Bayesian Estimation of DSGE Models

Edward P. Herbst & Frank Schorfheide

Dynamic stochastic general equilibrium (DSGE) models have become one of the workhorses of modern macroeconomics and are extensively used for academic research as well as forecasting and policy analysis at central banks. This book introduces readers to state-of-the-art computational techniques used in the Bayesian analysis of DSGE models. The book covers Markov chain Monte Carlo techniques for linearized DSGE models, novel sequential Monte Carlo methods that can be used for parameter inference, and the estimation of nonlinear DSGE models based on particle filter approximations of the likelihood function. The theoretical foundations of the algorithms are discussed in depth, and detailed empirical applications and numerical illustrations are provided. The book also gives invaluable advice on how to tailor these algorithms to specific applications and assess the accuracy and reliability of the computations.

Bayesian Estimation of DSGE Models is essential reading for graduate students, academic researchers, and practitioners at policy institutions.

Edward P. Herbst is an economist in the Division of Research and Statistics at the Federal Reserve Board. Frank Schorfheide is professor of economics at the University of Pennsylvania and research associate at the National Bureau of Economic Research.
Experimental Capitalism
The Nanoeconomics of American High-Tech Industries

Steven Klepper
Edited by Serguey Braguinsky, David A. Hounshell & John H. Miller

For much of the twentieth century, American corporations led the world in terms of technological progress. Why did certain industries have such great success? Experimental Capitalism examines six key industries—automobiles, pneumatic tires, television receivers, semiconductors, lasers, and penicillin—and tracks the highs and lows of American high-tech capitalism and the resulting innovation landscape. Employing “nanoeconomics”—a deep dive into the formation and functioning of companies—Steven Klepper determines how specific companies emerged to become the undisputed leaders that altered the course of their industry's evolution.

Klepper delves into why a small number of firms came to dominate their industries for many years after an initial period of tumult, including General Motors, Firestone, and Intel. Even though capitalism is built on the idea of competition among many, he shows how the innovation process naturally led to such dominance. Klepper explores how this domination influenced the search for further innovations. He also considers why industries cluster in specific geographical areas, such as semiconductors in northern California, cars in Detroit, and tires in Akron. He finds that early leading firms serve as involuntary training grounds for the next generation of entrepreneurs who spin off new firms into the surrounding region. Klepper concludes his study with a discussion of the impact of government and the potential for policy to enhance a nation’s high-tech industrial base.

A culmination of a lifetime of research and thought, Experimental Capitalism takes a dynamic look at how new ideas and innovations led to America’s economic primacy.

Steven Klepper (1949–2013) was the Arthur Arton Hamerschlag Professor of Economics and Social Science at Carnegie Mellon University. Klepper was a founding member of the Doctoral Colloquium of the Consortium for Competitiveness and Collaboration, and served as director of CMU’s program in Strategy, Entrepreneurship, and Technological Change. Serguey Braguinsky is associate professor of economics, David A. Hounshell is the David M. Roderick Professor of Technology and Social Change, and John H. Miller is professor of economics and social science, all at Carnegie Mellon University.
Trade is a cornerstone concept in economics worldwide. This updated second edition of the essential graduate textbook in international trade brings readers to the forefront of knowledge in the field and prepares students to undertake their own research. In Advanced International Trade, Robert Feenstra integrates the most current theoretical approaches with empirical evidence, and these materials are supplemented in each chapter by theoretical and empirical exercises.

Feenstra explores a wealth of material, such as the Ricardian and Heckscher-Ohlin models, extensions to many goods and factors, and the role of tariffs, quotas, and other trade policies. He examines imperfect competition, offshoring, political economy, multinationals, endogenous growth, the gravity equation, and the organization of the firm in international trade. Feenstra also includes a new chapter on monopolistic competition with heterogeneous firms, with many applications of that model. In addition to known results, the book looks at some particularly important unpublished results by various authors. Two appendices draw on index numbers and discrete choice models to describe methods applicable to research problems in international trade.

Completely revised with the latest developments and brand-new materials, Advanced International Trade is a classic textbook that will be used widely by students and practitioners of economics for a long time to come.

Robert C. Feenstra is a professor in the Department of Economics at the University of California, Davis, where he holds the C. Bryan Cameron Distinguished Chair in International Economics. His books include Offshoring in the Global Economy and Product Variety and the Gains from International Trade.

This comprehensive introduction to the ancient Greek economy revolutionizes our understanding of the subject and its possibilities. Alain Bresson is one of the world’s leading authorities in the field, and he is helping to redefine it. Here he combines a thorough knowledge of ancient sources with innovative new approaches grounded in recent economic historiography to provide a detailed picture of the Greek economy between the last century of the Archaic Age and the closing of the Hellenistic period. Focusing on the city-state, which he sees as the most important economic institution in the Greek world, Bresson addresses all of the city-states rather than only Athens.

The book offers a groundbreaking new theoretical framework for studying the economy of ancient Greece; presents a masterful survey and analysis of the most important economic institutions, resources, and other factors; and addresses some major historiographical debates. Among the many topics covered are climate, demography, transportation, agricultural production, market institutions, money and credit, taxes, exchange, long-distance trade, and economic growth.

The result is an unparalleled demonstration that, unlike just a generation ago, it is possible today to study the ancient Greek economy as an economy and not merely as a secondary aspect of social or political history. This is essential reading for students, historians of antiquity, and economic historians of all periods.

Alain Bresson is professor of classics at the University of Chicago.
There is a growing recognition that philosophy isn’t unique to the West, that it didn’t begin only with the classical Greeks, and that Greek philosophy was influenced by Near Eastern traditions. Yet even today there is a widespread assumption that what came before the Greeks was “before philosophy.” In *Philosophy before the Greeks*, Marc Van De Mieroop, an acclaimed historian of the ancient Near East, presents a groundbreaking argument that, for three millennia before the Greeks, one Near Eastern people had a rich and sophisticated tradition of philosophy fully worthy of the name.

In the first century BC, the Greek historian Diodorus of Sicily praised the Babylonians for their devotion to philosophy. Showing the justice of Diodorus’s comment, this is the first book to argue that there were Babylonian philosophers and that they studied knowledge systematically using a coherent system of logic rooted in the practices of cuneiform script. Van De Mieroop uncovers Babylonian approaches to knowledge in three areas: the study of language, which in its analysis of the written word formed the basis of all logic; the art of divination, which interpreted communications between gods and humans; and the rules of law, which confirmed that royal justice was founded on truth.

The result is an innovative intellectual history of the ancient Near Eastern world during the many centuries in which Babylonian philosophers inspired scholars throughout the region—until the first millennium BC, when the breakdown of this cosmopolitan system enabled others, including the Greeks, to develop alternative methods of philosophical reasoning.

Marc Van De Mieroop is professor of history at Columbia University. His books include *The Ancient Mesopotamian City, King Hammurapi of Babylon, A History of the Ancient Near East, The Eastern Mediterranean in the Age of Ramesses II*, and *A History of Ancient Egypt*.
Ladies’ Greek

Victorian Translations of Tragedy

Yopie Prins

In Ladies’ Greek, Yopie Prins illuminates a culture of female classical literacy that emerged in the second half of the nineteenth century, during the formation of women’s colleges on both sides of the Atlantic. Why did Victorian women of letters desire to learn ancient Greek, a “dead” language, written in a strange alphabet and no longer spoken? In the words of Elizabeth Barrett Browning, they wrote “some Greek upon the margin—lady’s Greek, without the accents.” Yet in the margins of classical scholarship they discovered other ways of knowing, and not knowing, Greek. Mediating between professional philology and the popularization of classics, these passionate amateurs became an important medium for classical transmission.

