

NOMINATION COVER SHEET
2011 Virginia Outstanding Faculty Awards

1. <u>NAME</u> Full (Legal): John Barkley Rosser, Jr. Preferred First Name: Barkley	
2. <u>INSTITUTIONAL INFORMATION</u> Institution: James Madison University Rank/Position Title: Professor Year Rank/Title Attained: 1988 Years at Institution: 33 Campus Email Address: rosserjb@jmu.edu Campus Phone: (540)568-3212 Campus Mailing Address: Department of Economics MSC: 0204 James Madison University Harrisonburg, VA 22807 Campus Communications Contact: -Name: Dr. Karen Santos -E-mail: santoske@jmu.edu	3. <u>PROFESSIONAL INFORMATION</u> Academic Discipline: Economics Specialization/Field: Mathematical Economics Type of Terminal Degree: Ph.D. Year Awarded: 1976 Awarding Institution: University of Wisconsin-Madison

Please check only one box:

- RESEARCH/DOCTORAL INSTITUTION NOMINEE:
 MASTERS/COMPREHENSIVE INSTITUTION NOMINEE:
 BACCALAUREATE INSTITUTION NOMINEE:
 TWO-YEAR INSTITUTION NOMINEE:
 TEACHING WITH TECHNOLOGY NOMINEE:
 RISING STAR NOMINEE:

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Signature (President or Chief Academic Officer): _____

Printed Name: Dr. A. Jerry Benson, Provost and Senior Vice President

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Mission Statement

James Madison University

We are a community committed to preparing students to be educated and enlightened citizens who lead productive and meaningful lives.

Summary of Accomplishments

Teaching

J. Barkley Rosser, Jr. is a unique teacher. His passion and enthusiasm are well known and recognized among students and colleagues alike, with other faculty sometimes asking him to speak more quietly as he occasionally projects into their classrooms. He has drawn many students to the economics majors, and shepherded many of them on to productive careers after graduating. He makes such an impression that returning alumni regularly ask about him even many years later.

A crucial part of his success as a teacher has been due to his own history as someone who has stood up and questioned established theories and views. After years in which he effectively “wandered in the wilderness” in being recognized for his research, his perspectives have now come to be taken very seriously at the highest levels of the economics profession. He inspires by example and strongly encourages students to think for themselves and to learn to articulate their ideas and questions. It is not surprising then that some of his students have stood up in the world in various ways to make a difference. He is one of the best professors on the JMU campus at teaching the fundamental skill of critical thinking.

While he has not taught these courses in the most recent years, he did teach the Principles of Macroeconomics and the Principles of Microeconomics for decades at JMU. His primary method of trying to get students to think critically was to assign three papers per semester in which the students were to find an article in the news media or in an academic journal and write a summary and an analysis of the arguments made in it. He always emphasized that the latter part of the assignment was the most important part of it; he made it clear that the students who would get the best grades on these papers would be those who were able to find problems or difficulties in the arguments made and would be able to logically or factually critique the arguments. He would always tell students in these courses that he was less concerned with them mastering the details of economic theories and more concerned with them being able to understand what they were hearing or reading in the media or on the Internet. He wants students to relate these things both to their own personal lives as well as to broader policy debates in the world at large. On numerous occasions he has run into alumni around the world and is gratified to have them confirm that he was helpful to them in achieving this goal.

Professor Rosser has taught many upper level courses over the years, including comparative economic systems (for which he has written a widely adopted textbook with his colleague and wife, who more frequently teaches this course), Soviet economy, natural resource economics, international economics, international finance, and intermediate microeconomic theory. However, the four upper level courses he has taught the most, in order of frequency, have been environmental economics, urban economics, advanced microeconomic theory, and regional economics.

He was the first at JMU to teach environmental economics, and when he was first hired by JMU, this field was only just beginning to be established. Indeed, he was a reviewer for the first edition of what has since become the most widely used textbook in the field. Rather than assign shorter topical papers, he has always had students write longer papers in this course. He has them turn in topics after two weeks, an initial outline and bibliography two weeks later, and then has them turn in a first draft two weeks before the end of the semester. He goes over these drafts with a fine-toothed comb, not only suggesting changes in content and substance, but also correcting such form problems as misspellings, syntactical or grammatical mistakes, and inconsistencies or problems with citations and bibliographies. He points out to students that in

the real world a good way to have a memo or proposal get rejected out of hand is to have it contain such easily avoided mistakes. The students then have the remaining two weeks to complete a final draft.

He was the first to teach urban economics on the JMU campus, an upper level course he taught during his first semester there. As in environmental economics, he has the students write a longer research paper. Indeed in all his upper level courses, he has the students read substantial amounts of outside material, which some students do not like doing, but which he feels is crucial to exposing them to a wide variety of viewpoints and perspectives. In both of these courses he emphasizes the links between more theoretical issues and practical policy problems, for which he draws on his own past work experience to illuminate more fully.

Advanced Microeconomic Theory, a senior level course geared towards students who may attend graduate programs, is another course he was the first to teach at JMU. This course has a much stronger mathematical orientation than the others he teaches, and students do extensive homework assignments with highly challenging problems in lieu of writing papers. Perhaps more than any other class, this is the course where he introduces much of his own research into problems rich in economic theory. The students get a thorough grounding in traditional material through a graduate level theory textbook, but then get the critiques of that theory in supplemental readings.

He also teaches a senior level Regional Economics course in the form of a seminar. Students not only write papers, but also present their papers orally to the other students during the last few weeks of the course. This is an important exercise given how many real world jobs involve being able to speak in front of groups of people. He has been able to help some shy students overcome their weakness in this area.

He has chaired 8 honors theses committees and served on 5 others. He has overseen 12 independent studies by students. He has also been instrumental in getting students into many graduate programs in economics, law, business administration, public administration, and urban planning. He has also used his international connections to help place students in internships in the OECD, INSEE, and UNESCO, as well as the US embassies in France, Great Britain, and Costa Rica. Additionally, his students have held internships at Goldman Sachs and the US Federal Reserve (both at the Board of Governors and at the Richmond Federal Reserve Bank), Deutsche Bank, and the US State Department. He has helped place students in jobs in the CBO, HUD, EPA, CIA, BLS, and numerous businesses. Several students have gone to graduate school in economics and in turn have become academic economists.

