nut" file	box 19	folder 5
O	box 19	folder 6

O'Neil, Patrick E.	box 19	folder 7
Onsager, Lars	box 19	folder 8
Oxford	box 19	folder 9
P	box 19	folder 10
P	box 19	folder 11
P	box 19	folder 12
P	box 20	folder 1
Pais, Abraham	box 20	folder 2
Palley, Igor	box 20	folder 3
Papanicolaou, George C.	box 20	folder 4
Pending	box 20	folder 5
Personal Miscellaneous	box 20	folder 6
Petrov, Valentin V.	box 20	folder 7
Phi Beta Kappa	box 20	folder 8
Pincus, Joel	box 20	folder 9
Pinsky, Mark A.	box 20	folder 10
Pittel, Boris G.	box 21	folder 1
Poland	box 21	folder 2
Polish Academy of Sciences	box 21	folder 3
Polish Conference	box 21	folder 4
Polish Conference	box 21	folder 5
Polish Correspondence	box 21	folder 6
Polish Correspondence	box 21	folder 7
Polish Correspondence	box 21	folder 8
Polish Correspondence, 1980-1982	box 22	folder 1
Polish Institute of Arts and Sciences	box 22	folder 2
Positions	box 22	folder 3
Prigogine, Ilya	box 22	folder 4
Prohorv, Yu	box 22	folder 5
Publishers	box 22	folder 6
Putterman, Seth	box 22	folder 7
Putterman, Seth	box 22	folder 8

Q-R	box 23	folder 1
Q-R	box 23	folder 2
Q-R	box 23	folder 3
Radin, Charles	box 23	folder 4
Recommendations	box 23	folder 5
Rees, Mina	box 23	folder 6
Rice and North	box 23	folder 7
Rosenblatt, Murray	box 23	folder 8
Riordan, John	box 23	folder 9
Rosser, Barkley	box 23	folder 10
Rota, Gian-Carlo	box 24	folder 1
Rota, Gian-Carlo	box 24	folder 2
Rockefeller University	box 24	folder 3
Rockefeller University	box 24	folder 4
Russian Correspondence	box 24	folder 5
S	box 24	folder 6
S	box 24	folder 7
S	box 25	folder 1
Sawyer, W.W.	box 25	folder 2
Scarsdale Teachers Association	box 25	folder 3
Schreiber, Morris	box 25	folder 4
Schwartz, Martin	box 25	folder 5
Sellers, Peter	box 25	folder 6
Seth	box 25	folder 7
SIAM & SIMS	box 25	folder 8
SIAM & SIMS	box 25	folder 9
SIAM Board of Trustees	box 26	folder 1
SIAM Board of Trustees	box 26	folder 2
SIAM Prize	box 26	folder 3
Siegert, Arnold J.F.	box 26	folder 4
Sigma XI	box 26	folder 5
Simms, John Carson	box 26	folder 6

Singer, Isadore	box 26	folder 7
Singer, Jonathon	box 26	folder 8
Sloan Foundation, 1972	box 26	folder 9
Sloan Foundation, 1973-1974	box 27	folder 1
Sloan Foundation, 1975-1980	box 27	folder 2
Sloan Foundation, 1975-1980	box 27	folder 3
Sloan Foundation, 1975-1980	box 27	folder 4
Sloan Science Book Committee	box 28	folder 1
Sloan Science Book Committee	box 28	folder 2
Smoluchowski, Marian	box 28	folder 3
Smoluchowski, Marian	box 28	folder 4
Smoluchowski, Roman	box 28	folder 5
Smoluchowski, Zofia	box 28	folder 6
Society for Natural Philosophy	box 28	folder 7
Springer	box 28	folder 8
Steinhaus, Hugo	box 28	folder 9
Stevens, Charles F.	box 28	folder 10
Stroock, Daniel W.	box 28	folder 11
Sylvester, Garrett Smith	box 28	folder 12
Szygowski, Juliusz	box 28	folder 13
T	box 29	folder 1
T	box 29	folder 2
Tainiter, Melvin	box 29	folder 3
Tharp, Leslie H.	box 29	folder 4
Thompson, Colin J.	box 29	folder 5
Thompson, Colin J.	box 29	folder 6
Thompson, Colin J.	box 29	folder 7
"The Three-body Toda System"	box 30	folder 1
Tupitsyn, Victor	box 30	folder 2
Turner, John William	box 30	folder 3
U-V	box 30	folder 4
Ueno, Tadashi	box 30	folder 5