Combining archival research on the entry of women into Greek studies in Victorian England and America with a literary interest in their translations of Greek tragedy, Prins demonstrates how women turned to this genre to perform a passion for ancient Greek, full of eros and pathos. She focuses on five tragedies—Agamemnon, Prometheus Bound, Electra, Hippolytus, and The Bacchae—to analyze a wide range of translational practices by women, and to explore the ongoing legacy of Ladies’ Greek. Key figures in this story include Barrett Browning and Virginia Woolf, Janet Case and Jane Harrison, Edith Hamilton and Eva Palmer, A. Mary F. Robinson and H.D. The book also features numerous illustrations, including photographs of early performances of Greek tragedy at women’s colleges.

The first comparative study of Anglo-American Hellenism, Ladies’ Greek opens up new perspectives in transatlantic Victorian studies and the study of classical reception, translation, and gender.

Yopie Prins is professor of English and comparative literature at the University of Michigan and the author of Victorian Sappho (Princeton).

MARCH

Paper $26.95
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Cloth $60.00
978-0-691-14188-6
296 pages. 30 halftones. 6 x 9.

Literature • Classics • Women’s Studies

Lydia Ginzburg’s Prose

Reality in Search of Literature

Emily Van Buskirk

The Russian writer Lydia Ginzburg (1902–90) is best known for her Notes from the Leningrad Blockade and for influential critical studies, such as On Psychological Prose, investigating the problem of literary character in French and Russian novels and memoirs. Yet she viewed her most vital work to be the extensive prose fragments, composed for the desk drawer, in which she analyzed herself and other members of the Russian intelligentsia through seven traumatic decades of Soviet history. In this book, the first full-length English-language study of the writer, Emily Van Buskirk presents Ginzburg as a figure of previously unrecognized innovation and importance in the literary landscape of the twentieth century.

Based on a decade’s work in Ginzburg’s archives, the book discusses previously unknown manuscripts and uncovers a wealth of new information about the author’s life, focusing on Ginzburg’s quest for a new kind of writing adequate to her times. She writes of universal experiences—frustrated love, professional failures, remorse, aging—and explores the modern fragmentation of identity in the context of war, terror, and an oppressive state. Searching for a new concept of the self, and deeming the psychological novel (a beloved academic specialty) inadequate to express this concept, Ginzburg turned to fragmentary narratives that blur the lines between history, autobiography, and fiction.

This full account of Ginzburg’s writing career in many genres and emotional registers enables us not only to rethink the experience of Soviet intellectuals, but to arrive at a new understanding of writing and witnessing during a horrific century.

Emily Van Buskirk is assistant professor in the Department of Germanic, Russian, and East European Languages and Literatures at Rutgers University. She is the coeditor of Lydia Ginzburg’s Alternative Literary Identities and of a Russian edition of Ginzburg’s blockade prose.

FEBRUARY

Cloth $39.95
978-0-691-16679-7
344 pages. 6 x 9.

Literature • Slavic Studies
This is the first comprehensive collection of hands-on, active learning exercises for the college literature classroom, offering ideas and inspiration for new and veteran teachers alike.

These 101 surefire lesson plans present creative and interactive activities to get all your students talking and learning, from the first class to final review. Whether you are teaching genres or periods, canonical or noncanonical literature, majors or nonmajors, medieval verse or the graphic novel, this volume provides practical and flexible exercises for creating memorable learning experiences. Help students learn more and retain that knowledge longer by teaching them how to question, debate, annotate, imitate, write, draw, map, stage, or perform. These user-friendly exercises feature clear and concise step-by-step instructions, and each exercise is followed by helpful teaching tips and descriptions of the exercise in action. All encourage collaborative learning and many are adaptable to different class sizes or course levels.

A collection of successful approaches for teaching fiction, poetry, and drama and their historical, cultural, and literary contexts, this indispensable book showcases the tried and true alongside the fresh and innovative.

Diana Fuss is the Louis W. Fairchild Class of ’24 Professor of English at Princeton University. William Gleason is professor and chair of English at Princeton. Both Fuss and Gleason have led teaching seminars for graduate students and received Princeton’s President’s Award for Distinguished Teaching.

“Steal from this book: Diana Fuss and William Gleason want you to. Bringing together an astonishing range of tips on an astounding range of literatures, this is a pedagogical care package for days when you’re ‘off,’ or students are tired, or the ice needs to be broken again, or you just want to shake things up. These tricks of the trade are more than surefire: they redefine the art of teaching literature.”
—Scott Herring, Indiana University

“This thoroughly compelling book—the first collection of student-centered teaching tools for English instructors—will be useful to a wide range of teachers.”
—Maurice S. Lee, Boston University

“Refreshingly hands-on without being reductive, this book makes an important contribution to undergraduate teaching and learning. By coming out in favor of active learning and student engagement, it positions itself at the head of a pack of bestsellers on the craft of teaching. But it outdistances them by calling on a wide range of expert teachers to share lessons gleaned from their experiences.”
—Jennifer Summit, San Francisco State University

DECEMBER
Paper $18.95S
978-0-691-15714-6
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978-0-691-15713-9
304 pages. 1 halftone. 1 line illus. 6 x 9.
LITERATURE | EDUCATION

PRESS.PRINCETON.EDU
“We have many poets of the First Book,” the poet and critic Louis Simpson remarked in 1957, describing a sense that the debut poetry collection not only launched the contemporary poetic career but also had come to define it. Surveying American poetry over the past hundred years, *The First Book* explores the emergence of the poetic debut as a unique literary production with its own tradition, conventions, and dynamic role in the literary market. Through new readings of poets ranging from Wallace Stevens and Marianne Moore to John Ashbery and Louise Glück, Jesse Zuba illuminates the centrality of the first book to twentieth-century American literary culture, where it serves as the site of complex struggles for legitimacy on the part of poets, critics, and publishers alike.

Zuba investigates poets’ diverse responses to the question of beginning a career in an increasingly professionalized literary scene that threatened the authenticity of the poetic calling. He shows how modernist debuts evoke markedly idiosyncratic paths, while postwar first books evoke trajectories that balance professional imperatives with traditional literary ideals. Debut titles ranging from Simpson’s *The Arrivistes* to Ken Chen’s *Juvenilia* stress the strikingly pervasive theme of beginning, accommodating a new demand for development even as it averts that demand.

Combining literary analysis with cultural history, *The First Book* will interest scholars and students of twentieth-century literature as well as readers and writers of poetry.

**Jesse Zuba** is assistant professor of English at Delaware State University.
History

REVOLUTIONARY LIVES
Constance and Casimir Markievicz

Lauren Arrington

Constance Markievicz (1868–1927), born to the privileged Protestant upper class in Ireland, embraced suffrage before scandalously leaving for a bohemian life in London and then Paris. She would become known for her roles as politician and Irish revolutionary nationalist. Her husband, Casimir Dunin Markievicz (1874–1932), a painter, playwright, and theater director, was a Polish noble who would eventually join the Russian imperial army to fight on behalf of Polish freedom during World War I. Revolutionary Lives offers the first dual biography of these two prominent European activists and artists. Tracing the Markieviczes’ entwined and impassioned trajectories, biographer Lauren Arrington sheds light on the avant-garde cultures of London, Paris, and Dublin, and the rise of anti-imperialism at the turn of the twentieth century.

Drawing from new archival material, including previously untranslated newspaper articles, Arrington explores the interests and concerns of Europeans invested in suffrage, socialism, and nationhood. Unlike previous works, Arrington’s book brings Casimir Markievicz into the foreground of the story and explains how his liberal imperialism and his wife’s socialist republicanism arose from shared experiences, even as their politics remained distinct. Arrington also shows how Constance did not convert suddenly to Irish nationalism, but was gradually radicalized by the Irish Revival. Correcting previous depictions of Constance as hero or hyster, Arrington presents her as a serious thinker influenced by political and cultural contemporaries.