In addition to teaching at JMU, he has taught many summers at the University of Wisconsin-Madison; Umeå University, Sweden; University of Newcastle, Australia; University of Paris-South-XI-Sceaux, France (lecturing in French); Polytechnic University of the Marches, Ancona, Italy (lecturing in Italian); and Chuo University, Tokyo, Japan. In addition he has served as an outside reader on Ph.D. committees at American University in Washington and the University of Adelaide, Australia.

Discovery

Barkley has been amazingly prolific in scholarly research in the past 33 years, especially for someone located at an institution that so strongly emphasizes teaching. Counting multiple editions and workbooks, he has published 10 books, with another in press. He has published 93 articles or comments in refereed journals, with another three in press and two forthcoming. He has published 31 book chapters, with another in press and another forthcoming. He has

published 22 book reviews, with one in press. Furthermore, he has an additional six papers currently under review at various possible outlets. All of this has led to a considerable impact, with Google Scholar reporting more than 1,500 citations of his work in one form or another. Of these some are self-citations and others are either duplicates or misattributions. Nevertheless, the number of distinct non-self citations of his work exceeds 1,000.

While he has published on many topics, including many multi-disciplinary or “transdisciplinary” ones (to use the term he prefers), a theme of many of his works—and what has drawn the most attention to his work—has been that of complexity, and the nonlinear dynamics that underlie complexity, within the field of economics and even more broadly. This approach provides a different way of viewing economics from the earlier neoclassical approach, one that allows for sudden changes and erratic movements, phenomena now more accepted as important (especially as we have seen the world economy go through a difficult crisis).

This theme reached its strongest development in his most widely cited work, the first edition of his first book, the 1991 *From Catastrophe to Chaos: A General Theory of Economic Discontinuities*. While it has been cited hundreds of times by others and often been praised as a comprehensive survey with its massive bibliography, the work is also where he introduced more new ideas than in any other single piece of published research he has done. This includes the idea of *hypercyclic morphogenesis* - how a system can endogenously generate a new level of hierarchical complexity. It is also where he was the first to produce a mathematical model of the phenomenon in speculative bubbles of the *period of financial distress* (which has characterized most historical bubbles) - a period after a bubble peaks when it declines for some time before it finally crashes. This is what appears to have happened to the global derivatives market between August 2007 and September 2008. He also first introduced into economic discourse in this work the concept of *chaotic bubbles* - the idea, now widespread, that speculative bubbles may follow chaotically dynamic paths; and, the concept of *chaotic hysteresis* - in which a system may jump from one zone of chaotic dynamics to a completely different zone. This concept he applied to the problem of the economic transition in the formerly socialist economies of the Soviet bloc.

He has proposed new ideas not having much to do with complex dynamics in other publications. One of the earliest (1981) is that of the *megacorpstate* - a cartel composed of both nations and companies, as in the oil price increases of the 1970s. In his 1996 *Comparative Economics in a Transforming World Economy* (co-authored with his wife, Marina Rosser) he introduced the concept of the *new traditional economy* - an economy that is embedded within a traditional social system such as a religion, with Islamic economies such as Iran being examples. This key concept lies at the foundation of their reconstruction of the entire field of comparative economics in the wake of the end of the Cold War and the lessening of importance of the old capitalism versus socialism debate.

Another new concept he has published on—with Marina Rosser and Ehsan Ahmed—was in a 2000 paper published in the *Journal of Comparative Economics*. They recognized a possible link between income inequality and the size of an underground economy in transition economies. While they established this empirically, they also explained this with a model of nonlinear dynamic complexity in labor markets. This led to a series of papers that established that this theory holds in the rest of the world economy, and would become the basis for some of Barkley’s policy advising. This idea has been so widely accepted that it is now the conventional view, having completely overturned what had been an earlier consensus.

His most cited article is his 1999 paper from the *Journal of Economic Perspectives*, “On the Complexities of Complex Economic Dynamics,” in which he establishes a general framework for studying complex economic dynamics that has come to be enormously influential and widely accepted. This has been followed up by a series of papers that have delved more deeply into the definition and meaning of complexity. Some of these have appeared as debates with others as this is a controversial topic still under intense discussion.

While his transdisciplinary work will be discussed in the next section, he has also published widely across many different sub-fields of economics: microeconomic theory; macroeconomic theory; environmental economics; urban economics; regional economics; comparative economics; international finance; economic development; economic anthropology; socio-economics; public finance; industrial organization; the history of economic thought; economic methodology; computable economics; and, econometric theory. Additionally, his Wikipedia entry identifies him as a “mathematical economist.”

More recently, he has been engaged in a broader effort to shift how economics as a whole is done, with this primarily driven by his complexity vision. This was best put forward in the enormously influential and award-winning 2004 book, *The Changing Face of Economics: Conversations with Cutting Edge Economists*, which he wrote with David Colander and Richard Holt. He has followed this up with a 2010 sequel, *European Economics at the Crossroads*.

His influence is global and goes across many disciplines as well as many areas of economics. This is evidenced by the large number of countries that he has been invited to speak in, many of them numerous times: Argentina, Australia, Austria, Belgium, Canada, China, Denmark, Finland, France, Germany, Great Britain, Hungary, India, Israel, Italy, Japan, Mexico, Morocco, the Netherlands, Russia, Saudi Arabia, South Africa, South Korea, Sweden, Switzerland, Taiwan, Tunisia, and Turkey, as well as throughout the United States. He has given 16 invited plenary or keynote lectures, a majority of those outside the United States.

Knowledge Integration

Barkley Rosser’s integration of ideas from many different disciplines in studying complex dynamics is what allowed him to be one of the few economists to foresee the serious danger facing the world economy: how the economy was likely to experience a massive financial crash that would result in a deep recession around the world. Several of the letter writers below, including Nobel Prize winner George Akerlof and the influential policy economist James K. Galbraith, attest to his acuity in this matter and how his special insights allowed him to foresee this.

In terms of curricular development, Professor Rosser has been involved with this extensively at JMU. Besides creating three new courses himself, he has served on Curriculum and Instruction committees extensively at both the department and college level, including serving as chair during periods of major curricular restructuring. He also served from 1997 to 2008 on the Social Sciences Cluster of the Committee on General Education at the university level. He was the economics representative on that committee for many years, including during the period of one of the greatest upheavals and restructurings to ever happen on the campus with respect to curriculum—when the former Liberal Studies program became the General Education program. He also served as Chair of his department’s C&I committee during this difficult period.

