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A classic escape nightmare, *Chasing Homer* is sped on not only by Krasznahorkai's signature velocity, but also by a unique musical score and intense illustrations. In this thrilling chase narrative, a hunted being escapes certain death at breakneck speed—careening through Europe, heading blindly South. Faster and faster, escaping the assassins, our protagonist flies forward, blending into crowds, adjusting to terrains, hopping on and off ferries, always desperately trying to stay a step ahead of certain death: the past did not exist, only what was current existed—a prisoner of the instant, rushing into this instant, an instant that had no continuation ... Krasznahorkai—celebrated for the exhilarating energy of his prose—outdoes himself in *Chasing Homer*. And this unique collaboration boasts beautiful full-color paintings by Max Neumann and—reaching out of the book proper—the wildly percussive music of Szilveszter Miklós scored for each chapter (to be accessed by the reader via QR codes).

John von Neumann (1903-1957) was unquestionably one of the most brilliant scientists of the twentieth century. He made major contributions to quantum

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mechanics and mathematical physics and in 1943 began a new and all-too-short career in computer science. William Aspray provides the first broad and detailed account of von Neumann's many different contributions to computing. These, Aspray reveals, extended far beyond his well-known work in the design and construction of computer systems to include important scientific applications, the revival of numerical analysis, and the creation of a theory of computing. Aspray points out that from the beginning von Neumann took a wider and more theoretical view than other computer pioneers. In the now famous EDVAC report of 1945, von Neumann clearly stated the idea of a stored program that resides in the computer's memory along with the data it was to operate on. This stored program computer was described in terms of idealized neurons, highlighting the analogy between the digital computer and the human brain. Aspray describes von Neumann's development during the next decade, and almost entirely alone, of a theory of complicated information processing systems, or automata, and the introduction of themes such as learning, reliability of systems with unreliable components, self-replication, and the importance of memory and storage capacity in biological nervous systems; many of these themes remain at the heart of current investigations in parallel or neurocomputing. Aspray allows the record to speak for itself. He unravels an intricate sequence

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of stories generated by von Neumann's work and brings into focus the interplay of personalities centered about von Neumann. He documents the complex interactions of science, the military, and business and shows how progress in applied mathematics was intertwined with that in computers. William Aspray is Director of the Center for the History of Electrical Engineering at The Institute of Electrical and Electronics Engineers. Marina Whitman is the daughter and only child of John von Neumann, one of the five Hungarian scientific geniuses dubbed "the Martians" by their colleagues, a figure often hailed as the greatest mathematician of the 20th century and even as the greatest scientist after Einstein. He was a key figure in the Manhattan project; the inventor of game theory; the pioneer developer of the modern stored-program electronic computer; and, right up until his death, an adviser to the top echelons of the American military establishment. Whitman's memoir is the story of how the cosmopolitan environment in which she was immersed, the demanding expectations of her parents, and her own struggles to emerge from the shadow of a larger-than-life parent shaped her life and work. Starting as, in her words, "a trailing spouse," she rose to become a noted academic during the 1960s and '70s, casting her teaching and writing in the framework of globalization before the word had been invented.

She was the first woman ever to serve on the President's Council of Economic Advisers and participated actively in U.S. efforts to reshape the international monetary and financial system during the early 1970s. She pioneered the role of women on the boards of leading multinational corporations, and became the highest-ranking female executive in the American auto industry in the 1980s, serving not only as GM's vice president and chief economist but also as its Cassandra while the firm persisted along a path that led eventually to its collapse into bankruptcy.

John von Neumann was a Jewish refugee from Hungary — considered a “genius” like fellow Hungarians Leo Szilard, Eugene Wigner and Edward Teller — who played key roles developing the A-bomb at Los Alamos during World War II. As a mathematician at Princeton's Institute for Advanced Study (where Einstein was also a professor), von Neumann was a leader in the development of early computers. Later, he developed the new field of game theory in economics and became a top nuclear arms policy adviser to the Truman and Eisenhower administrations. “I always thought [von Neumann's] brain indicated that he belonged to a new species, an evolution beyond man. Macrae shows us in a lively way how this brain was nurtured and then left its great imprint on the world.” — Hans A. Bethe, Cornell University “The book makes for