Revolutionary Lives places the exciting biographies of two uniquely creative and political individuals and spouses in the wider context of early twentieth-century European history.

Lauren Arrington is senior lecturer at the Institute of Irish Studies, University of Liverpool. She is the author of W. B. Yeats, the Abbey Theatre, Censorship, and the Irish State.

JANUARY
Cloth $35.00S
978-0-691-16124-2
360 pages. 15 halftones. 6 x 9.
EUROPEAN HISTORY

GERMAN JEWRY AND THE ALLURE OF THE SEPHARDIC

John M. Efron

In the eighteenth and nineteenth centuries, as German Jews struggled for legal emancipation and social acceptance, they also embarked on a program of cultural renewal, two key dimensions of which were distancing themselves from their fellow Ashkenazim in Poland and giving a special place to the Sephardim of medieval Spain. Where they saw Ashkenazic Jewry as insular and backward, a result of Christian persecution, they depicted the Sephardim as worldly, morally and intellectually superior, and beautiful, products of the tolerant Muslim environment in which they lived. In this elegantly written book, John Efron looks in depth at the special allure Sephardic aesthetics held for German Jewry.

Efron examines how German Jews idealized the sound of Sephardic Hebrew and the Sephardim’s physical and moral beauty, and shows how the allure of the Sephardic found expression in neo-Moorish synagogue architecture, historical novels, and romanticized depictions of Sephardic history. He argues that the shapers of German-Jewish culture imagined medieval Iberian Jewry as an exemplary Jewish community, bound by tradition yet fully at home in the dominant culture of Muslim Spain. Efron argues that the myth of Sephardic superiority was actually an expression of withering self-critique by German Jews who, by seeking to transform Ashkenazic culture and win the acceptance of German society, hoped to enter their own golden age.

Stimulating and provocative, this book demonstrates how the goal of this aesthetic self-refashioning was not assimilation but rather the creation of a new form of German-Jewish identity inspired by Sephardic beauty.

John M. Efron is the Koret Professor of Jewish History at the University of California, Berkeley. He is the author of Medicine and the German Jews: A History and Defenders of the Race: Jewish Doctors and Race Science in Fin-de-Siècle Europe and the coauthor of The Jews: A History.

JANUARY
Cloth $45.00S
978-0-691-16774-9
312 pages. 34 halftones. 6 x 9.
HISTORY ▪ JEWISH STUDIES
The 580 documents in this volume cover a wide range of fascinating topics. Jefferson receives impressions of a mammoth’s tooth, altitude and meteorological observations, a call for a national pharmacopoeia, a discussion of primeval geology, and a letter that elicits Jefferson’s opinion that cognition exists “in animal bodies certainly, in Vegetables probably, in Minerals not impossibly.” Jefferson leases his Tufton and Lego plantations to his grandson Thomas Jefferson Randolph. The directors of the Rivanna Company rebut Jefferson’s 1817 bill of complaint and he unwittingly ensures his eventual financial ruin by endorsing notes totaling $20,000 for Wilson Cary Nicholas. Jefferson adds to the collections of the American Philosophical Society and writes an extended introduction to the “Anas,” a corpus of official papers and political anecdotes documenting his service as George Washington’s secretary of state. Jefferson drafts legislation to establish a public education system in Virginia. He attends a Masonic cornerstone laying ceremony for the nascent Central College’s first pavilion early in October 1817 and is greatly pleased by the passage on 21 February 1818 of a law establishing a commission to plan a new state university, raising his hopes that Central College might soon become the University of Virginia.

J. Jefferson Looney is editor of The Papers of Thomas Jefferson: Retirement Series, which is sponsored by the Thomas Jefferson Foundation, Charlottesville, Virginia.

Beyond Religious Freedom
The New Global Politics of Religion
Elizabeth Shakman Hurd

In recent years, North American and European nations have sought to legally remake religion in other countries through an unprecedented array of international initiatives. Policymakers have rallied around the notion that the fostering of religious freedom, interfaith dialogue, religious toleration, and protections for religious minorities are the keys to combating persecution and discrimination. Beyond Religious Freedom persuasively argues that these initiatives create the very social tensions and divisions they are meant to overcome.

Elizabeth Shakman Hurd looks at three critical channels of state-sponsored intervention: international religious freedom advocacy, development assistance and nation building, and international law. She shows how these initiatives make religious difference a matter of law, resulting in a divide that favors forms of religion authorized by those in power and excludes other ways of being and belonging. In exploring the dizzying power dynamics and blurred boundaries that characterize relations between “official religion,” “governed religion,” and “lived religion,” Hurd charts new territory in the study of religion in global politics.

A forceful and timely critique of the politics of promoting religious freedom, Beyond Religious Freedom provides new insights into today’s most pressing dilemmas of power, difference, and governance.

Elizabeth Shakman Hurd is associate professor of political science at Northwestern University. She is the author of The Politics of Secularism in International Relations (Princeton) and the coeditor of Comparative Secularisms in a Global Age and Politics of Religious Freedom.
When engaging with other countries, the U.S. government has a number of different policy instruments at its disposal, including foreign aid, international trade, and the use of military force. But what determines which policies are chosen? Does the United States rely too much on the use of military power and coercion in its foreign policies? *Sailing the Water’s Edge* focuses on how domestic U.S. politics—in particular the interactions between the president, Congress, interest groups, bureaucratic institutions, and the public—have influenced foreign policy choices since World War II and shows why presidents have more control over some policy instruments than others. Presidential power matters and it varies systematically across policy instruments.

Helen Milner and Dustin Tingley consider how Congress and interest groups have substantial material interests in and ideological divisions around certain issues and that these factors constrain presidents from applying specific tools. As a result, presidents select instruments that they have more control over, such as use of the military. This militarization of U.S. foreign policy raises concerns about the nature of American engagement, substitution among policy tools, and the future of U.S. foreign policy. Milner and Tingley explore whether American foreign policy will remain guided by a grand strategy of liberal internationalism, what affects American foreign policy successes and failures, and the role of U.S. intelligence collection in shaping foreign policy. The authors support their arguments with rigorous theorizing, quantitative analysis, and focused case studies, such as U.S. foreign policy in Sub-Saharan Africa across two presidential administrations.

*Sailing the Water’s Edge* examines the importance of domestic political coalitions and institutions on the formation of American foreign policy.

**Helen V. Milner** is the B.C. Forbes Professor of Politics and International Affairs at Princeton University. Her books include *Votes, Vetoes, and the Political Economy of International Trade Agreements* and *Interests, Institutions, and Information* (both Princeton). **Dustin Tingley** is the Paul Sack Associate Professor of Political Economy and International Relations at Harvard University.

“In contrast to standard international relations accounts, which consider foreign policy to be driven by international factors, Milner and Tingley contend that domestic politics plays a major role in foreign policy decisions, and that certain foreign policy tools have major consequences domestically. Their book presents an original and provocative argument and substantiates it with a myriad of impressive original evidence.” —James Raymond Vreeland, Georgetown University

“An engaging and important look at how politics between institutions within the United States shapes American foreign policy, *Sailing the Water’s Edge* brings together an incredibly wide array of examples and sources, while covering a tremendous breadth of empirical ground. A major and welcome contribution to international relations, this book will be widely read.” —Jon Pevehouse, University of Wisconsin–Madison
When Movements Anchor Parties
Electoral Alignments in American History

Daniel Schlozman

Throughout American history, some social movements, such as organized labor and the Christian Right, have forged influential alliances with political parties, while others, such as the antirwar movement, have not. When Movements Anchor Parties provides a bold new interpretation of American electoral history by examining five prominent movements and their relationships with political parties.