Similarly, interdisciplinarity (or multidisciplinary or transdisciplinarity) is an area of great strength in Barkley Rosser’s record. He has not only published in, but also served on the editorial boards of, two multidisciplinary journals dealing with complexity: *Nonlinear Dynamics*,

Psychology, and Life Sciences as well as *Discrete Dynamics in Nature and Society*. Some other journals he has published in that cross disciplines include *Advances in Complex Systems*; *American Journal of Economics and Sociology*; *Annals of Regional Science*; *Annals of the Japan Association for Philosophy of Science*; *Ecological Economics*; *International Journal of Social Economics*; *Journal of Economics and Business*; *Mathematics and Computers in Simulation*; *Quarterly Review of Economics and Finance*; *Review of Political Economy*; *Reviews of Modern Physics*; *Systems Research*; *Urban Studies*; and *Virginia Social Science Journal*.

Beyond his own publications in journals crossing disciplinary boundaries, his influence has gone even further as measured by non-economics journals where his scholarly research has been cited. A partial list includes *Bioscience*; *Geoforum*; *Stochastic Hydrology and Hydraulics*; *European Financial Management*; *Journal of Social and Evolutionary Systems*; *Physica D*; *European Journal of Operational Research*; *Environment and Planning A*; *Journal of Marketing*; *American Journal of Sociology*; *Journal of Business Venturing*; *Ecological Complexity*; *Management Science*; *International Journal of Environmental Studies*; *Human Resource Development Review*; *Journal of Mathematical Sociology*; *Theoretical and Applied Computing*; *American Behavioral Science*; *International Journal of Bifurcations and Chaos*; *Journal of Creative Behavior*; *Urban Geography*; *Journal of Organizational Change*; *Northwestern University Law Review*; *Land Use Policy*; *Ecological Applications*; *Developmental Psychobiology*; and *Journal of Theoretical Politics*.

He has regularly incorporated his own research into his courses. The most obvious way is by having students read relevant published research in his courses. In all of his main upper level courses he includes chapters from his *magnum opus*, although he uses different chapters for each course. He has also assigned self-authored articles in all of them. While the theme of complexity appears in all these courses, it appears in different ways in each one. He has also introduced other disciplines where relevant, which occurs most often when complexity enters into the discussion.

For example, in Environmental Economics he has long brought in other disciplines such as biology, chemistry and physics. Some of the most important issues in this course involve interacting systems combining all these elements in nonlinear ways. Some examples include the global climate issue and the bioeconomics of fisheries; chaos theory was first developed in climatology and the collapses of fisheries are well modeled by catastrophe theory. Rosser has published papers on both of these matters that he has students read.

Urban Economics is also a subject that involves interactions with other disciplines such as sociology, political science and history, each with aspects that draw on complexity. A major approach to complexity involves interacting agent models, where the agents are located in a space and interact locally. Such approaches have been applied to such things as urban segregation, with Rosser publishing one of his earliest papers in 1980 on this topic.

Additionally, in Advanced Microeconomic Theory he has assigned more mathematical and theoretical works dealing with complexity. In this course he also confronts more directly the implications for economic theory at its foundations. The dynamics of regional growth and inter-regional trade relations involve geography and complexity. He has also published on these matters, some of which his students read.

Finally, in his textbook with Marina Rosser on comparative economics, many other disciplines are brought in, including anthropology, history, sociology, and political science, as complexity enters through the issue of transition. The book has been adopted for use at Harvard and

Stanford Universities, as well as at Southeast Missouri State and Cazenovia Colleges. Nearly a third of the book's adoptions are outside the United States, including Canada, UK, Australia, Singapore, and India.

Service

A mark of his service both at his university and in the broader professional community has been his innovative energy that has led him to be involved in founding organizations and societies. At JMU he initiated the founding of the Economics Club. This is a group open to all students, in contrast to the more restricted Omicron Delta Epsilon honor society, of which he was the Faculty Adviser at the time. Although students would initiate it, he was also the first Faculty Adviser of the JMU chapter of Amnesty International beginning in 1988, and lasting to 2005.

In the professional community he was a cofounder of two societies: the United States Society for Ecological Economics, and the Society for Nonlinear Dynamics and Econometrics. In June 2009, he founded the new Society for Nonlinear Economic Dynamics while attending a conference. After delivering the main plenary address, he chaired the final overview session, at which he proposed the founding of the society. This was voted on and accepted by the members in attendance; he then organized an immediate election for an initial set of officers.

By drawing on his research on many topics, his service has extended to extensive consulting and advising at many levels of government: the city of Madison, Wisconsin; the city of Harrisonburg; the state of Wisconsin; the Commonwealth of Virginia; various agencies of the United States government; and, international agencies.

He has also been involved with public communication on economics and a number of other issues. This interaction has also been at all levels: numerous interviews with local newspapers, TV, and radio programs in Harrisonburg and the Shenandoah Valley; the *Richmond Times-Dispatch* and Channel 29 in Charlottesville; Channel 9 in Washington and the *Washington Post*; and, international outlets such as TV in Russia and Italy, as well as in the *India Times*.

In more recent years, a major outlet of his public communications has been through the new medium of blogging. He has become a prominent figure in the econoblogosphere, first with Maxspeak, which ended in 2007. Since then he has co-blogged with Econospeak, which was recently ranked as the 19th most useful blog for economics students. Palgrave Econolog has also ranked it as 19th in the top 100 best economics blogs.

Probably his most prominent area of professional service has been his editorship since 2001 of the highly respected and innovative journal, *Journal of Economic Behavior and Organization* (JEBO). The journal is the 14th most cited economics journal in non-economics journals, and its impact factor has more than doubled since he took over. He has also moved the journal into new areas such as the emerging field of *econophysics*, in which he has also published.

J. Barkley Rosser, Jr. – Personal Statement

“Barkley Rosser is my current mentor in economics.”