utterly captivating reading. Von Neumann was, of course, one of this century's geniuses, and it is surprising that we have had to wait so long... for a fully fleshed and sympathetic biography of the man. But now, happily, we have one. Macrae nicely delineates the cultural, familial, and educational environment from which von Neumann sprang and sketches the mathematical and scientific environment in which he flourished. It's no small task to render a genius like von Neumann in ordinary language, yet Macrae manages the trick, providing more than a glimpse of what von Neumann accomplished intellectually without expecting the reader to have a Ph.D. in mathematics. Beyond that, he captures von Neumann's qualities of temperament, mind, and personality, including his effortless wit and humor. And [Macrae] frames and accounts for von Neumann's politics in ways that even critics of them, among whom I include myself, will find provocative and illuminating." — Daniel J. Kevles, California Institute of Technology "A lively portrait of the hugely consequential nonmathematician-physicist-et al., whose genius has left an enduring impress on our thought, technology, society, and culture. A double salute to Steve White, who started this grand book designed for us avid, nonmathematical readers, and to Norman Macrae, who brought it to a triumphant conclusion." — Robert K. Merton, Columbia University "The first full-scale

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biography of this polymath, who was born Jewish in Hungary in 1903 and died Roman Catholic in the United States at the age of 53. And Mr. Macrae has some great stories to tell... Mr. Macrae's biography has rescued a lot of good science gossip from probable extinction, and has introduced many of us to the life story of a man we ought to know better." — Ed Regis, The New York Times "A nice and fascinating picture of a genius who was active in so many domains." —Zentralblatt MATH "Biographer Macrae takes a 'viewspaperman' approach which stresses the context and personalities associated with von Neumann's remarkable life, rather than attempting to give a detailed scholarly analysis of von Neumann's papers. The resulting book is a highly entertaining account that is difficult to put down." — Journal of Mathematical Psychology "A full and intimate biography of 'the man who consciously and deliberately set mankind moving along the road that led us into the Age of Computers.'" — Freeman Dyson, Princeton, NJ "It is good to have a biography of one of the most important mathematicians of the twentieth century, even if it is a biography that focuses much more on the man than on the mathematics." — Fernando Q. Gouvêa, Mathematical Association of America "Based on much research, his own and that of others (especially of Stephen White), Macrae has written a valuable biography of this remarkable genius of our century, without the

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opacity of technical (mathematical) dimensions that are part of the hero's intellectual contributions to humanity. Interesting, informative, illuminating, and insightful.” — Choice Review “Macrae paints a highly readable, humanizing portrait of a man whose legacy still influences and shapes modern science and knowledge.” — Resonance, Journal of Science Education “In this affectionate, humanizing biography, former Economist editor Macrae limns a prescient pragmatist who actively fought against fascism and who advocated a policy of nuclear deterrence because he foresaw that Stalin's Soviet Union would rapidly acquire the bomb and develop rocketry... Macrae makes [von Neumann's] contributions accessible to the lay reader, and also discusses von Neumann's relationships with two long-suffering wives, his political differences with Einstein and the cancer that killed him.” — Publishers Weekly “Macrae's life of the great mathematician shows dramatically what proper care and feeding can do for an unusually capacious mind.” — John Wilkes, Los Angeles Times

In his work on rings of operators in Hilbert space, John von Neumann discovered a new mathematical structure that resembled the lattice system L_n . In characterizing its properties, von Neumann founded the field of continuous geometry. This book, based on von Neumann's lecture notes, begins with the development of the axioms of continuous geometry,

dimension theory, and--for the irreducible case--the function $D(a)$. The properties of regular rings are then discussed, and a variety of results are presented for lattices that are continuous geometries, for which irreducibility is not assumed. For students and researchers interested in ring theory or projective geometries, this book is required reading.