Taking readers from the Civil War to today, Daniel Schlozman shows how two powerful alliances—those of organized labor and Democrats in the New Deal, and the Christian Right and Republicans since the 1970s—have defined the basic priorities of parties and shaped the available alternatives in national politics. He traces how they diverged sharply from three other major social movements that failed to establish a place inside political parties—the abolitionists following the Civil War, the Populists in the 1890s, and the antirwar movement in the 1960s and 1970s. Moving beyond a view of political parties simply as collections of groups vying for influence and resources, Schlozman explores how would-be influencers gain influence—or don’t. He reveals how movements join with parties only when the alliance is beneficial to parties, and how alliance exacts a high price from movements. Their radical supporters get shunted aside. Their sweeping visions give way to compromise and partial victories. Yet as Schlozman demonstrates, the price is well worth paying as movements reorient parties’ priorities.

Daniel Schlozman is assistant professor of political science at Johns Hopkins University.

Paths Out of Dixie
The Democratization of Authoritarian Enclaves
in America’s Deep South, 1944–1972

Robert Mickey

The transformation of the American South—from authoritarian to democratic rule—is the most important political development since World War II. It has re-sorted voters into parties, remapped presidential elections, and helped polarize Congress. Most important, it is the final step in America’s democratization. Paths Out of Dixie illuminates this sea change by analyzing the democratization experiences of Georgia, Mississippi, and South Carolina.

Robert Mickey argues that Southern states, from the 1890s until the early 1970s, constituted pockets of authoritarian rule trapped within and sustained by a federal democracy. These enclaves—devoted to cheap agricultural labor and white supremacy—were established by conservative Democrats to protect their careers and clients. From the abolition of the whites-only Democratic primary in 1944 until the national party reforms of the early 1970s, enclaves were battered and destroyed by a series of democratization pressures from inside and outside their borders. Drawing on archival research, Mickey traces how Deep South rulers—dissimilar in their internal conflicts and political institutions—varied in their responses to these challenges. Ultimately, enclaves differed in their degree of violence, incorporation of African Americans, and reconciliation of Democrats with the national party. These diverse paths generated political and economic legacies that continue to reverberate today.

Robert Mickey is associate professor of political science at the University of Michigan.
Righteous Transgressions

Women’s Activism on the Israeli and Palestinian Religious Right

Lihi Ben Shitrit

How do women in conservative religious movements expand spaces for political activism in ways that go beyond their movements’ strict ideas about male and female roles? How and why does this activism happen in some movements but not in others? Righteous Transgressions examines these questions by comparatively studying four groups: the Jewish settlers in the West Bank, the ultra-Orthodox Shas, the Islamic Movement in Israel, and the Palestinian Hamas. Lihi Ben Shitrit demonstrates that women’s prioritization of a nationalist agenda over a proselytizing one shapes their activist involvement.

Ben Shitrit shows how women construct “frames of exception” that temporarily suspend, rather than challenge, some of the limiting aspects of their movements’ gender ideology. Viewing women as agents in such movements, she analyzes the ways in which activists use nationalism to astutely reframe gender role transgressions from inappropriate to righteous. The author engages the literature on women’s agency in Muslim and Jewish religious contexts, and sheds light on the centrality of women’s activism to the promotion of the spiritual, social, cultural, and political agendas of both the Israeli and Palestinian religious right.

Looking at the four most influential political movements of the Israeli and Palestinian religious right, Righteous Transgressions reveals how the bounds of gender expectations can be crossed for the political good.

Lihi Ben Shitrit is an assistant professor in the School of Public and International Affairs at the University of Georgia.

“This excellent and rigorously researched book enhances our understanding of Jewish and Muslim religious-political movements and women’s attendant roles in ways that have remained largely unaddressed until now. By providing a window into a world seldom seen, let alone traversed, it challenges common understandings about these movements and women’s agency therein.”

—Sara Roy, Harvard University

PRINCETON STUDIES IN MUSLIM POLITICS
Dale F. Eickelman and Augustus Richard Norton, Series Editors
Why do tribal genealogies matter in modern-day Saudi Arabia? What compels the strivers and climbers of the new Saudi Arabia to want to prove their authentic descent from one or another prestigious Arabian tribe? Of Sand or Soil looks at how genealogy and tribal belonging have informed the lives of past and present inhabitants of Saudi Arabia and how the Saudi government’s tacit glorification of tribal origins has shaped the powerful development of the kingdom’s genealogical culture.

Nadav Samin presents the first extended biographical exploration of the major twentieth-century Saudi scholar Hamad al-Jasir, whose genealogical studies frame the story about belonging and identity in the modern kingdom. Samin examines the interplay between al-Jasir’s genealogical project and his many hundreds of petitioners, mostly Saudis of nontribal or lower status origin who sought validation of their tribal roots in his genealogical texts. Investigating the Saudi relationship to this opaque, orally inscribed historical tradition, Samin considers the consequences of modern Saudi genealogical politics and how the most intimate anxieties of nontribal Saudis today are amplified by the governing strategies and kinship ideology of the Saudi state.

Challenging the impression that Saudi culture is determined by puritanical religiosity or rentier economic principles, Of Sand or Soil shows how the exploration and establishment of tribal genealogies have become influential phenomena in contemporary Saudi society. Beyond Saudi Arabia, this book casts important new light on the interplay between kinship ideas, oral narrative, and state formation in rapidly changing societies.

Nadav Samin is visiting assistant professor of anthropology at Dartmouth College.

Sounding the Limits of Life
Essays in the Anthropology of Biology and Beyond

Stefan Helmreich

What is life? What is water? What is sound? In Sounding the Limits of Life, anthropologist Stefan Helmreich investigates how contemporary scientists—biologists, oceanographers, and audio engineers—are redefining these crucial concepts. Life, water, and sound are phenomena at once empirical and abstract, material and formal, scientific and social. In the age of synthetic biology, rising sea levels, and new technologies of listening, these phenomena stretch toward their conceptual snapping points, breaching the boundaries between nature and culture.

Through examinations of the computational life sciences, marine biology, astrobiology, acoustics, and more, Helmreich follows scientists to the limits of these categories. Along the way, he offers critical accounts of such other-than-human entities as digital life forms, microbes, coral reefs, whales, seawater, extraterrestrials, tsunamis, seashells, and bionic cochlea. He develops a new notion of “sounding”—as investigating, fathoming, listening—to describe the form of inquiry appropriate for tracking meanings and practices of the biological, aquatic, and sonic in a time of global change and climate crisis.

Sounding the Limits of Life shows that life, water, and sound no longer mean what they once did, and that what count as their essential natures are under dynamic revision.

Stefan Helmreich is professor of anthropology at the Massachusetts Institute of Technology. He is the author of Alien Ocean and Silicon Second Nature.

PRINCETON STUDIES IN MUSLIM POLITICS
Dale F. Eickelman and Augustus Richard Norton, Series Editors

SEPTEMBER

Cloth $39.50
978-0-691-16444-1
320 pages. 15 halftones. 1 map. 6 x 9.
MIDDLE EAST STUDIES ● ISLAMIC STUDIES

Paper $24.95
978-0-691-16481-6
320 pages. 29 halftones. 6 line illus. 6 x 9.
ANTHROPOLOGY ● SCIENCE STUDIES
Farming is essential to the American economy and our daily lives, yet few of us have much contact with farmers except through the food we eat. Who are America’s farmers? Why is farming important to them? How are they coping with dramatic changes to their way of life? In the Blood paints a vivid and moving portrait of America’s farm families, shedding new light on their beliefs, values, and complicated relationship with the land.