Uhlenbeck, G.E.	box 30	folder 6
Uhlenbeck, G.E.	box 30	folder 7
Uhlenbeck, G.E.	box 30	folder 8
Uhlenbeck, G.E.	box 30	folder 9
Ulam, Stan	box 31	folder 1
Ulam, Stan	box 31	folder 2
USSR Visa	box 31	folder 3
Universities	box 31	folder 4
Van Moerbeke, Pierre	box 31	folder 5
Van Moerbeke, Pierre	box 31	folder 6
Van Moerbeke, Pierre	box 31	folder 7
Velocity	box 31	folder 8
W	box 32	folder 1
W	box 32	folder 2
W	box 32	folder 3
Wang, Hao	box 32	folder 4
Ward, John	box 32	folder 5
Wegrowicz, Lucjan	box 32	folder 6
Weinberg, Alvin M.	box 32	folder 7
Weizmann Institute of Science	box 32	folder 8
Weizmann Institute of Science	box 32	folder 9
Weizmann Institute of Science	box 32	folder 10
Weizmann Institute of Science	box 33	folder 1
Weizmann Institute of Science	box 33	folder 2
Weizmann Institute of Science	box 33	folder 3
Windwer, Stanley	box 33	folder 4
Wu, Tai Te	box 33	folder 5
X-Y-Z	box 33	folder 6
X-Y-Z	box 33	folder 7
Yale University Council Committee	box 33	folder 8
Yanenko Affair	box 33	folder 9
Zasada, Christopher S.	box 33	folder 10

Ziff, Robert

box 33

folder 11

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Includes early drafts of published articles; some correspondence.

**Arrangement note**

Arranged in alphabetical order by manuscript title or subject.

Title/Description	Instances	
1945-1947	box 34	folder 1
1975	box 34	folder 2
"About Brownian Motion and Bound States"	box 34	folder 3
Bibliography of Multivariate Statistical Analysis	box 34	folder 4
Birkhoff's Ergodic Theorem	box 34	folder 5
Birkhoff Prize Talks, Atlanta, 1978	box 34	folder 6
Catastrophe Theory as Applied to the Social and Biological Sciences	box 34	folder 7
Computers	box 34	folder 8
Enciclopedia Italiana	box 34	folder 9
Feynman Manuscript	box 34	folder 10
Functional Integration	box 34	folder 11
Gabor Szego	box 34	folder 12
"A Heuristic Approach to Ornstein-Zernike Theory"	box 34	folder 13
Journals	box 34	folder 14
Krein Volume	box 34	folder 15
"The Making of Statistician"	box 34	folder 16
"Marceli Stark in Memoriam"	box 34	folder 17
"Marian Smoluchowski and the Evolution of Statistical Thought in Physics"	box 34	folder 18
"Master Equations for Finite Systems"	box 34	folder 19
"A Mathematical View of the Theory of Changes Phase"	box 34	folder 20