The ideas of John von Neumann have had a profound influence on modern mathematics and science. One of the great thinkers of our century, von Neumann initiated major branches of mathematics--from operator algebras to game theory to scientific computing--and had a fundamental impact on such areas as self-adjoint operators, ergodic theory and the foundations of quantum mechanics, and numerical analysis and the design of the modern computer. This volume contains the proceedings of an AMS Symposium in Pure Mathematics, held at Hofstra University, in May 1988. The symposium brought together some of the foremost researchers in the wide range of areas in which von Neumann worked. These articles illustrate the sweep of von Neumann's ideas and thinking and document their influence on contemporary mathematics. In addition, some of those who knew von Neumann when he was alive have presented here personal reminiscences about him. This book is directed to those interested in operator theory, game

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theory, ergodic theory, and scientific computing, as well as to historians of mathematics and others having an interest in the contemporary history of the mathematical sciences. This book will give readers an appreciation for the workings of the mind of one of the mathematical giants of our time.

Based upon the principle that graph design should be a science, this book presents the principles of graph construction. The orientation of the material is toward graphs in technical writings, such as journal articles and technical reports. But much of the material is relevant for graphs shown in talks and for graphs in nontechnical publications. -- from back cover.

Galileo and Newton's work towards the mathematisation of the physical world; Leibniz's universal logical calculus; the Enlightenment's *mathématique sociale*. John von Neumann inherited all these aims and philosophical intuitions, together with an idea that grew up around the Vienna Circle of an ethics in the form of an exact science capable of guiding individuals to make correct decisions. With the help of his boundless mathematical capacity, von Neumann developed a conception of the world as a mathematical game, a world globally governed by a universal logic in which individual consciousness moved following different strategies: his vision guided him from set theory to quantum mechanics, to economics and to his theory of automata

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(anticipating artificial intelligence and cognitive science). This book provides the first comprehensive scientific and intellectual biography of John von Neumann, a man who perhaps more than any other is representative of twentieth century science.

John von Neumann (1903-1957) was undoubtedly one of the scientific geniuses of the 20th century. The main fields to which he contributed include various disciplines of pure and applied mathematics, mathematical and theoretical physics, logic, theoretical computer science, and computer architecture. Von Neumann was also actively involved in politics and science management and he had a major impact on US government decisions during, and especially after, the Second World War. There exist several popular books on his personality and various collections focusing on his achievements in mathematics, computer science, and economy.

Strangely enough, to date no detailed appraisal of his seminal contributions to the mathematical foundations of quantum physics has appeared. Von Neumann's theory of measurement and his critique of hidden variables became the touchstone of most debates in the foundations of quantum mechanics. Today, his name also figures most prominently in the mathematically rigorous branches of contemporary quantum mechanics of large systems and quantum field theory. And finally - as one of his last lectures, published in this volume for the first time, shows - he considered the relation of quantum logic and quantum mechanical probability as his most important problem for the second half of the twentieth century. The present volume embraces both

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historical and systematic analyses of his methodology of mathematical physics, and of the various aspects of his work in the foundations of quantum physics, such as theory of measurement, quantum logic, and quantum mechanical entropy. The volume is rounded off by previously unpublished letters and lectures documenting von Neumann's thinking about quantum theory after his 1932 *Mathematical Foundations of Quantum Mechanics*. The general part of the *Yearbook* contains papers emerging from the Institute's annual lecture series and reviews of important publications of philosophy of science and its history.

John von Neuman was perhaps the most influential mathematician of the twentieth century, especially if his broad influence outside mathematics is included. Not only did he contribute to almost all branches of mathematics and created new fields, but he also changed post-World War II history with his work on the design of computers and with being a sought-after technical advisor to many figures in the U.S. military-political establishment in the 1940s and 1950s. The present volume is the first substantial collection of (previously mainly unpublished) letters written by von Neumann to colleagues, friends, government officials, and others. The letters give us a glimpse of the thinking of John von Neumann about mathematics, physics, computer science, science management, education, consulting, politics, and war. Readers of quite diverse backgrounds will find much of interest in this fascinating first-hand look at one of the towering figures of twentieth century science.