Drawing on more than two hundred in-depth interviews, Robert Wuthnow presents farmers in their own voices as they speak candidly about their family traditions, aspirations for their children, business arrangements, and conflicts with family members. They describe their changing relationships with neighbors, their shifting views about religion, and the subtle ways they defend their personal independence. Wuthnow shares the stories of farmers who operate dairies, raise livestock, and grow our fruit and vegetables. We hear from corn and soybean farmers, wheat-belt farmers, and cotton growers. We gain new insights into how farmers assign meaning to the land, and how they grapple with the increasingly difficult challenges of biotechnology and global markets.

In the Blood reveals how, despite profound changes in modern agriculture, farming remains an enduring commitment that runs deeply in the veins of today’s farm families.

Robert Wuthnow is the Gerhard R. Andlinger ’52 Professor of Social Sciences and director of the Center for the Study of Religion at Princeton University. He is the author of many books, including Rough Country, Small-Town America, Red State Religion, and Remaking the Heartland (all Princeton).

“Wuthnow presents a lively portrait of the complexities and concerns of American agriculture, helping us better understand those who grow our food. In the Blood is an extremely ambitious book and a very good read. There is nothing else like it. No one else has so thoroughly presented farmers in their own words.”
—Pamela Riney-Kehrberg, author of Always Plenty to Do: Growing Up on a Farm in the Long Ago

“In the Blood is a thorough and compelling look at farm life in America by the nation’s top sociologist of culture. Wuthnow offers new conceptions of a crucial yet neglected institution.”
—Elaine Howard Ecklund, Rice University

SEPTEMBER
Cloth $35.00
978-0-691-16709-1
232 pages. 6 x 9.
SOCIOLOGY ■ AMERICAN STUDIES

PRESS.PRINCETON.EDU
Magazines and the Making of America
Modernization, Community, and Print Culture, 1741–1860

Heather A. Haveman

From the colonial era to the onset of the Civil War, *Magazines and the Making of America* looks at how magazines and the individuals, organizations, and circumstances they connected ushered America into the modern age. How did a magazine industry emerge in the United States, where there were once only amateur authors, clumsy technologies for production and distribution, and sparse reader demand? What legitimated magazines as they competed with other media, such as newspapers, books, and letters? And what role did magazines play in the integration or division of American society?

From their first appearance in 1741, magazines brought together like-minded people, wherever they were located and whatever interests they shared. As America became socially differentiated, magazines engaged and empowered diverse communities of faith, purpose, and practice. Religious groups could distinguish themselves from others and demarcate their identities. Social-reform movements could energize activists across the country to push for change. People in specialized occupations could meet and learn from one another to improve their practices. Magazines built translocal communities—collections of people with common interests who were geographically dispersed and could not easily meet face-to-face. By supporting communities that crossed various axes of social structure, magazines also fostered pluralistic integration.


Heather A. Haveman is professor of sociology and business at the University of California, Berkeley.

Beyond the Beat
Musicians Building Community in Nashville

Daniel B. Cornfield

At a time when the bulwarks of the music industry are collapsing, what does it mean to be a successful musician and artist? How might contemporary musicians sustain their artistic communities? Based on interviews with over seventy-five popular-music professionals in Nashville, *Beyond the Beat* looks at artist activists—those visionaries who create inclusive artist communities in today’s individualistic and entrepreneurial art world. Using Nashville as a model, Daniel Cornfield develops a theory of artist activism—the ways that artist peers strengthen and build diverse artist communities.

Cornfield discusses how genre-diversifying artist activists have arisen throughout the late twentieth-century musician migration to Nashville, a city that boasts the highest concentration of music jobs in the United States. Music City is now home to diverse recording artists—including Jack White, El Movimiento, the Black Keys, and Paramore. Cornfield identifies three types of artist activists: the artist-producer who produces and distributes his or her own and others’ work while mentoring early-career artists, the social entrepreneur who maintains social spaces for artist networking, and arts trade union reformers who are revamping collective bargaining and union functions. Throughout, Cornfield examines enterprising musicians both known and less recognized. He links individual and collective actions taken by artist activists to their orientations toward success, audience, and risk and to their original inspirations for embarking on music careers.

*Beyond the Beat* offers a new model of artistic success based on innovating creative institutions to benefit the society at large.

Daniel B. Cornfield is professor of sociology at Vanderbilt University. He is the author of *Becoming a Mighty Voice* and coeditor of *Worlds of Work*.

OCTOBER

Cloth $35.00S
978-0-691-16073-3
224 pages. 5 line illus. 2 tables. 6 x 9.

SOCIOLOGY ■ MUSIC
Nietzsche’s Jewish Problem
Between Anti-Semitism and Anti-Judaism

Robert C. Holub

For more than a century, Nietzsche’s views about Jews and Judaism have been subject to countless polemics. The Nazis infamously fashioned the philosopher as their anti-Semitic precursor, while in the past thirty years the pendulum has swung in the opposite direction. The increasingly popular view today is that Nietzsche was not only completely free of racist tendencies but was also a principled adversary of anti-Jewish thought. Nietzsche’s Jewish Problem offers a definitive reappraisal of the controversy, taking the full historical, intellectual, and biographical context into account. As Robert Holub shows, a careful consideration of all the evidence from Nietzsche’s published and unpublished writings and letters reveals that he harbored anti-Jewish prejudices throughout his life.

Nietzsche’s Jewish Problem demonstrates how this is so despite the apparent paradox of the philosopher’s well-documented opposition to the crude political anti-Semitism of the Germany of his day. As Holub explains, Nietzsche’s “anti-anti-Semitism” was motivated more by distaste for vulgar nationalism than by any objection to anti-Jewish prejudice.

A richly detailed account of a controversial issue that goes to the heart of Nietzsche’s reputation and reception, Nietzsche’s Jewish Problem will fascinate anyone interested in philosophy, intellectual history, or the history of anti-Semitism.

Robert C. Holub is Ohio Eminent Scholar and Professor of German at Ohio State University and former chancellor of the University of Massachusetts, Amherst. The author of several books on nineteenth- and twentieth-century German literary, cultural, and intellectual history, he is also the editor of editions of Nietzsche’s On the Genealogy of Morals and Beyond Good and Evil.

“Nietzsche’s Jewish Problem promises to be the definitive account of Nietzsche’s relation to Jews and Judaism for some time to come. In lucid and compelling prose, Robert Holub offers a provocative reappraisal of Nietzsche that forces us to confront how he managed to mix sustained anti-Jewish views with a rejection of anti-Semitic politics. No one seriously interested in the German intellectual tradition can afford to ignore this book.”
—Jonathan M. Hess, University of North Carolina, Chapel Hill

NOVEMBER
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320 pages. 6 x 9.
PHILOSOPHY JEWISH STUDIES

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**Epistemic Angst**
Radical Skepticism and the Groundlessness of Our Believing

**Duncan Pritchard**

*Epistemic Angst* offers a completely new solution to the ancient philosophical problem of radical skepticism—the challenge of explaining how it is possible to have knowledge of a world external to us.

Duncan Pritchard argues that the key to resolving this puzzle is to realize that it is composed of two logically distinct problems, each requiring its own solution. He then puts forward solutions to both problems. To that end, he offers a new reading of Wittgenstein’s account of the structure of rational evaluation and demonstrates how this provides an elegant solution to one aspect of the skeptical problem. Pritchard also revisits the epistemological disjunctivist proposal that he developed in previous work and shows how it can effectively handle the other aspect of the problem. Finally, he argues that these two antiskeptical positions, while superficially in tension with each other, are not only compatible but also mutually supporting.

The result is a comprehensive and distinctive resolution to the problem of radical skepticism, one that challenges many assumptions in contemporary epistemology.

