

Economics in Action

Department
of
Economics

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University of California, San Diego

UCSD's Granger and Engle Receive the Nobel Prize!

The UCSD Economics Department was the scene of unrestrained joy on Wednesday, October 8 with the news that UCSD Professors Clive Granger and Robert Engle had been awarded the Nobel Prize in Economics. An immense banner was suspended on the walkway balcony reading "Congratulations UCSD Nobel Laureates Clive Granger and Robert Engle". There were champagne toasts. The Granger and Engle Nobel Prize story made the front page of the San Diego Union Tribune. Photos of Clive Granger --- posed James Dean style --- atop a motorcycle appeared round the building, captioned "Rebel without a Causal Model." We've known for a quarter of a century that UCSD is the leading center for time series econometrics. Now all the world knows as well.

Clive Granger and Robert Engle share the 2003 Nobel Memorial Prize in Economic Sciences for their discoveries in the analysis of time series data, economic statistics over time such as stock market prices each day or national income each year. Their work has fundamentally changed the way economists analyze financial and macroeconomic data.

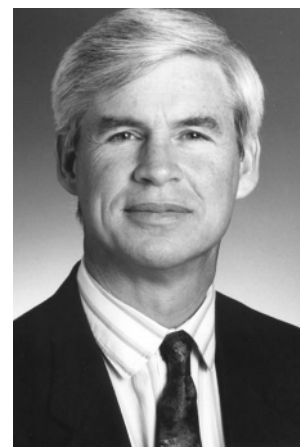
Clive Granger's great breakthroughs showed that traditional statistical methods could be misleading if applied to variables that tend to wander over time without returning to some long-run resting point. He demonstrated that many variables display long-run patterns that can be exploited in statistical analysis. Granger's discovery of cointegration (mathematical structure of time series data) not only led to significant breakthroughs in statistics and macroeconomic forecasting,

but also to an important reconciliation between macroeconomic theory and data. Granger also developed a formal statistical notion (now widely used and universally known as 'Granger causality') describing how some economic data series can help to predict others.

Robert Engle's most important contribution (in addition to joint work with Granger on cointegration) is the path-breaking discovery of a method for analyzing unpredictable movements in financial market prices and interest rates. Accurate characterization and prediction of these volatile movements are essential for quantifying and effectively managing risk. Risk measurement plays a key role in pricing financial options and derivatives. Engle developed new statistical models of volatility that captured the tendency of stock prices and other financial variables to move between high volatility and low volatility periods ("Autoregressive Conditional Heteroskedasticity: ARCH"). These statistical models have become essential tools of modern asset pricing theory and practice.

Clive Granger joined the UCSD faculty in 1974 and retired in 2003. He is now a Professor Emeritus at UCSD. Robert Engle joined the UCSD faculty in 1975 and retired in 2003. He now holds positions of Professor Emeritus and Research Professor at UCSD, and of Professor at the Stern School of Business at New York University. UCSD is immensely proud of our Nobel Laureates!!

Professors Valerie Ramey and Ross Starr contributed to this article.



*Robert Engle,
Nobel Laureate, UCSD*



*Clive Granger,
Nobel Laureate, UCSD*

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Yixiao Sun's Long Journey with Many Steps

By Barry Jagoda,
UCSD Communications



Yixiao Sun, Assistant Professor
UCSD Economics Department

His mother was a farmer in rural Central China and his father was a village school teacher. A year ago Yixiao Sun became Assistant Professor in the Department of Economics at UCSD. The department, he says, "Every econometrics graduate student in the country wants to join."

"I did farm work every summer until I came to the United States and it was very hard work. It

taught me that life is not easy, that you have to work hard and be tough."

Now, with research taking 60% of his working hours and preparing for and teaching three econometric courses taking another 40%, those early lessons about hard work are coming in handy.

"My current interest is in developing econometric tests in the presence nonparametric autocorrelation," says Sun. For a non-economist he explains, "For example, if someone claims that economic events have no significant effect on the presidential vote, I want to know how we can be sure of the accuracy of that statement. There are very often problems, technical problems, in hypothesis testing with data measured over time and solving some of these issues is absorbing me now."

In China of the 1980's the problem was finding a way out of rural Chinese villages.

"When I was a child I never thought about going to college," Sun confided during an interview in his Economics Department office in late summer. "We were very poor and I was the only person from my village in that year who went to the one town middle school. I got in by passing tests and then I had to walk ten miles to get there, but at least I was commuting on a weekly basis. Three years later, I was one of about ten students who stood out in a series of exams and were admitted to the one county high school, which provided a possible background for college."

"I was admitted to Wuhan University, assigned to study mathematics. Although my first preference was biology, I came to like math and earned the Bachelor of Science degree in 1993," recalled Sun. That first college degree came with highest honors and after another three more years Wuhan University awarded him

2 the Master degree in management also with highest honors. Wuhan

is the capital of Hubei Province and, with a population of seven million, is one of the largest cities in China, but Sun spent his second year of graduate school in Beijing, at Renmin University, studying under a Ford Foundation program which

brings American economics professors to China.

"Most of us studying in this program wanted to go to the United States and after I finished

"I did farm work every summer until I came to the United States and . . . it taught me that life is not easy, that you have to work hard and be tough."

up with my master's in management I did go on to the State University of New York at Albany. After two years there I was accepted into the economics graduate program at Yale, where I earned my Ph.D in 2002."

Meantime, Yixiao had met and married a student from his college days. Yan has just earned her doctorate in biostatistics and will be teaching in Chicago during this academic year. "For my wife there should be a job in one of the many biotechnology firms in this area. Our son, Derrick, is almost two and he has been living with his maternal grandparents in China and we want him back in the States soon so all three of us can be together here in San Diego."