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A double biography compares the lives and careers of two innovative mathematicians and assesses their respective contributions in the areas of quantum mechanics and cybernetics

In 1942, the logician Kurt Godel and Albert Einstein became close friends; they walked to and from their offices every day, exchanging ideas about science, philosophy, politics, and the lost world of German science. By 1949, Godel had produced a remarkable proof: In any universe described by the Theory of Relativity, time cannot exist. Einstein endorsed this result reluctantly but he could find no way to refute it, since then, neither has anyone else. Yet cosmologists and philosophers alike have proceeded as if this discovery was never made. In *A World Without Time*, Palle Yourgrau sets out to restore Godel to his rightful place in history, telling the story of two magnificent minds put on the shelf by the scientific fashions of their day, and attempts to rescue the brilliant work they did together. John von Neumann was perhaps the most influential mathematician of the twentieth century, especially if his broad influence outside mathematics is included. The present volume is the first substantial collection of (previously mainly unpublished) letters written by von Neumann to colleagues, friends, government officials, and others. The letters give us a glimpse of the thinking of John von Neumann about mathematics, physics, computer science, science management, education, consulting, politics, and war. Readers of quite diverse backgrounds will find much of interest in this first-hand look at one of the towering figures of twentieth century

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This is the classic work upon which modern-day game theory is based. What began as a modest proposal that a mathematician and an economist write a short paper together blossomed, when Princeton University Press published *Theory of Games and Economic Behavior*. In it, John von Neumann and Oskar Morgenstern conceived a groundbreaking mathematical theory of economic and social organization, based on a theory of games of strategy. Not only would this revolutionize economics, but the entirely new field of scientific inquiry it yielded--game theory--has since been widely used to analyze a host of real-world phenomena from arms races to optimal policy choices of presidential candidates, from vaccination policy to major league baseball salary negotiations. And it is today established throughout both the social sciences and a wide range of other sciences. This text shows that insights in quantum physics can be obtained by exploring the mathematical structure of quantum mechanics. It presents the theory of Hermitean operators and Hilbert spaces, providing the framework for transformation theory, and using th

In an era of market triumphalism, this book probes the social and environmental consequences of market-linked nature conservation schemes. Rather than supporting a new anti-market orthodoxy, Charles Zerner and colleagues assert that there is no universal entity, "the market." Analysis and remedies must be based on broader considerations of history, culture, and geography in order to establish meaningful and lasting changes in policy and practice. Original case studies from Asia,

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Latin America, Africa, and the South Pacific focus on topics as diverse as ecotourism, bioprospecting, oil extraction, cyanide fishing, timber extraction, and property rights. The cases position concerns about biodiversity conservation and resource management within social justice and legal perspectives, providing new insights for students, scholars, policy professionals and donor/foundations engaged in international conservation and social justice.

A reconstruction of the creation of game theory in the twentieth century by John von Neumann and Oskar Morgenstern.

Eugene Wigner is one of the few giants of 20th-century physics. The present annotated volume begins with a short biographical sketch followed by Wigner's papers on group theory, an extremely powerful tool he created for theoretical quantum physics.

Documents the innovations of a group of eccentric geniuses who developed computer code in the mid-20th century as part of mathematician Alan Turing's theoretical universal machine idea, exploring how their ideas led to such developments as digital television, modern genetics and the hydrogen bomb.

Child prodigy and brilliant MIT mathematician, Norbert Wiener founded the revolutionary science of cybernetics and ignited the information-age explosion of computers, automation, and global telecommunications. His best-selling book, *Cybernetics*, catapulted him into the public spotlight, as did his chilling visions of the future and his ardent social activism. Based on a wealth of primary sources and exclusive access to Wiener's closest family

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members, friends, and colleagues, Dark Hero of the Information Age reveals this eccentric genius as an extraordinarily complex figure. No one interested in the intersection of technology and culture will want to miss this epic story of one of the twentieth century's most brilliant and colorful figures.