Nassim Nicholas Taleb, author, *The Black Swan*, 5/1/09, at <http://pirsa.org/09050023>

“You should leave this program and go to work for Exxon,” my frustrated major professor at the University of Wisconsin-Madison, Eugene Smolensky, told me once while I was bogged down in writing my PhD thesis. My job at the Institute for Environmental Studies studying how climate change affected world food production—a topic of interest to me, although distant from my thesis topic “Discontinuities in Land Values at the Urban-Rural Margin”—had ended. It seemed that I was pursuing strange ideas about mathematics in nonlinear dynamics that would only lead me to a dead end. He later told me that it was only as we talked while walking down the hall to my final thesis defense that he came to accept fully the validity of the arguments in it.

I had never fit in well in the economics graduate program. I was viewed as fun to have around as I regularly wrote (and performed in) the satirical skits the grad students would perform at the annual department Christmas parties. But I was constantly challenging the professors in classes on basic theoretical issues, taking courses outside the department, such as ecology, and pursuing apparently odd branches of mathematics that I claimed related to in the foundations of economic theory. Now they are pleased to have me as an alumnus, for whom a tribute in my honor was published earlier this year (*Nonlinear Dynamics in Economics, Finance and the Social Sciences: Essays in Honour of John Barkley Rosser, Jr.*, 2010, Springer).

After working at the Institute, I went to work for the State of Wisconsin in its Department of Natural Resources, looking at the plans of cities to build or expand their municipal sewage treatment plants, about as down-to-earth as one can get. I eventually developed the formula still used in the state for distributing funds for this, as well as working on the first “cap and trade” system in the world to manage pollution in the Fox River from pulp and paper mills. I joked that I had “my head in the clouds, but my feet in the sewers.” Indeed, while I would successfully pursue my interests in abstract theory, I was always focused on real world policy applications of what I did. This balance would serve me well when I came to teach undergraduate economics at JMU beginning in 1977.

I accepted the offer from what was then Madison College in economics over one from the Urban and Regional Studies Program at University of Virginia. This was partly because I knew I wanted to pursue a wide range of topics in research, some on unorthodox ideas that might be hard to publish. A graduate program such as the one at UVA would want me to focus on a narrow area, while publishing in top journals, especially in my first years there. JMU would be pleased as long as I published in refereed journals on a regular basis, and I would do so prolifically. While I have visited other schools around the world and taken time off to consult, JMU has remained my professional home ever since. JMU let me be free.

Furthermore, I was genuinely interested in teaching undergraduates, with my dramatic lecturing style and my interest in practical real world problems. I knew working at a masters level school, with its mission of “preparing students to be educated and enlightened citizens who lead productive and meaningful lives,” would provide the sort of balance of teaching, research, and service that appealed to me more than what I might find elsewhere. I would provide students with a full picture of economics and its relationship with other disciplines, offering a critical perspective on established theories and a practical orientation that would help them in their future lives and jobs. From my own experience, I would challenge students with the skills of thinking critically and questioning established ideas in their pursuit of knowledge.

I had the opportunity to attract some excellent students to become economics majors, with some of them going on to become professional academic economists themselves; most have pursued careers in government or business (see letters by Mary Evans, Stacy Fuller, Kristina Terkun, and Stephen Versen, the latter two in Additional Documentation section). This has been a source of deep satisfaction for me: seeing young people going forth to do good things in the world with the feeling that I have contributed to their ability and motivation to do so.

I would also co-author with my wife the influential textbook, *Comparative Economics in a Transforming World Economy*—adopted for use at Harvard, Stanford, and Oxford—which draws on complexity ideas in connection with the problem of economic transition. This would lead to me engaging in policy advising on related issues. I also pursued my interests in policy issues further by advising local city government officials in Harrisonburg; testifying before the Virginia legislature on environmental and land use issues; consulting with a variety of federal government agencies; informally advising four presidential campaigns on numerous issues such as global warming, social security, national defense; and, speaking to international bodies from the Organization of Economic Cooperation and Development to the National Science Foundation of Japan on economics of global warming.

In more recent years, I have extended my public communication service through the Internet, particularly by co-blogging first with the influential *Maxspeak* blog—until its owner shut it down when he took a government position. More recently I have blogged with *Econospeak*, ranked by Online Universities Weblog as #19 out of “100 Best Blogs for Econ Students.” While I mostly deal with economics, I once made the Harrisonburg community aware of the plight of its Kurdish immigrant community, who were facing harassment from federal authorities, when few knew of this. I helped rally support for them across the political spectrum: from the liberal Democratic mayor to the conservative Republican local newspaper editorial page.

As I pursued the implications of nonlinear dynamics, my unconventional research path would lead me to become one of the world’s leading experts on what is now called *complexity economics*. It was in 1991 that I finally drew the threads together to publish my book *From Catastrophe to Chaos: A General Theory of Economic Discontinuities*. It would be rejected by 13 publishers before Kluwer accepted it, and then it went into three printings and two editions. It became a standard reference book and my most cited work.

I began to be invited to speak around the world (28 countries on six continents), including 16 times as an invited plenary or keynote speaker at conferences. I had defined a new approach to economics. I would move to editing the influential *Journal of Economic Behavior and Organization*, beginning in late 2001, but also continue to publish on complexity, with my 2009 *Handbook of Complexity Research* and another in press. I have become one who is involved in fundamentally redefining economics more broadly, as with my award-winning 2004 book, *The Changing Face of Economics: Conversations with Cutting Edge Economists*.

It has been satisfying that my complexity perspective allowed me to be one of the few economists who foresaw the upheavals we have undergone in recent years in the world economic and financial system. It has been my insight on this that led bestselling author Nassim Taleb to label me his “current mentor in economics” in a May, 2009 address to a crowd of over a hundred at the Perimeter Institute of Theoretical Physics in Canada.

Abbreviated Curriculum Vita

Education

B.A. University of Wisconsin-Madison, 1969
M.A. University of Wisconsin-Madison, 1972
Ph.D. University of Wisconsin-Madison, 1976

Academic Positions

Assistant Professor of Economics, James Madison University, 1977-1983
Associate Professor of Economics, James Madison University, 1983 -1988
Professor of Economics, James Madison University, 1988 - present
Kirby L. Cramer, Jr. Professor of Business Administration, JMU, 1996 - present

Selected Awards and Honors

Member, Phi Kappa Phi Honorary Society, 1969-present
JMU Madison Scholar, 1991, 2000
Who's Who in America, 2002-
American Library Association Choice Outstanding Book for 2006, *The Changing Face of Economics: Conversations with Cutting Edge Economists*
Workshop held in honor of 60th birthday on Dynamic Modeling in Economics and Finance, Urbino University, Italy, September 25-27, 2008
Fellow, Economists for Peace and Security, 2009
Festschrift published in his honor, 2010.