"Mathematics: Reflections on the Present and Thoughts About the Future"	box 35	folder 1
"Mathematics in the Physical Sciences"	box 35	folder 2
Miscellaneous Historical Papers and Letters	box 35	folder 3
"A Note on Eigenvalues and Eigenfunctions of the Laplace Operator"	box 35	folder 4
One-dimensional Objects	box 35	folder 5
Papers, 1978-1981	box 35	folder 6
Polish manuscripts, 1942	box 35	folder 7
[Probability Density]	box 35	folder 8
Pythagorean Theorem on the Surface of a Sphere	box 35	folder 9
Reviews of Kac Articles	box 35	folder 10
Scientific American Article-first draft	box 35	folder 11
Scientific American Article-revised version	box 35	folder 12
"The Search"	box 36	folder 1
"Some Applications of the Theory of Brownian Motion to Potential Theory"	box 36	folder 2
"Some Remarks on the Various Ensembles Used"	box 36	folder 3
"Statistical Analysis of a Certain Random Walk	box 36	folder 4
"Statistical Mechanics of Some One-dimensional Systems"	box 36	folder 5
Steinhaus Manuscript	box 36	folder 6
Steinhaus' Polish Manuscripts	box 36	folder 7
Taylor Manuscripts	box 36	folder 8
"The Themes and Trends of Mathematics"	box 36	folder 9
"A Theory of Diffusion"	box 36	folder 10
Von Neumann, John	box 36	folder 11

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## Administrative Files, 1958-1971

Physical Description: 1.32 Cubic Feet

### Scope and Contents note

Includes editorial work for professional journals and administrative work for Rockefeller University.

**Arrangement note**

Arranged in alphabetical order by subject.

<b>Title/Description</b>	<b>Instances</b>	
Appointments and Promotions	box 37	folder 1
Memoranda/Meetings	box 37	folder 2
Calendars, 1971-1975	box 37	folder 3
Calendars, 1976-1980	box 37	folder 4
National Academy of Science (NAS)	box 37	folder 5
NAS Editorial Board	box 37	folder 6
NAS Exchange of Scientists USSR	box 37	folder 7
NAS Nominations	box 37	folder 8
NAS Report Review Committee	box 37	folder 9
NAS Report Review Committee	box 38	folder 1
NAS "TNG in Statistical Mathematics"	box 38	folder 2
"Nut" file	box 38	folder 3
Press	box 38	folder 4
Press	box 38	folder 5
Rockefeller University (RU) Computer Center	box 38	folder 6
RU Faculty Appointments	box 38	folder 7
RU Faculty Club	box 38	folder 8
RU General, 1973	box 38	folder 9
RU General, 1974	box 39	folder 1
RU General, 1975	box 39	folder 2
RU General, 1976	box 39	folder 3
RU General, 1977	box 39	folder 4
RU General, 1978	box 39	folder 5
RU General, 1979-1981	box 39	folder 6
RU President's Office	box 39	folder 7
RU Press	box 39	folder 8
Security	box 39	folder 9

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## Lecture Files, 1960-1975

Physical Description: 1.76 Cubic Feet

### Scope and Contents note

Includes transcripts of lectures, some correspondence, and notes.

### Arrangement note

Arranged in alphabetical order by lecture title or subject.

Title/Description	Instances	
Lecture notes Summer, 1995	box 40	folder 1
Notes, 1964-1965	box 40	folder 2
1972	box 40	folder 3
1978-1979	box 40	folder 4
Brandeis Lectures on Phase Transitions	box 40	folder 5
Brandeis University Summer School, 1966	box 40	folder 6
Catastrophe Theory	box 40	folder 7
Chance and Regularity, Merrimack College, 1965	box 40	folder 8
Christmas Lecture Notes	box 40	folder 9
City University of New York, Fall, 1964	box 40	folder 10
"Conference on Mathematical Theory of Elementary...."	box 40	folder 11
Congress of Scholars and Scientists of Polish Background	box 40	folder 12
Cornell University Centenary, 1965 April	box 40	folder 13
Dog Flea Model Pictures	box 41	folder 1
Engineering College Council-Cornell University	box 41	folder 2
Ferromagnetism	box 41	folder 3
Fifth Berkeley Symposium on Mathematics	box 41	folder 4
Gas Dynamics Colloquium-Northwestern University, 1964	box 41	folder 5
George Washington Project	box 41	folder 6
Gibbs Lecture and Related Material	box 41	folder 7
Harrelson Lectures, 1965 November 29-December 3	box 41	folder 8
Hierarchical Model	box 41	folder 9
Holiday Lectures, 1962	box 41	folder 10
Important Lectures	box 41	folder 11
Introduction to the General Theory of Relativity		