Knowledge is a big subject, says Stuart Firestein, but ignorance is a bigger one. And it is ignorance--not knowledge--that is the true engine of science. Most of us have a false impression of science as a surefire, deliberate, step-by-step method for finding things out and getting things done. In fact, says Firestein, more often than not, science is like looking for a black cat in a dark room, and there may not be a cat in the room. The process is more hit-or-miss than you might imagine, with much stumbling and groping after phantoms. But it is exactly this "not knowing," this puzzling over thorny questions or inexplicable data, that gets researchers into the lab early and keeps them there late, the thing that propels them, the very driving force of science. Firestein shows how scientists use ignorance to program their work, to identify what should be done, what the next steps are, and where they should concentrate their energies. And he includes a catalog of how scientists use ignorance, consciously or unconsciously--a remarkable range of approaches that includes looking for connections to other research, revisiting apparently settled questions, using small questions to get at big ones, and tackling a problem simply out of curiosity. The book concludes with four case histories--in cognitive psychology, theoretical physics, astronomy, and

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neuroscience--that provide a feel for the nuts and bolts of ignorance, the day-to-day battle that goes on in scientific laboratories and in scientific minds with questions that range from the quotidian to the profound. Turning the conventional idea about science on its head, Ignorance opens a new window on the true nature of research. It is a must-read for anyone curious about science.

If science has the equivalent of a Bloomsbury group, it is the five men born at the turn of the twentieth century in Budapest: Theodore von Karman, Leo Szilard, Eugene Wigner, John von Neumann, and Edward Teller. From Hungary to Germany to the United States, they remained friends and continued to work together and influence each other throughout their lives. As a result, their work was integral to some of the most important scientific and political developments of the twentieth century. Istvan Hargittai tells the story of this remarkable group: Wigner won a Nobel Prize in theoretical physics; Szilard was the first to see that a chain reaction based on neutrons was possible, initiated the Manhattan Project, but left physics to try to restrict nuclear arms; von Neumann could solve difficult problems in his head and developed the modern computer for more complex problems; von Karman became the first director of NASA's Jet Propulsion Laboratory, providing the scientific basis for the U.S. Air Force; and Teller was the father of the hydrogen bomb, whose name is now synonymous with the controversial "Star Wars" initiative of the 1980s. Each was fiercely opinionated, politically active, and fought against all forms of totalitarianism. Hargittai, as a young Hungarian physical chemist, was able to get to know some of these

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great men in their later years, and the depth of information and human interest in *The Martians of Science* is the result of his personal relationships with the subjects, their families, and their contemporaries.

"This is an important story that needs to be told, and Hargittai tells it well." - *Nature* "What a story! Hargittai, a Jewish-Hungarian like his heroes, tells the remarkable story of five immigrants, of vastly different politics, without whom American science (and the world) would not be the same." - Roald Hoffmann, Nobel laureate, Cornell University

The Hungarian born mathematical genius, John von Neumann, was undoubtedly one of the greatest and most influential scientific minds of the 20th century. Von Neumann made fundamental contributions to Computing and he had a keen interest in Dynamical Systems, specifically Hydrodynamic Turbulence. This book, offering a state-of-the-art collection of papers in computational dynamical systems, is dedicated to the memory of von Neumann. Including contributions from J E Marsden, P J Holmes, M Shub, A Iserles, M Dellnitz and J Guckenheimer, this book offers a unique combination of theoretical and applied research in areas such as geometric integration, neural networks, linear programming, dynamical astronomy, chemical reaction models, structural and fluid mechanics.

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specifically Hydrodynamic Turbulence. This book, offering a state-of-the-art collection of papers in computational dynamical systems, is dedicated to the memory of von Neumann. Including contributions from J E Marsden, P J Holmes, M Shub, A Iserles, M Dellnitz and J Guckenheimer, this book offers a unique combination of theoretical and applied research in areas such as geometric integration, neural networks, linear programming, dynamical astronomy, chemical reaction models, structural and fluid mechanics. The contents of this book was also published as a special issue of the International Journal of Bifurcation and Chaos — March 2005.