Selected Publications

Books

From Catastrophe to Chaos: A General Theory of Economic Discontinuities, Boston: Kluwer, 1991 (2nd edition, Kluwer, 2000)
Comparative Economics in a Transforming World Economy, Chicago: Irwin, 1996 (2nd edition, MIT Press, 2004) (with Marina V. Rosser)
Complexity in Economics, Volumes I-III, Cheltenham, Edward Elgar, 2004
The Changing Face of Economics: Conversations with Cutting Edge Economists, Ann Arbor: University of Michigan Press, 2004 (with David Colander and Richard P.F. Holt)
Handbook of Complexity Research, Cheltenham: Edward Elgar, 2009
European Economics at the Crossroads, Cheltenham: Edward Elgar, 2010 (with David Colander and Richard P.F. Holt)

Articles in Refereed Journals

"The Theory and Policy Implications of Spatial Discontinuities in Land Values," *Land Economics*, 1978
"The Emergence of the Megacorpstate and the Acceleration of Global Inflation," *Journal of Post Keynesian Economics*, 1981
"Reswitching as a Cusp Catastrophe," *Journal of Economic Theory*, 1983
"Chaos Theory and the New Keynesian Economics," *The Manchester School of Economic and Social Studies*, 1990
"The Dialogue between the Economic and the Ecologic Theories of Evolution," *Journal of Economic Behavior and Organization*, 1992
"Dynamics of Emergent Urban Hierarchy," *Chaos, Solitons & Fractals*, 1994
"Schumpeterian Evolutionary Dynamics and the Collapse of Soviet-Bloc Socialism," *Review of Political Economy*, 1997 (with M.V. Rosser)
"Islamic and Neo-Confucian Perspectives on the New Traditional Economy," *Eastern Economic Journal*, 1998 (with M.V. Rosser)

“On the Complexities of Complex Economic Dynamics,” *Journal of Economic Perspectives*, 1999

“Income Inequality and the Informal Economy in Transition Economies,” *Journal of Comparative Economics*, 2000 (with M.V. Rosser and E. Ahmed)

“Complex Ecologic-Economic Dynamics and Environmental Policy,” *Ecological Economics*, 2001

“Complex Coupled System Dynamics and the Global Warming Policy Problem,” *Discrete Dynamics in Nature and Society*, 2002

“Epistemological Implications of Economic Complexity,” *Annals of the Japan Association for Philosophy of Science*, 2004

“Do Nonlinear Dynamics in Economics Amount to a Kuhnian Paradigm Shift?” *Nonlinear Dynamics, Psychology, and Life Sciences*, 2006 (with M. Dore)

“The Rise and Decline of Mancur Olson’s View of *The Rise and Decline of Nations*,” *Southern Economic Journal*, 2007

“Econophysics and Economic Complexity,” *Advances in Complex Systems*, 2008

“A Critique of the New Comparative Economics,” *Review of Austrian Economics*, 2008 (with M.V. Rosser)

“Is a Transdisciplinary Perspective on Economic Complexity Possible?” *Journal of Economic Behavior and Organization*, 2010

“The Period of Financial Distress in Speculative Markets: Interacting Heterogeneous Agents and Financial Constraints,” *Macroeconomic Dynamics*, 2010, in press (with M. Gallegati and A. Palestrini)

“Emerging Markets and Stock Market Bubbles: Nonlinear Speculation?” *Journal of Emerging Markets, Trade, and Finance*, 2010, in press (with E. Ahmed and J. Uppal)

Selected Invited Plenary or Keynote Addresses

“Speculations on Nonlinear Speculative Bubbles,” Society for Chaos Theory in Psychology and Life Sciences, University of California-Berkeley, 1996

“The Rise and Fall of Catastrophe Theory Applications in Economics: Was the Baby Thrown Out with the Bathwater?” Eighth Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics, University of Technology-Vienna, Austria, 2003

“Complex Ecologic-Economic Dynamics and Forestry Management Policy,” Economics of Sustainable Forestry and Natural Resources Conference, Toronto, Canada, 2004

“Is a Transdisciplinary Perspective on Economic Complexity Possible?” Computational Intelligence in Economics and Finance Conference, Kainan University, Taiwan, 2008

“Nonlinear Dynamics in Urban and Regional Models,” Sixth Conference on Nonlinear Economic Dynamics, Jönköping University, Sweden, 2009

Selected University, Professional, and Community Service

Founder, James Madison University Economics Club, 1987

First Faculty Adviser, JMU Amnesty International, 1988-2005

Editor, *Journal of Economic Behavior and Organization*, 2001-present

Founder, Society for Nonlinear Economic Dynamics, 2009

Grant Reviewer, IGERT Fellowships, National Science Foundation, 2003

Scientific Advisory Board, Max Planck Institute of Economics, Germany, 2008-present

International Scientific Committee, Conference on Economic Science of Heterogeneous Interacting Agents, Beijing Normal University, China, 2009

Chair, IDDRI Conference Session on Global Warming Policy, Paris, France, 2007

Adviser on Land Use Policies, US Forest Service, 1980

Testimony before Virginia House of Delegates, Environmental Issues, 1978, 2002

Co-Blogger, *Maxspeak*, 2005-07 [blog ended]; Co-Blogger, *Econospeak*, 2007-present

Letters of Support (Excerpted)

“Barkley Rosser is one of economics’ great polymaths. What will probably be considered for generations the ‘great mistake’ of economics, the failure to predict the recession in the Summer of 2007, has occurred because economists have pursued the wrong mathematics...Their systems ignored the complexity of nonlinear dynamic dynamics...But Rosser foresaw the importance of complexity, and nonlinear dynamics, and its role in creating boom, and then dramatic bust, long before the crisis. He has been years ahead of the economics profession...Rosser’s ability in vast areas of mathematics that are foreign territory to most economists have made him a unique resource...With the same expansive view...he has also seen that economics should be a more inclusive part of social sciences...