Duncan Pritchard is professor of philosophy at the University of Edinburgh, where he is the director of Eidyn: The Edinburgh Centre for Epistemology, Mind and Normativity. His books include *Epistemic Luck* and *Epistemological Disjunctivism*.

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**Reconstruction**

**A. J. Julius**

What should a person do when she depends for her possibilities of action on the actions of other persons? Is it possible to live as one free person among others? In this groundbreaking work of moral and political philosophy, A. J. Julius argues that a person acts freely by acting for good reasons. To act for good reasons in the presence of other people, a person must act for reasons that she shares with them. Julius uses these ideas of free action and interpersonal rationality to explain the wrongness of coercion, the value of cooperation, the rational force of democratic law, and the imperative of substituting public for private property. He proposes that we can begin to act freely, within our actual unfree society, by setting out to reconstruct it on a democratic basis.

A book that will open new directions in the discussion of rationality and freedom, *Reconstruction* makes it plain that the political is personal.

A. J. Julius is assistant professor of philosophy at the University of California, Los Angeles.
On War and Democracy
Christopher Kutz

On War and Democracy provides a richly nuanced examination of the moral justifications democracies often invoke to wage war. In this compelling and provocative book, Christopher Kutz argues that democratic principles can be both fertile and toxic ground for the project of limiting war’s violence. Only by learning to view war as limited by our democratic values—rather than as a tool for promoting them—can we hope to arrest the slide toward the borderless, seemingly endless democratic “holy wars” and campaigns of remote killings we are witnessing today, and to stop permanently the use of torture and secret law.

Kutz shows how our democratic values, understood incautiously and incorrectly, can actually undermine the goal of limiting war. He helps us better understand why we are tempted to believe that collective violence in the name of politics can be legitimate when individual violence is not. In doing so, he offers a bold new account of democratic agency that acknowledges the need for national defense and the promotion of liberty abroad while limiting the temptations of military intervention. Kutz demonstrates why we must address concerns about the means of waging war—including remote war and surveillance—and why we must create institutions to safeguard some nondemocratic values, such as dignity and martial honor, from the threat of democratic politics.

On War and Democracy reveals why understanding democracy in terms of political agency, not institutional process, is crucial to limiting when and how democracies use violence.

Christopher Kutz is the C. William Maxeiner Distinguished Professor of Law and director of the Kadish Center for Morality, Law, and Public Affairs at the University of California, Berkeley. He is the author of Complicity: Ethics and Law for a Collective Age.

Classical Confucian Political Thought
A New Interpretation
Loubna El Amine

The intellectual legacy of Confucianism has loomed large in efforts to understand China’s past, present, and future. While Confucian ethics has been thoroughly explored, the question remains: what exactly is Confucian political thought? Classical Confucian Political Thought returns to the classical texts of the Confucian tradition to answer this vital question. Showing how Confucian ethics and politics diverge, Loubna El Amine argues that Confucian political thought is not a direct application of Confucian moral philosophy. Instead, contrary to the conventional view that Confucian rule aims to instill virtue in all members of society, El Amine demonstrates that its main aim is to promote political order.

El Amine analyzes key aspects of the Confucian political vision, including the relationship between the ruler and the people, the typology of rulers, and the role of ministers and government officials. She also looks at Confucianism’s account of the mechanisms through which society is to be regulated, from welfare policies to rituals. She explains that the Confucian conception of the political leaves space open for the rule of those who are not virtuous if these rulers establish and maintain political order. She also contends that Confucians defend the duty to take part in government based on the benefits that such participation can bring to society.

Classical Confucian Political Thought brings a new understanding to Confucian political theory by illustrating that it is not chiefly idealistic and centered on virtue, but rather realistic and driven by political concerns.

Loubna El Amine is assistant professor of government at Georgetown University.
Carlos Chávez (1899–1978) is the central figure in Mexican music of the twentieth century and among the most eminent of all Latin American modernist composers. An enfant terrible in his own country, Chávez was an integral part of the emerging music scene in the United States in the 1920s. His highly individual style—diatonic, dissonant, contrapuntal—addressed both modernity and Mexico’s indigenous past. Chávez was also a governmental arts administrator, founder of major Mexican cultural institutions, and conductor and founder of the Orquesta Sinfónica de México. Carlos Chávez and His World brings together an international roster of leading scholars to delve into not only Chávez’s music but also the history, art, and politics surrounding his life and work.

Contributors explore Chávez’s vast body of compositions, including his piano music, symphonies, violin concerto, late compositions, and Indianist music. They look at his connections with such artistic greats as Aaron Copland, Miguel Covarrubias, Henry Cowell, Silvestre Revueltas, and Paul Strand. The essays examine New York’s modernist scene, Mexican symphonic music, portraits of Chávez by major Mexican artists of the period, including Diego Rivera and Rufino Tamayo, and Chávez’s impact on El Colegio Nacional.

A quantum leap in understanding Carlos Chávez and his milieu, this collection will stimulate further work in Latin American music and culture.

Leonora Saavedra is associate professor of music at the University of California, Riverside.

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Hōzan Tankai and Japanese Buddhist Art of the Early Modern Era

In this beautifully illustrated book, eminent art historian John Rosenfield explores the life and art of the Japanese Buddhist monk Hōzan Tankai (1629–1716). Through a close examination of sculptures, paintings, ritual implements, and primary documents, the book demonstrates how the Shingon prelate’s artistic activities were central to his important place in the world of late-seventeenth-century Japanese Buddhism. At the same time, the book shows the richness of early modern Japanese Buddhist art, which has often been neglected and undervalued.

Tankai was firmly committed to the spiritual disciplines of mountain Buddhism—seclusion, severe asceticism, meditation, and ritual. But in the 1680s, after being appointed head of a small, run-down temple on the slopes of Mount Ikoma, near Nara, he revealed that he was also a gifted artist and administrator. He embarked on an ambitious campaign of constructing temple halls and commissioning icons, and the Ikoma temple, soon renamed Hōzanji, became a vibrant center of popular Buddhism, as it remains today. He was a remarkably productive artist, and by the end of his life more than 150 works were associated with him.

A major reconsideration of a key artistic and religious figure, Preserving the Dharma brings much-needed attention to an overlooked period of Japanese Buddhist art.

John M. Rosenfield (1924–2013) was the Abby Aldrich Rockefeller Professor Emeritus of East Asian Art at Harvard University and curator emeritus of Asian art at the Harvard University Art Museums.
Ecological Mechanics
Principles of Life’s Physical Interactions

Mark Denny

Plants and animals interact with each other and their surroundings, and these interactions—with all their complexity and contingency—control where species can survive and reproduce. In this comprehensive and groundbreaking introduction to the emerging field of ecological mechanics, Mark Denny explains how the principles of physics and engineering can be used to understand the intricacies of these remarkable relationships.

Denny opens with a brief review of basic physics before introducing the fundamentals of diffusion, fluid mechanics, solid mechanics, and heat transfer, taking care to explain each in the context of living organisms. Why are corals of different shapes on different parts of a reef? How can geckos climb sheer walls? Why can birds and fish migrate farther than mammals? How do desert plants stay cool? The answers to these and a host of similar questions illustrate the principles of heat, mass, and momentum transport and set the stage for the book’s central topic, the application of these principles in ecology. Denny shows how variations in the environment—in both space and time—affect the performance of plants and animals. He introduces spectral analysis, a mathematical tool for quantifying the patterns in which environments vary, and uses it to analyze such subjects as the spread of invasive species. Synthesizing the book’s materials, the final chapters use ecological mechanics to predict the occurrence and consequences of extreme ecological events, explain the emergence of patterns in the distribution and abundance of organisms, and empower readers to explore further.