	box 42	folder 1
Josiah Willard Gibbs Lecture, 1967 January 24	box 42	folder 2
Kac Lectures	box 42	folder 3
Lecture Notes on Thermodynamics	box 42	folder 4
Lectures in Probability	box 42	folder 5
Leiden, 1963 April 20	box 42	folder 6
MAA Cooperative Summer Seminar	box 42	folder 7
Mathematics-Science Seminars Summer, 1967	box 42	folder 8
MacMillan Company	box 42	folder 9
MIT Conference on Information Transfer, 1965 August 2	box 42	folder 10
NAS Symposium on Stability of Celestial Mechanics, 1967 June-July	box 43	folder 1
Notes on 1947-1948 Kac Lectures by Bill Newcomb, 1947-1948	box 43	folder 2
Potential Theory in Three Dimensions	box 43	folder 3
Probability Theory and Differential Equations	box 43	folder 4
"The Pythagorean Theorem on the Surface of a Sphere", 1966	box 43	folder 5
Relevance of the College Experience March 1966, 1966 March	box 43	folder 6
Rockefeller Institute Holiday Science Lectures	box 43	folder 7
Rota, G.C.	box 43	folder 8
Schedules	box 43	folder 9
Sigma XI	box 43	folder 10
Science and Engineering Television, 1963 February 14	box 43	folder 11
SIAM, 1960-1965	box 44	folder 1
SIAM, 1960-1965	box 44	folder 2
SIAM Meeting Courant Symposium, 1965 June	box 44	folder 3
Society for Natural Philosophy, 1966 October 21-22	box 44	folder 4
Some Interconnections between Mathematics and Other Disciplines	box 44	folder 5
Swathmore College Fall, 1965	box 44	folder 6
Towson State College Baltimore, 1966 October 26	box 44	folder 7
University of Kentucky Centennial, 1965	box 44	folder 8
Various Notes	box 44	folder 9
Wayne State University	box 44	folder 10

Wesleyan University, 1965 February 8-13	box 44	folder 11
Wittenberg University Address, 1966 October 13	box 44	folder 12

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## Laboratory Notebooks, 1942-1964

Physical Description: 4.84 Cubic Feet

### Scope and Contents note

Includes notes of laboratory experiments.

### Arrangement note

Arranged in chronological and in alphabetical order.

Title/Description	Instances	
1942	box 45	folder 1
Notebook III, 1946 October	box 45	folder 2
1952	box 45	folder 3
1953	box 45	folder 4
Summer 1953	box 45	folder 5
1954	box 45	folder 6
1957 November	box 45	folder 7
1959 March	box 45	folder 8
1960s	box 45	folder 9
1960 January	box 45	folder 10
1960 July-August	box 46	folder 1
1961 January-June	box 46	folder 2
1961 March	box 46	folder 3
1961 September	box 46	folder 4
1962 January	box 46	folder 5
1962 October	box 46	folder 6
1963 January	box 46	folder 7
1963 February	box 47	folder 1
1963 April-May	box 47	folder 2
1963 June	box 47	folder 3