Rosser’s unusual abilities...in the job of editor of the *Journal of Economic Behavior and Organization* [JEBO]...with his encompassing knowledge of economics, social sciences and mathematics, he has turned *JEBO*...into the most exciting journal in economics. He has that talent, rare among editors to know what research goes beyond highly competent and difficult to do and be truly novel and at the frontier...Rosser has the true nose for a good idea.”
George S. Akerlof, University of California-Berkeley, Nobel Laureate in Economics, 2001

“Working with Dr. Rosser, I had the opportunity to meet with him weekly during his office hours to review my progress on my [senior honors] thesis paper, *Complexity, Evolution and General Equilibrium: A Historical Perspective*...Listening to a normal lecture from Dr. Rosser is similar to trying to drink from a fire hose...I was never told ‘ask me later,’ as I had been told by so many other professors...

He was the first professor I ever had who explained the world as I absorbed it...He is easily the most patient teacher I have ever had...His classroom demeanor stems from his simultaneous passion as well as his interest in seeing his students understand and apply the information he teaches.”

Stacy Fuller, former JMU student, Staff of Congressman Eric Paulsen (R-Minnesota)

“Professor Rosser is an economist of great distinction...His work on the economics of complex systems is marked by a constant interplay between theory...and the evidence of events in the real world (such as the transition out of communism in eastern and central Europe). His work is highly relevant to the understanding of complex and chaotic phenomena, including especially the ongoing financial crisis...

Professor Rosser is also notably engaged in the interface of economics, science, technology and engineering, in particular related to the problem of global warming. And I have invited him twice to participate in expert sessions on the financial crisis – 2008 and 2009 – at which he was an exceptionally valuable contributor to a team effort...Economists with Professor Rosser’s range, depth, agility and relevance are very rare.”

James K. Galbraith, Lloyd M. Bentsen, Jr. Professor of Government/Business Relations, Lyndon B. Johnson School of Public Affairs, University of Texas-Austin

“Dr. John Barkley Rosser...is a superior educator who possesses immense wisdom and a personable disposition. Not only is he extremely knowledgeable, but he also holds the talent to pass that knowledge onto his students. In fact, Dr. Rosser is more than just an economics professor; he also teaches his students important life lessons. His students become autonomous and accountable because Dr. Rosser pushes them to do their absolute best. He treats his students with respect and dignity, while still expecting them to be exceptional. He doesn’t pamper his students, but considers them adults.”

Alex J. Fiore, current JMU student

“Simply put, Barkley is a phenomenon...He is a sought after lecturer throughout the world...an in-demand keynote lecturer in economics...His breadth of interests and knowledge of the field of economics are enormous...he has been on the cutting edge of economic theory. His work on complexity is recognized in the profession as central to our understanding of how complexity fits into the field of economics...

Barkley doesn't explore small issues – he goes right for the jugular and looks at major questions, often framing issues in ways others have not thought to frame them. As such he has been far ahead of the field in a variety of research areas in economics, and the passage of time is making his contributions even more important.”

David C. Colander, Christian A. Johnson Professor of Economics, Middlebury College

“I signed up for Dr. Rosser's class in the fall of my freshman year knowing little about the professor and even less about the field of economics...The fact that the course challenged me only made me more attracted to the field. I soon decided to pursue a double major in Economics and French...In my junior year, I signed up for a course in advanced microeconomic theory with Dr. Rosser. It was by far the most challenging course I took at JMU. It was also the most helpful...I began to consider pursuing a graduate degree in Economics. Dr. Rosser was extremely helpful in working with me to identify prospective programs...My first semester of graduate school, the course that most of my fellow graduate students found most challenging...was less so for me. Dr. Rosser's advanced theory course had covered many of the concepts...

I feel extremely lucky to be working in a career I enjoy and find fulfilling. Dr. Rosser put me on a path to find that career. I only hope that I do the same for some of my own students.”

Mary F. Evans, Associate Professor of Economics, Claremont McKenna College

“Such is the international renown of Professor Rosser that to mark the occasion of his 60th birthday a special conference was held in his honour at the University of Urbino, Italy in 2008 and was attended by 56 scholars from eight countries. The papers from that conference appeared in January 2010 in a special volume honouring Professor Rosser and published by the highly regarded publisher Springer-Verlag. It was my pleasure and honour to be one of the editors of this volume. It no doubt speaks volumes for Professor Rosser's international reputation that when I proposed this special volume to Springer-Verlag, they accepted it with great enthusiasm.”

Carl Chiarella, Professor of Quantitative Finance, University of Technology- Sydney, Australia

“Dr. Rosser, among his many other obligations, has consistently volunteered his time in and around Harrisonburg to make engaging and educational presentations to groups and organizations seeking insights into the issues of the day...In May 2009, he was the key speaker at a regional business leadership summit focused on exploring the local implications and trends on the current economic downturn...

I hold Dr. Rosser as a personal advisor, knowing he is available to answer questions on such issues as a recent economic development decision to sell a city-owned building to a local corporation. In addition, Dr. Rosser proactively shares systems and models he finds in his international travels that might be an example for Harrisonburg to follow.”

Kai Degner, Mayor, City of Harrisonburg, Virginia

“My first class with Dr. Rosser was Urban Economics. From the first day I stepped into the classroom, I knew I was in for a unique experience many are nor privileged to have...I am now currently enrolled in Dr. Rosser's Environmental Economics course; he will be the only teacher I will have taken twice at JMU by choice.”

Chase Lyne, current JMU student

"I began to know Barkley Rosser's work mainly through his book, "From Catastrophe to Chaos: A General Theory of Economic Discontinuities," published in 1991, the beginning of the era characterized by non-linear dynamics. His book led me to think of crashes and bubbles not in the traditional framework of shock propagation linear stochastic mechanism, but in a non-linear environment..."

Each time he was a keynote speaker...his energetic and sensational speech has...helped facilitate communication between him and many Asian scholars, even though some of them have difficulty speaking fluent English."

Shu-Heng Chen, Dean of International Cooperation; Editor, New Mathematics and Natural Computation, National Chengchi University, Taipei, Taiwan

"For years Professor Rosser has been a dynamic voice on the internet in assorted, very visible online forums...He is most well known for his commentary on social insurance, finance, and the frontiers of economic theory. We should also note his courageous defense of Kurdish immigrants in his own backyard in the face of unjust treatment by the authorities...his views were ultimately vindicated in the courts."

