



Kac (Mark) papers

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Rockefeller Archive Center

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Summary Information

| | |
|----------------------------------|---|
| Repository: | Rockefeller Archive Center |
| Creator - aut: | Kac, Mark |
| Title: | Mark Kac papers, Rockefeller University Faculty |
| ID: | FA170 |
| Date [inclusive]: | 1939-1984 |
| Physical Description: | 25.83 Cubic Feet 61 boxes |
| Physical Description: | 61 boxes. |
| Language of the Material: | 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

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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Scope and Contents

Types of records include: correspondence, manuscripts, administrative files, notes, personal material, student work, and audio-visual materials.

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Arrangement note

Arranged in chronological and alphabetical order.

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File Plan note

Former Classification: I 450 K11

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Administrative Information

Publication Statement

Rockefeller Archive Center

15 Dayton Avenue

Sleepy Hollow 10591

archive@rockarch.org

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

Open for research with select materials restricted as noted. Brittle or damaged items are available at the discretion of RAC. Researchers interested in accessing digital media (floppy disks, CDs, DVDs, etc.) or audiovisual material (audio cassettes, VHS, etc.) in this collection must use an access surrogate. The original items may not be accessed because of preservation concerns. To request an access surrogate be made, or if you are unsure if there is an access surrogate, please contact an archivist.

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Controlled Access Headings

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

Collection Inventory

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 |

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|---|-------|-----------|
| 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 |

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| 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 |

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| 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 |

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| 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 |

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| 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 |

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| 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 |

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| 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 |

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| 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 |

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| "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 |

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| 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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Manuscripts, 1940-1981

Physical Description: 1.32 Cubic Feet

Scope and Contents note

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" | | |

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|---|--------|-----------|
| | 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.

| Title/Description | Instances | |
|---|-----------|----------|
| 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 | | |

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| | 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 |

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| 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> : | | |

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.

| | | |
|--|--------|----------|
| "How to Hear the Shape of a Drum", 1964 August | box 56 | folder 2 |
|--|--------|----------|

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.

| | | |
|--|--------|----------|
| "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.

| | | |
|--|--------|----------|
| "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.

| | | |
|------------------|--------|----------|
| "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.

| | | |
|----------|--------|----------|
| "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.

| | | |
|---------------------|--------|----------|
| [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. Baclig, 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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