Ecological Mechanics offers new insights into the physical workings of organisms and their environment.

Mark Denny is the John B. and Jean DeNault Professor of Marine Sciences at Stanford University’s Hopkins Marine Station in Pacific Grove, California. His books include Biology and the Mechanics of the Wave-Swept Environment, Air and Water, and How the Ocean Works.

“In this timely book, Denny posits that treating biomechanics and ecology separately leads to an incomplete understanding of nature. Their working together is key. Using engaging case studies and explaining in depth the physics underlying biomechanics, Denny takes readers through a vast amount of material and territory, and presents science that is relevant to actual and pressing problems. There is no other work like it.” —Jérôme Casas, Institut Universitaire de France and University of Tours

“This is a landmark book, the best of its kind I’ve ever read. It manages to be beautifully detailed and broadly visionary at the same time. Denny sees connections among multiple phenomena and offers his insights with an authoritative, comprehensive, lucid, and entertaining style. I will certainly use this book, as will other professional biologists, graduate students, and advanced undergraduates in the field.” —Art Woods, University of Montana

February
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BIOLOGY  ECOLOGY  BIOMECHANICS

press.princeton.edu
QUANTITATIVE VIRAL ECOLOGY
Dynamics of Viruses and Their Microbial Hosts

JOSHUA S. WEITZ

When we think about viruses we tend to consider ones that afflict humans—such as those that cause influenza, HIV, and Ebola. Yet, vastly more viruses infect single-celled microbes. Diverse and abundant, microbes and the viruses that infect them are found in oceans, lakes, plants, soil, and animal-associated microbiomes. Taking a vital look at the “microscopic” mode of disease dynamics, Quantitative Viral Ecology establishes a theoretical foundation from which to model and predict the ecological and evolutionary dynamics that result from the interaction between viruses and their microbial hosts.

Joshua Weitz addresses three major questions: What are viruses of microbes and what do they do to their hosts? How do interactions of a single virus-host pair affect the number and traits of hosts and virus populations? How do virus-host dynamics emerge in natural environments when interactions take place between many viruses and many hosts? Emphasizing how theory and models can provide answers, Weitz offers a cohesive framework for tackling new challenges in the study of viruses and microbes and how they are connected to ecological processes—from the laboratory to the Earth system.

Quantitative Viral Ecology is an innovative exploration of the influence of viruses in our complex natural world.

JOSHUA S. WEITZ is associate professor of biology at the Georgia Institute of Technology.

ENERGY LANDSCAPES, INHERENT STRUCTURES, AND CONDENSED-MATTER PHENOMENA

FRANK H. STILLINGER

This book presents an authoritative and in-depth treatment of potential energy landscape theory, a powerful analytical approach to describing the atomic and molecular interactions in condensed-matter phenomena. Drawing on the latest developments in the computational modeling of many-body systems, Frank Stillinger applies this approach to a diverse range of substances and systems, including crystals, liquids, glasses and other amorphous solids, polymers, and solvent-suspended biomolecules.

Stillinger focuses on the topography of the multidimensional potential energy hypersurface created when a large number of atoms or molecules simultaneously interact with one another. He explains how the complex landscape topography separates uniquely into individual “basins,” each containing a local potential energy minimum or “inherent structure,” and he shows how to identify interbasin transition states—saddle points—that reside in shared basin boundaries. Stillinger describes how inherent structures and their basins can be classified and enumerated by depth, curvatures, and other attributes, and how those enumerations lead logically from vastly complicated multidimensional landscapes to properties observed in the real three-dimensional world.

Essential for practitioners and students across a variety of fields, the book illustrates how this approach applies equally to systems whose nuclear motions are intrinsically quantum mechanical or classical, and provides novel strategies for numerical simulation computations directed toward diverse condensed-matter systems.

FRANK H. STILLINGER is senior scientist in the Department of Chemistry at Princeton University. He is a member of the National Academy of Sciences.
A Student’s Guide to Python for Physical Modeling

Jesse M. Kinder & Philip Nelson

Python is a computer programming language that is rapidly gaining popularity throughout the sciences. *A Student’s Guide to Python for Physical Modeling* aims to help you, the student, teach yourself enough of the Python programming language to get started with physical modeling. You will learn how to install an open-source Python programming environment and use it to accomplish many common scientific computing tasks: importing, exporting, and visualizing data; numerical analysis; and simulation. No prior programming experience is assumed.

This tutorial focuses on fundamentals and introduces a wide range of useful techniques, including:

- Basic Python programming and scripting
- Numerical arrays
- Two- and three-dimensional graphics
- Monte Carlo simulations
- Numerical methods, including solving ordinary differential equations
- Image processing
- Animation

Numerous code samples and exercises—with solutions—illustrate new ideas as they are introduced. A website that accompanies this guide provides additional resources, including data sets and sample code.

Jesse M. Kinder earned his PhD in physics and astronomy at the University of Pennsylvania, completed a postdoctoral fellowship in quantum chemistry at Cornell University, and taught physics at Case Western Reserve University. He currently works as a consultant in Rio Rancho, New Mexico.

Philip Nelson is professor of physics at the University of Pennsylvania. He is the author of *Biological Physics* and *Physical Models of Living Systems*.

“This book covers the basics of Python programming language, with an emphasis on physical modeling. It provides a very useful introduction to Python for undergraduate students and others who have never programmed before.”

—Zeljko Ivezic, University of Washington

“This is an excellent introductory text, aimed at those with little to no experience in programming. In a clear and concise manner, the authors cover or touch upon all the important aspects of computational science in Python. They guide readers by explaining how to best perform certain common tasks in scientific computing. The book’s examples and user exercises are well selected.”

—Quentin Caudron, Princeton University

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COMPUTER SCIENCE | PHYSICS
How Do You Find an Exoplanet?

John Asher Johnson

Alien worlds have long been a staple of science fiction. But today, thanks to modern astronomical instrumentation and the achievements of many enterprising observational astronomers, the existence of planets outside our solar system—also known as exoplanets—has moved into the realm of science fact. With planet hunters finding ever smaller, more Earth-like worlds, our understanding of the cosmos is forever changed, yet the question of how astronomers make these discoveries often goes unanswered.

How Do You Find an Exoplanet? is an authoritative primer on the four key techniques that today’s planet hunters use to detect the feeble signals of planets orbiting distant stars. John Johnson provides you with an insider’s perspective on this exciting cutting-edge science, showing how astronomers detect the wobble of stars caused by the gravitational tug of an orbiting planet, the slight diminution of light caused by a planet eclipsing its star, and the bending of space-time by stars and their planets, and how astronomers even directly take pictures of planets next to their bright central stars.

Accessible to anyone with a basic foundation in college-level physics, How Do You Find an Exoplanet? sheds new light on the prospect of finding life outside our solar system, how surprising new observations suggest that we may not fully understand how planets form, and much more.

John Asher Johnson is professor of astronomy at Harvard University.

AN AUTHORITATIVE PRIMER ON THE CUTTING-EDGE SCIENCE OF PLANET HUNTING
Mathematical Knowledge and the Interplay of Practices

José Ferreirós

This book presents a new approach to the epistemology of mathematics by viewing mathematics as a human activity whose knowledge is intimately linked with practice. Charting an exciting new direction in the philosophy of mathematics, José Ferreirós uses the crucial idea of a continuum to provide an account of the development of mathematical knowledge that reflects the actual experience of doing math and makes sense of the perceived objectivity of mathematical results.

Describing a historically oriented, agent-based philosophy of mathematics, Ferreirós shows how the mathematical tradition evolved from Euclidean geometry to the real numbers and set-theoretic structures. He argues for the need to take into account a whole web of mathematical and other practices that are learned and linked by agents, and whose interplay acts as a constraint. Ferreirós demonstrates how advanced mathematics, far from being a priori, is based on hypotheses, in contrast to elementary math, which has strong cognitive and practical roots and therefore enjoys certainty.