Max Sawicky, Founder of Maxspeak Blog, Deputy Director, Government Accountability Office

"Barkley Rosser, through his wide-ranging contributions to the development of complex economic dynamics has shown his exceptional mastery of the theories, histories and methodologies of nonlinear dynamics...I cannot think of any other living, or not-living, economist who has organized his visions of theory and policy, of individuals and institutions, of history and the present, in terms of the permutations and combinations of these rich concepts."

Kumaraswamy Vela Velupillai, Fellow, Girton College, Cambridge University; Trento University

"Barkley exhibits the full package – teaching, scholarship and professional service. A gifted, engaging and animated professor, Dr. Rosser is highly sought after by students. In 2010, he approaches the classroom with the same dedication and passion as he did during his first semester. He draws students in, engaging them in the learning process and pushing them to think critically in ways they have not done previously. Alumni often ask about him and recall the influence he had on their academic experience in an Economics course 15-20 years earlier..."

He is equally at ease with Nobel Laureates and new Assistant Professors...In May 2008...he hosted a conference on our campus. It attracted a wide array of world class economists. It was readily apparent that everyone in attendance held Barkley in the highest professional regard. The discussion was spirited and at the highest intellectual level. It is evident that Barkley's network of colleagues is truly global and highly regarded."

Robert D. Reid, Dean, College of Business, James Madison University

"He is one of only three editors I have known in 50 years of experience who has had the courage and principles to field the criticisms and severe pressures needed to publish important work that significant and influential people have preferred to see brushed aside, sometimes in spite of dispassionate and scholarly reviews that support publication. This is of critical importance and his guts and integrity as editor have served well the continued intellectual accomplishments of JEBO to the profession."

Barkley's vast knowledge and deep intellect are complemented by human qualities that particularly qualify him as the outstanding editor of JEBO and also make him a particularly appropriate candidate for this outstanding faculty award."

Vernon L. Smith, Chapman University and George Mason University, Nobel Laureate in Economics, 2002

Additional Documentation

Teaching

Additional Excerpts from Signed Letters from Students

“Just over a year ago I took a job, one I absolutely love, with the Virginia Department of Agriculture in their Agribusiness Development unit...I attended graduate school for Urban Planning, primarily because of the strong background in economics I received at JMU, and more specifically in his classes.

I had never seen anyone teach a class with as much passion as he taught...It left quite an impression. I declared as an econ major...I haven't forgotten that feeling and credit that time as enforcing a love of learning that I still have today.

My favorite class was his Environmental Economics class...Environmental issues have become increasingly important in the work I do now...and the rational and balanced view of the issue he taught in that class gave me a mature understanding of the subject. His passion, intellect and interest in making sure we really learned the topic has had a big, positive impact on my education, my career, and my intellectual life.”

Stephen Versen, former JMU student, Virginia Department of Agriculture

“Professor Rosser is truly an outstanding teacher...He is an exceptional professor because he challenges his students. He leads the class to think or experience different ideals or viewpoints, laying out the framework for students to make the connections. No one would describe Urban Economics with him as easy. I would describe the semester as rewarding.

...He encouraged the class to challenge our standing beliefs, inspiring us all to open our eyes to other opinions...He is better versed and well connected in the larger academia of economics than I can ever imagine, always traveling to conferences to keep himself up to date to help his students learn the most current issues. This only heightens his effectiveness in the class room and brings coursework outside the textbook and lectures.”

Jared Antin, current JMU student

“I was pleasantly surprised to find his courses both challenging and entertaining. I have not since had a professor who managed to keep his students so engaged in the material...He has a knack for peppering his lectures with humorous and colorfully relevant analogies. The ease with which he explains concepts makes his expertise in his field apparent to all...

Following my first experience with Professor Rosser I decided to follow up with another of his courses. Consequently, my interest in economics continued to grow...I not only majored in the field, but went on to receive my PhD in Applied Economics. As a teacher myself, I now have a deeper understanding and appreciation for the skills that are required to motivate one's students and that seem to abound in Professor Rosser. His enthusiasm for his work has always been evident to me and I'm sure that his flair for teaching will continue to spark students' imaginations well into the future.”

Kristina Terkun, former JMU student, Assistant Professor of Economics, DePaul University

10-Year Averages of Numerical Teaching Evaluation Scores, Main Courses (1-5 Scale)

Course	Degree of Challenge	Overall Evaluation of Teacher
Environmental Economics	4.39	4.19
Urban Economics	4.22	4.49
Advanced Microeconomic Theory	4.75	4.25
Regional Economics	4.43	4.57

Comments by Students from Anonymous Evaluations

Environmental Economics

“His lectures combine environmental economics with historical background, science, personal anecdotes, and always humor. Great professor, fair tests and want to take him again.”

“I love the energy that he brings to the classroom. Also, he is incredibly knowledgeable about all subjects related to the course. I love all the side stories and his emphasis on history. Dr. Rosser is definitely my favorite economics professor at JMU.”

Urban Economics

“He knows the material. Smartest professor I have had in my 4 years at JMU. Keep being the Man. Never felt more enjoyed and stimulated in class.”

“Knows so much about everything. Great course, will definitely try to take Professor again for another econ course.”

Advanced Microeconomic Theory

“His strongest points are his knowledge of material, his enthusiasm, his willingness to help, and his initiative. Dr. Rosser is certainly one of the best professors at JMU.”

“By far the most knowledgeable teacher I’ve ever had. It seems like he loves the subject. It was a great experience to sit there and listen to his passion. I only wish I could have dedicated more time to this course.”

Regional Economics

“He has a high level of intellect, knows a lot about a broad range of issues. Very passionate and animated. The material was interesting and apart from being an econ course incorporated other subjects, history, geography.”

“He has enthusiasm, knowledge, and excitement about lectures. I liked the interaction during the lectures and discussions. The way it’s taught is like a senior seminar. He puts all of econ in one big picture. I loved the class, but only if taught by Dr. Rosser. My favorite class ever.”