Surveys the historical development of the computer, paying special attention to events since the World War II creation of ENIAC

Selected Contributed Papers of the Tenth International Congress of Logic, Methodology and Philosophy of Science, Florence, August 1995

Should you watch public television without pledging?...Exceed the posted speed limit?...Hop a subway turnstile without paying? These questions illustrate the so-called "prisoner's dilemma", a social puzzle that we all face every day. Though the answers may seem simple, their profound implications make the prisoner's dilemma one of the great unifying concepts of science. Watching players bluff in a poker game inspired John von Neumann—father of the modern computer and one of the sharpest minds of the century—to construct game

theory, a mathematical study of conflict and deception. Game theory was readily embraced at the RAND Corporation, the archetypical think tank charged with formulating military strategy for the atomic age, and in 1950 two RAND scientists made a momentous discovery. Called the "prisoner's dilemma," it is a disturbing and mind-bending game where two or more people may betray the common good for individual gain. Introduced shortly after the Soviet Union acquired the atomic bomb, the prisoner's dilemma quickly became a popular allegory of the nuclear arms race. Intellectuals such as von Neumann and Bertrand Russell joined military and political leaders in rallying to the "preventive war" movement, which advocated a nuclear first strike against the Soviet Union. Though the Truman administration rejected preventive war the United States entered into an arms race with the Soviets and game theory developed into a controversial tool of public policy—alternately accused of justifying arms races and touted as the only hope of preventing them. A masterful work of science writing, *Prisoner's Dilemma* weaves together a biography of the brilliant and tragic von Neumann, a history of pivotal phases of the cold war, and an investigation of game theory's far-reaching influence on public policy today. Most important, *Prisoner's Dilemma* is the incisive story of a revolutionary idea that has been hailed as a landmark of twentieth-

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This volume is the reprinted edition of the first full-scale biography of the man widely regarded as the greatest scientist of the century after Einstein. Born in Budapest in 1903, John von Neumann grew up in one of the most extraordinary of scientific communities. From his arrival in America in the mid-1930s--with bases in Boston, Princeton, Washington, and Los Alamos--von Neumann pioneered and participated in the major scientific and political dramas of the next three decades, leaving his mark on more fields of scientific endeavor than any other scientist. Von Neumann's work in areas such as game theory, mathematics, physics, and meteorology formed the building blocks for the most important discoveries of the century: the modern computer, game theory, the atom bomb, radar, and artificial intelligence, to name just a few. From the laboratory to the highest levels of government, this definitive biography gives us a behind-the-scenes look at the politics and personalities involved in these world-changing discoveries. Written more than 30 years after von Neumann's untimely death at age 54, it was prepared with the cooperation of his family and includes information gained from interviewing countless sources across Europe and America. Norman Macrae paints a highly readable, humanizing portrait of a man whose legacy still influences and shapes modern science and

Quantum mechanics was still in its infancy in 1932 when the young John von Neumann, who would go on to become one of the greatest mathematicians of the twentieth century, published *Mathematical Foundations of Quantum Mechanics*--a revolutionary book that for the first time provided a rigorous mathematical framework for the new science. Robert Beyer's 1955 English translation, which von Neumann reviewed and approved, is cited more frequently today than ever before. But its many treasures and insights were too often obscured by the limitations of the way the text and equations were set on the page. In this new edition of this classic work, mathematical physicist Nicholas Wheeler has completely reset the book in TeX, making the text and equations far easier to read. He has also corrected a handful of typographic errors, revised some sentences for clarity and readability, provided an index for the first time, and added prefatory remarks drawn from the writings of Léon Van Hove and Freeman Dyson. The result brings new life to an essential work in theoretical physics and mathematics.

This is *Bulletin* , Volume 64, Number 3, Part II, May 1958. A memorial to the late John von Neumann edited by J. C. Oxtoby, B. J. Pettis and E. B. Price. The ideas of John von Neumann have had a profound influence on modern mathematics and

science. Often considered one of the great thinkers of our century, von Neumann initiated major branches of mathematics - from operator algebras to game theory to scientific computing - and had a fundamental impact on such areas as self-adjoint operators, ergodic theory and the foundations of quantum mechanics, and numerical analysis and the design of the modern computer.

The present collection of papers forms the Proceedings of the First Meeting on Brain Theory, held October 1-4, 1984 at the International Centre for Theoretical Physics in Trieste, Italy. The Meeting was organized with the aim of bringing together brain theorists who are willing to put their own research in the perspective of the general development of neuroscience. Such a meeting was considered necessary since the explosion of experimental work in neuroscience during the last decades has not been accompanied by an adequate development on the theoretical side. The intensity of the discussions during the Meeting is probably reflected best in the report of the organizers, reprinted here following the Preface. During the Meeting it was decided that a workshop of this kind should be repeated at regular intervals of approximately 2 years. The International Centre for Theoretical Physics in Trieste has kindly agreed to act as host for future meetings. The present Meeting was supported by grants from the International Centre for Theoretical Physics and the

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International School for Advanced Studies in Trieste, IBM-Germany through the "Stifterverband für die Deutsche Wissenschaft" and the Max Planck-Institute for Biological Cybernetics.