1963 July	box 47	folder 4
1963 August	box 47	folder 5
1964 January	box 47	folder 6
1964 May	box 47	folder 7
1964 May	box 47	folder 8
1965 January	box 48	folder 1
1965 July	box 48	folder 2
1966 June	box 48	folder 3
1966 August	box 48	folder 4
1967 February	box 48	folder 5
1967 October	box 48	folder 6
1968 December-1969 June	box 48	folder 7
1968 December	box 48	folder 8
1969 August	box 48	folder 9
1970 October	box 49	folder 1
1971 March	box 49	folder 2
1971 August	box 49	folder 3
197? February	box 49	folder 4
1973 November	box 49	folder 5
1974 August	box 49	folder 6
Algebra Over the Complex Number	box 49	folder 7
Analytic Number Theory	box 49	folder 8
Benel Functions	box 50	folder 1
Complex Variables	box 50	folder 2
Complex Variables-Math 531/32	box 50	folder 3
Complex Variables-Math 531/32	box 50	folder 4
Derivation of Boltzmann's Equation	box 50	folder 5
Ehrenfest Example	box 50	folder 6
Ehrenfest Model	box 50	folder 7
Equation of Continuity	box 50	folder 8
4-body Toda Problem	box 50	folder 9
Generalized Diffusion Theory	box 50	folder 10

Kinetic Theory	box 51	folder 1
Kinetic Theory	box 51	folder 2
Kinetic Theory and Related Topics	box 51	folder 3
Langenian Equation for a Brownian Particle	box 51	folder 4
Linear Boltzmann Equation	box 51	folder 5
Linville's Equation	box 51	folder 6
Marnoff Chains	box 51	folder 7
"Master Equation" for the Simplified Model	box 51	folder 8
Mathematical Physics	box 51	folder 9
Mathematics 400	box 51	folder 10
Mathematics 721-22	box 51	folder 11
Matrix of Transitions Probabilities	box 52	folder 1
Method of Steepest Descent	box 52	folder 2
Miscellaneous	box 52	folder 3
Miscellaneous	box 52	folder 4
Miscellaneous II	box 52	folder 5
Miscellaneous Notes	box 52	folder 6
Moran Models	box 52	folder 7
Non-linear Models	box 53	folder 1
Notebook, 1946 August 1	box 53	folder 2
Notebook, 1946 August 2	box 53	folder 3
Notebook, 1947 March 5	box 53	folder 4
Notebook, 1946 November 9	box 53	folder 5
"On the Distribution of Distances of Points Chosen at Random"	box 53	folder 6
"On the Distribution of Eigenvalues of Certain Integral Equations"	box 53	folder 7
"On the Theory of Random Noise in Radio Receivers"	box 53	folder 8
Particle Density	box 53	folder 9
Princeton, 1951-1952	box 54	folder 1
"Probabilistic Approach to Kinetic Theory of Gases"	box 54	folder 2
Propagation of sound in rarefied gases	box 54	folder 3
Ray's derivation of Spitzer's Theorem	box 54	folder 4
Rayleigh's treatment of convection	box 54	folder 5

Remarks on the first passage time for the Uhlenbeck-Ornstein Process	box 54	folder 6
Remarks on Markoff Chains	box 54	folder 7
Rotating bucket notes	box 54	folder 8
Second Law of Thermodynamics	box 54	folder 9
Spherical Model	box 54	folder 10
Statistical Mechanics Seminar Spring, 1948	box 55	folder 1
Statistical Thermodynamics	box 55	folder 2
Stellar Statistics	box 55	folder 3
Three-body Toda problem	box 55	folder 4
Theory of Random Process, 1948	box 55	folder 5
Translation Kernels	box 55	folder 6
Two-dimensional Markoff Process	box 55	folder 7
Uhlenbeck's Notebook on Quantum Electrodynamics	box 55	folder 8
[unidentified]	box 55	folder 9

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## Audio-Visual Material, 1960s

Physical Description: 0.5 Cubic Feet

### Scope and Contents note

Recordings of several lectures and 14 glass slides, unidentified.

### Arrangement note

Arranged in chronological order by title of lecture.