Discovery

“John Barkley Rosser, Jr. is a mathematical economist known for his work in nonlinear economic dynamics, including applications in economics of catastrophe theory, chaos theory, and complexity theory. With Marina V. Rosser he invented the concept of the *new traditional economy*. He introduced into economics the concepts of *chaotic bubbles*, *chaotic hysteresis*, and *econochemistry*. He also invented the concepts of the *megacorpstate* and *hypercyclic morphogenesis*. He also was the first to provide a mathematical model of the *period of financial distress* in speculative bubbles. [With two others], he was the first to argue for a two-way positive link between income inequality and the size of an underground economy in a nation.” *Wikipedia entry for J. Barkley Rosser, Jr.* [opening paragraph, without citations, 9/20/10]

“With a smoothly flowing, at times entertaining prose, Rosser takes the reader through an educated, albeit often dizzy tour of at least half a dozen major disciplines (micro and macroeconomics, geography, ecology, and of course mathematics and physics). He points out the areas where mathematical discontinuities and bifurcation theory originated at the core disciplines and how they have influenced developments in the applied fields in the 1980s.”
*Review of **From Catastrophe to Chaos: A General Theory of Economic Discontinuities**, 1st edition, by Dimitrios S. Dendrinos, **Geographical Analysis**, Oct. 1991, p. 365*

“What this book really amounts to is a very literate and wide-ranging survey of the chaos and catastrophe theory literature. Professor Rosser deserves great credit for drawing together an enormous number of sources (the bibliography contains about 1200 references) both inside economics and in neighboring fields like ecology, history, biology, and mathematics, and weaving them into a compelling story.”
*Review of **From Catastrophe to Chaos: A General Theory of Economic Discontinuities**, 1st edition, by John C. Eckalbar, **Journal of Economic Literature**, Dec. 1992, p. 2150*

“These interviews offer insights into how mainstream economics has been influenced by those working at the edge – a must-read for understanding the evolution of recent economics.”
*On back cover of **The Changing Face of Economics: Conversations with Cutting Edge Economists**, paperback edition, Vernon L. Smith, Nobel Laureate in Economics, 2002*

“A unique series of interviews with professionally recognized economists engaged in attempts to rechannel the mainstream of economic thinking. It will be a valuable accompaniment to any history of economic thought.”
*On back cover of **The Changing Face of Economics: Conversations with Cutting Edge Economists**, paperback edition, Melvin W. Reder, University of Chicago*

“The recognition of the importance of complex systems in physics and biology has led to their study in economic systems, usually characterized as governed by a large set of interacting nonlinear dynamic systems...Professor Rosser has collected a large number of papers, some of them from not-easily-accessible sources, which show the application of complex systems to a variety of economic phenomena. This collection will be invaluable to the development of new and necessary thinking in economics.”
*On back cover of **Complexity in Economics: The International Library of Critical Writings in Economics**, Kenneth J. Arrow, Stanford University, Nobel Laureate in Economics, 1972*

Knowledge Integration

“Barkley’s superb scholarship generates great externalities in teaching. This is especially beneficial for our students...he brings his highly successful scholarship to his classes, which certainly increases the quality of overall teaching in this institution. I have reviewed hundreds of students’ comments about his teaching during the last ten years. In course after course students rate him as an exceptional teacher. A significant number of comments point to his use of the latest research data in the classroom. All of his published work is also available online for students to use. His contributions in the areas of income inequality, corruption, and the non-observed economy have direct relevance for our students. He also uses his research in environmental economics and global nonlinearities in asset markets to enhance his teaching...”

To summarize, I would note that Barkley’s tremendous contributions to scholarly research complement very closely with his teaching and service. JMU is very fortunate to have him as a faculty member in the economics department and college of business.”
Ehsan Ahmed, Head of JMU Economics Department, from Letter of Support

“Rosser and Rosser’s wide-ranging textbook provides an engrossing and up-to-date introduction, not just to capitalism and socialism in their various forms, but also to the “new traditionalism” as found in such countries as Iran. Their emphasis on the political and religious factors complementing particular economic forces in shaping economic institutions is particularly insightful.” *On back cover of **Comparative Economics in a Transforming World Economy**, 2nd edition, Frederic L. Pryor, Senior Research Scholar, Swarthmore College*

“Barkley and Marina Rosser’s presentation of the mosaic of world economic systems is theoretically rigorous and factually interesting. It challenges students analytically and offers them a new vantage point for examining the complexities of our societies.”
*On back cover of **Comparative Economics in a Transforming World Economy**, 2nd edition, Sohrab Behdad, John Harris Professor of Economics, Denison University*

“The global economic crisis of 2008 has underscored the need for new leadership, fresh ideas, and sharp thinking on economic theory and its policy implications...Professor Rosser is recognized worldwide for his pioneering work on nonlinear dynamics in economics...His numerous books and scores of articles subsequently challenge many of the underlying assumptions of conventional neo-classical economists and most policymakers today, and have widespread implications for finance, macroeconomic phenomena, and ecological economics...

It is also important here that Professor Rosser is equally an expert on comparative economic systems. He is widely sought as a speaker for international conferences, particularly those pertaining to the Economic Manhattan Project and other gatherings of international policymakers worldwide.”

*Stephen J. Guastello, Professor of Psychology, Editor, **Nonlinear Dynamics, Psychology, and Life Sciences**, Marquette University, from Letter of Support*

Service

“In addition to his superb teaching and scholarly research, Barkley has made significant contributions not only to the department but to economics professionally. His busy schedule in terms of teaching and research has not stopped him from making major contributions to service in the department. During the last several years Barkley has been active in new faculty recruitment for the department. His name recognition facilitates recruitment of new faculty.”
Ehsan Ahmed, Head of JMU Department of Economics, from Letter of Support

“I look forward to his participation in the comments at my blog because he brings an honest perspective to the discussion. He is willing to say what he believes, to back it up with solid research, and it may or may not be what you are expecting to hear. But whether you agree or not the perspective is very valuable because it is based upon a well-reasoned, fact based approach...

This is not the only way he provides a community service. The posts at his own blog have all of the same positive qualities, and he has provided a very useful perspective on a wide variety of issues of the day. Some of the most widely read economics blogs often echo the things he has to say. His participation is both valuable and influential.”

Mark Thoma, University of Oregon, founder of Economist’s View blog, from Letter of Support

“Barkley became Editor of the *Journal of Economic Behavior and Organization*...In an era when many top journals seem to be ever more closed to new or different ways of thinking this journal remains open to new and innovative ideas in the economic and social sciences, as such it provides a perfect foil for Barkley’s very broad range of interests.”

Laura Gardini, Professor of Economics, University of Urbino, Italy, from Letter of Support