The ideas of John von Neumann have had a profound influence on modern mathematics and science. One of the great thinkers of our century, von Neumann initiated major branches of mathematics--from operator algebras to game theory to scientific computing--and had a fundamental impact on such areas as self-adjoint operators, ergodic theory and the foundations of quantum mechanics, and numerical analysis and the design of the modern computer. This volume contains the proceedings of an AMS Symposium in Pure Mathematics, held at Hofstra University, in May 1988. The symposium brought together some of the foremost researchers in the wide range of areas in which von Neumann worked. These articles illustrate the sweep of von Neumann's ideas and thinking and document their influence on contemporary mathematics. In addition, some of those who knew von Neumann when he was alive have presented here personal reminiscences about him. This book is directed to those interested in operator theory, game theory, ergodic theory, and scientific computing, as well as to historians of mathematics and others having an interest in the contemporary history of the mathematical sciences. This book will give readers

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an appreciation for the workings of the mind of one of the mathematical giants of our time.

John von Neumann: The Scientific Genius Who Pioneered the Modern Computer, Game Theory, Nuclear Deterrence, and Much More
Plunkett Lake Press

A vibrant biography of the renowned scientist and the world he made.

After three decades since the first nearly complete edition of John von Neumann's papers, this book is a valuable selection of those papers and excerpts of his books that are most characteristic of his activity, and reveal that of his continuous influence. The results receiving the 1994 Nobel Prizes in economy deeply rooted in Neumann's game theory are only minor traces of his exceptionally broad spectrum of creativity and stimulation. The book is organized by the specific subjects-quantum mechanics, ergodic theory, operator algebra, hydrodynamics, economics, computers, science and society. In addition, one paper which was written in German will be translated and published in English for the first time. The sections are introduced by short explanatory notes with an emphasis on recent developments based on von Neumann's contributions. An overall picture is provided by Ulam's, one of his most intimate partners in thinking, 1958 memorial lecture. Facsimilae and translations of some of his personal letters and a newly

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completed bibliography based on von Neumann's own careful compilation are added.

Contents:Quantum Mechanics:Mathematical Foundations of Quantum MechanicsThe Logic of Quantum Mechanics (with G Birkhoff)Ergodic Theory:Proof of the Quasi-Ergodic HypothesisOperator Methods in Classical Mechanics, II (with P R Halmos)Operator Algebra:Algebra of Functional Operations and Theory of Normal OperatorsOn Rings of Operators I–IVUse of Variational Methods in HydrodynamicsEconomics:Theory of Games and Economic Behavior (with O Morgenstern)Computers:On the Principles of Large Scale Computing Machines (with H H Goldstine)Science and Society:The MathematicianMethod in the Physical SciencesThe Role of Mathematics in the Sciences and in Societyand other papers Readership: Mathematicians. keywords:Mathematics;Science History;Computer Science;J V Neumann;Science and Society;Game Theory;Quantum Mechanics;Operator Algebra;Hydrodynamics;Ergodic Theory“The collection bears testimony to the lasting influence of John von Neumann's work on the course of modern mathematics.”R Siegmund-Schultze Mathematical Abstracts “This collection is a fascinating introduction to the work of John von Neumann ... it

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has much to offer even to the casual browser and will also be relevant and interesting to those working today in the fields on which von Neumann had such enormous influence.”Mathematical Reviews

This book represents the views of one of the greatest mathematicians of the twentieth century on the analogies between computing machines and the living human brain. John von Neumann concludes that the brain operates in part digitally, in part analogically, but uses a peculiar statistical language unlike that employed in the operation of man-made computers. This edition includes a new foreword by two eminent figures in the fields of philosophy, neuroscience, and consciousness.

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