Title/Description	Instances	
"Role of Mathematical Models in Science", 1969 February 12	box 56	folder 1
<u>Conditions Governing Access:</u>		
<b>Conditions Governing Access</b>		
<p>RAC is unable to provide access to obsolete media. When feasible, a digital surrogate may be created via special order. All applicable charges will apply. See RAC Head of Archival Services or RAC Head of Digital Programs for details.</p>		
"How to Hear the Shape of a Drum", 1964 August	box 56	folder 2
<u>Conditions Governing Access:</u>		



## Conditions Governing Access

RAC is unable to provide access to obsolete media. When feasible, a digital surrogate may be created via special order. All applicable charges will apply. See RAC Head of Archival Services or RAC Head of Digital Programs for details.

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"How to Hear the Shape of a Drum", 1964 August

box 56

folder 3

Conditions Governing Access:

## Conditions Governing Access

RAC is unable to provide access to obsolete media. When feasible, a digital surrogate may be created via special order. All applicable charges will apply. See RAC Head of Archival Services or RAC Head of Digital Programs for details.

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"How to Hear the Shape of a Drum", 1964 August

box 56

folder 4

Conditions Governing Access:

## Conditions Governing Access

RAC is unable to provide access to obsolete media. When feasible, a digital surrogate may be created via special order. All applicable charges will apply. See RAC Head of Archival Services or RAC Head of Digital Programs for details.

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"Computer Music"

box 56

folder 5

Conditions Governing Access:

## Conditions Governing Access

RAC is unable to provide access to obsolete media. When feasible, a digital surrogate may be created via special order. All applicable charges will apply. See RAC Head of Archival Services or RAC Head of Digital Programs for details.

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"Wiener"

box 56

folder 6

Conditions Governing Access:

## Conditions Governing Access

RAC is unable to provide access to obsolete media. When feasible, a digital surrogate may be created via special order. All applicable charges will apply. See RAC Head of Archival Services or RAC Head of Digital Programs for details.

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[unidentified reel]

box 56

folder 7

Conditions Governing Access:

## Conditions Governing Access

RAC is unable to provide access to obsolete media. When feasible, a digital surrogate may be created via special order. All applicable charges will apply. See RAC Head of Archival Services or RAC Head of Digital Programs for details.

14 unidentified glass slides, 1964

box 56

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## Student Thesis, 1940-1970

Physical Description: 1.32 Cubic Feet

### Scope and Contents note

Includes students' theses who had been advised by Kac.

### Arrangement note

Arranged in alphabetical order by student's last name.

Title/Description	Instances	
Eustaquio S. Baclic, Jr., 1953	box 57	folder 1
Harlan G.H. Bartram, 1950	box 57	folder 2
Donald Elro Bedo, 1957	box 57	folder 3
Jack Logan Bellamy, 1950	box 57	folder 4
Martin Roy Bates, 1949	box 57	folder 5
Tseng Tung Cheng, 1949	box 57	folder 6
Robert Cohen, 1956	box 57	folder 7
Joanne Elliott, 1949	box 57	folder 8
Ernest Slavko Elyash, 1950	box 57	folder 9
Abraham Morton Mark, 1945	box 59	folder 1
Abraham Morton Mark, 1947	box 59	folder 2
Henry S. McGaughan, 1949	box 59	folder 3
David Frederick Neu, 1960	box 59	folder 4
David S. Newman, 1963	box 59	folder 5
Alfred Milton Peiser, 1944	box 59	folder 6
Murray Rosenblatt, 1949	box 59	folder 7
Irma Schocken, 1946	box 59	folder 8

Jerome C. Smith, 1945	box 59	folder 9
Murray R. Spiegel, 1949	box 60	folder 1
Alan Gustave Konheim, 1960	box 60	folder 2
Paul Joseph Lochak, 1951	box 60	folder 3
William Judson Leveque, 1947	box 60	folder 4
Charles C. Torrance, 1927	box 60	folder 5
Michael Waldner, 1948	box 60	folder 6

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## Personal File, 1939-1984

Physical Description: 0.25 Cubic Feet

### Scope and Contents note

Includes biographical material and photographs.

### Arrangement note

Arranged in chronological order.

Title/Description	Instances	
Biographical material	box 61	folder 1
Photographs	box 61	folder 2

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