Offering a wealth of philosophical and historical insights, Mathematical Knowledge and the Interplay of Practices challenges us to rethink some of our most basic assumptions about mathematics, its objectivity, and its relationship to culture and science.

José Ferreirós is professor of logic and philosophy of science at the University of Seville in Spain. He is the author of Labyrinth of Thought: A History of Set Theory and Its Role in Modern Mathematics and the coeditor of The Architecture of Modern Mathematics: Essays in History and Philosophy.

The Mathematics of Various Entertaining Subjects

Research in Recreational Math

Edited by Jennifer Beineke & Jason Rosenhouse

The history of mathematics is filled with major breakthroughs resulting from solutions to recreational problems. Problems of interest to gamblers led to the modern theory of probability, for example, and surreal numbers were inspired by the game of Go. Yet even with such groundbreaking findings and a wealth of popular-level books exploring puzzles and brain teasers, research in recreational mathematics has often been neglected. The Mathematics of Various Entertaining Subjects brings together authors from a variety of specialties to present fascinating problems and solutions in recreational mathematics.

Contributors to the book show how sophisticated mathematics can help you construct mazes that look like famous people, how the analysis of crossword puzzles has much in common with understanding epidemics, and how the theory of electrical circuits is useful in understanding the classic Towers of Hanoi puzzle. The card game SET is related to the theory of error-correcting codes, and simple tic-tac-toe takes on a new life when played on an affine plane. Inspirations for the book’s wealth of problems include board games, card tricks, fake coins, flexagons, pencil puzzles, poker, and so much more.

The Mathematics of Various Entertaining Subjects is sure to entertain, challenge, and inspire academic mathematicians and avid math enthusiasts alike.

Jennifer Beineke is professor of mathematics at Western New England University. Jason Rosenhouse is professor of mathematics at James Madison University.
“Imhausen is one of the leading contemporary researchers in the mathematics of ancient Egypt and her book, which spans the whole of Egyptian mathematics from the early dynastic periods to the Greco-Roman era, will be the quintessential scholarly work in the field.”
—Amy Shell-Gellasch, Montgomery College

“A modern, up-to-date, unbiased discussion on ancient Egyptian mathematics, this book is an important contribution to the field. It represents the most recent and best-documented presentation of the subject.”
—Corinna Rossi, author of Architecture and Mathematics in Ancient Egypt

“Imhausen’s book is a superb introduction to the fascinating field of Egyptian mathematics. The work displays an impressive mastery of source material that straddles a range of languages and an enormous timespan, and is filled with impeccable scholarship that is superbly readable. It will become the standard reference for this topic.”
—Duncan J. Melville, St. Lawrence University

Mathematics in Ancient Egypt traces the development of Egyptian mathematics, from the end of the fourth millennium BC—and the earliest hints of writing and number notation—to the end of the pharaonic period in Greco-Roman times. Drawing from mathematical texts, architectural drawings, administrative documents, and other sources, Annette Imhausen surveys three thousand years of Egyptian history to present an integrated picture of theoretical mathematics in relation to the daily practices of Egyptian life and social structures.

Imhausen shows that from the earliest beginnings, pharaonic civilization used numerical techniques to efficiently control and use their material resources and labor. Even during the Old Kingdom, a variety of metrological systems had already been devised. By the Middle Kingdom, procedures had been established to teach mathematical techniques to scribes in order to make them proficient administrators for their king. Imhausen looks at counterparts to the notation of zero, suggests an explanation for the evolution of unit fractions, and analyzes concepts of arithmetic techniques. She draws connections and comparisons to Mesopotamian mathematics, examines which individuals in Egyptian society held mathematical knowledge, and considers which scribes were trained in mathematical ideas and why.

Of interest to historians of mathematics, mathematicians, Egyptologists, and all those curious about Egyptian culture, Mathematics in Ancient Egypt sheds new light on a civilization’s unique mathematical evolution.

Annette Imhausen is professor of the history of science at Goethe University, Frankfurt. She is the author of Egyptian Algorithms.
Descent in Buildings

Bernhard Mühlherr, Holger P. Petersson & Richard M. Weiss

Descent in Buildings begins with the resolution of a major open question about the local structure of Bruhat-Tits buildings. The authors then put their algebraic solution into a geometric context by developing a general fixed point theory for groups acting on buildings of arbitrary type, giving necessary and sufficient conditions for the residues fixed by a group to form a kind of subbuilding or “form” of the original building. At the center of this theory is the notion of a Tits index, a combinatorial version of the notion of an index in the relative theory of algebraic groups. These results are combined at the end to show that every exceptional Bruhat-Tits building arises as a form of a “residually pseudo-split” Bruhat-Tits building. The book concludes with a display of the Tits indices associated with each of these exceptional forms.

This is the third and final volume of a trilogy that began with Richard Weiss’ The Structure of Spherical Buildings and The Structure of Affine Buildings.

Bernhard Mühlherr is professor of mathematics at the University of Giessen in Germany. Holger P. Petersson is professor emeritus of mathematics at the University of Hagen in Germany. Richard M. Weiss is the William Walker Professor of Mathematics at Tufts University. He is the author of The Structure of Spherical Buildings, Quadrangular Algebras and The Structure of Affine Buildings (all Princeton) and the coauthor with Jacques Tits of Moufang Polygons.

Classification of Pseudo-reductive Groups

Brian Conrad & Gopal Prasad

In the earlier monograph Pseudo-reductive Groups, Brian Conrad, Ofer Gabber, and Gopal Prasad explored the general structure of pseudo-reductive groups. In this new book, Classification of Pseudo-reductive Groups, Conrad and Prasad go further to study the classification over an arbitrary field. An isomorphism theorem proved here determines the automorphism schemes of these groups. The book also gives a Tits-Witt type classification of isotropic groups and displays a cohomological obstruction to the existence of pseudo-split forms. Constructions based on regular degenerate quadratic forms and new techniques with central extensions provide insight into new phenomena in characteristic 2, which also leads to simplifications of the earlier work. A generalized standard construction is shown to account for all possibilities up to mild central extensions.

The results and methods developed in Classification of Pseudo-reductive Groups will interest mathematicians and graduate students who work with algebraic groups in number theory and algebraic geometry in positive characteristic.

Brian Conrad is professor of mathematics at Stanford University. Gopal Prasad is the Raoul Bott Professor of Mathematics at the University of Michigan.

ANNALES OF MATHEMATICS STUDIES, 190
Phillip A. Griffiths, John N. Mather, and Elias M. Stein, Series Editors
OCTOBER

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The Digital Einstein Papers

- An exciting new free, open-access website that puts The Collected Papers of Albert Einstein online for the very first time
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The Digital Einstein Papers is an exciting new free, open-access website that puts The Collected Papers of Albert Einstein online for the very first time, bringing the writings of the twentieth century’s most influential scientist to a wider audience than ever before. This unique, authoritative resource provides full public access to the complete transcribed, annotated, and translated contents of each print volume of The Collected Papers. The volumes are published by Princeton University Press, sponsored by the Hebrew University of Jerusalem, and supported by the California Institute of Technology. The website—einsteinpapers.press.princeton.edu—currently contains the contents of Volumes 1–13 of The Collected Papers, covering the first forty-four years of Einstein’s life, up to and including the award of the Nobel Prize in physics and his long voyage to the Far East. The contents of each new volume will be added to the website approximately eighteen months after print publication. Eventually, the website will provide access to all of Einstein’s writings and correspondence accompanied by scholarly annotation and apparatus, which are expected to fill thirty volumes.

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