If Derrick stays much longer in China he might learn some early lessons about hard work, and like his parents, get started on the road to academic success.

Barry Jagoda, UCSD Director of Communications for Social Sciences, Arts and Humanities and International Relations, is a reporter and writer with many years of experience in journalism and public affairs.

The UCSD Economics Roundtable Presents . . .

The UCSD Economics Roundtable is organized by the UCSD Department of Economics in coordination with UCSD Extended Studies and Public Programs. The purpose of the Roundtable is to provide top business professionals and community leaders in the San Diego region with the opportunity to share the views and opinions of renowned experts in the field of economics, finance, business and public policy. Members of the Roundtable share insights with their counterparts in the business community and with members of the UCSD faculty, continuing an important UCSD partnership tradition between the academic and business communities.

Steve Baum
Chairman, Preseident, CEO
Sempra Energy
February 18, 2004
7:30 - 9:00 AM
UCSD Faculty Club

Mark Watson
Professor of Economics and Public Affairs
Woodrow Wilson School, Princeton University
April 15, 2004
7:30 - 9:00 AM
UCSD Faculty Club

Anne Krueger *
First Deputy Managing Director
International Monetary Fund
June 10, 2004
7:30 - 9:00 AM
UCSD Faculty Club

For additional information and registration, please contact Edie Munk, Coordinator of the UCSD Economics Roundtable:

Edie Munk, Coordinator
UCSD Roundtable
Phone: (858) 822-0510
Email: emunk@ucsd.edu

<http://econ.ucsd.edu/roundtable>

The cost to attend each Roundtable is \$50 per person.

* Invited but not confirmed

Marc Muendler's Global Laboratory

By Barry Jagoda,
UCSD Communications



Marc Muendler, Assistant Professor
UCSD Economics Department

As is the case with many scholars, international economist Marc Muendler has sought to find deeper, more meaningful answers to practical questions often first encountered in life outside the academy. The 32-year-old UCSD Assistant Professor of Economics has an apparent ability to seamlessly incorporate widely divergent experiences in ways that

makes synergy seem to come naturally.

From a business apprenticeship at Siemens he became interested in first principles about international business and the economy. From introductory college courses in economics he grew to major in the subject and to follow that direction in graduate school. While detouring as a resident advisor during mandatory national service at the Goethe Institute, the German-language school, he met a lovely girl from Brazil. Half-a-decade later, in graduate school at Berkeley, searching for dissertation data, while also visiting that Brazilian girlfriend, Muendler uncovered a treasure-trove of data that would form the core data-set for his dissertation and would yield the field of international economics a unique study of the effects of cutting tariffs on national economic growth.

Not incidentally, that young scholar's name is Beatriz, or Bia, and she and Marc were married just this past summer. She is finishing up her Ph.D work in bio-medical engineering and will soon be moving to San Diego.

Marc grew up in Southern Germany, in Bavaria and after high school he thought he wanted to study philosophy in college, but his bill-paying father suggested that it might be better to "do something real" first. So Marc took a two-year apprenticeship at the giant Siemens conglomerate, where, he explains, "I got a good idea of how the economy works at the micro level of a firm."

Study of economics at the University of Munich, on top of the apprenticeship, hooked Marc on his future career. Marc explains, "The idea of applying rigorous mathematical thinking to social problems was just the thing for me." A Fulbright Scholarship took him to Boston University and then in 1998 he accepted an offer for Ph.D studies in Economics at the University of California at Berkeley, finishing up in 2002.

Marc summarized his dissertation research: "While at Berkeley, but during a visit to Brazil looking for approaches to my dissertation, I discovered one of the best international experiments imaginable. Brazil had cut tariffs over a two-year period so taxes on incoming goods were only 20% of what they had been, down to zero in some sectors. I discovered a very high quality data-set on the impact of this action. My study showed that the tariff cuts increased competition enormously and put a lot of firms out of business but caused the surviving firms to become more productive and grow stronger."

This work in Brazil has made Marc want to learn more about issues in the developing world because he observed that growth from increased trade was good for productivity but lots of people seemed to lose jobs in the process. "My current research is on the impact of globalization, of trade reform and corporate international investment in foreign plants, on displaced workers." Muendler is picking off selected topics in the vast research laboratory that has been created by internationalization of the global economy. He is also active as one of the planners of the November UCSD Social Sciences Research Conference on new approaches to development.

One can observe that Muendler is still dipping into the practical while keeping an eye on new and vexing theoretical issues: He has found time to focus on important new questions in international finance, testing out his personal answers to questions raised by a number of world-renowned economists.

Marc Muendler had never been certain if he and the academic world were made for each other. "Even as I was finishing my doctoral work I didn't know that I could get such a good job as the one here at UCSD." This was practical concern from a graduate student, but the laboratory data comprised of Professor Muendler's impressive work to-date proves that he is delivering a splendid young career.

What's new, Alumni?

*Economics, QEDS, & Management Science Alumni
Do you have some news to share with us?
Economics in Action would like to hear from you!*

In your correspondence, please include the following:

Your name, year of graduation/major, address, email, current employer, other degrees you hold (year and institution), and your news item for inclusion in the next newsletter.

*Send to: Economics in Action, Department of Economics,
University of California San Diego,
9500 Gilman Drive, MC 0508
La Jolla, CA 92093-0508
or email slshaffer@ucsd.edu*

Alumni News

Matthew Gehring, Management Science '02, has been working at MUSICMATCH as the marketing manager in E-commerce since graduation. He has accepted an offer to attend the McCombs Graduate School of Business at the University of Texas at Austin, and will be part of the MBA class of 2005.

Eric Bertrand, Management Science '00, moved to New York in August to attend NYU's Stern School of Business for an MBA specializing in Finance and Information systems. He worked for two years as a Project and IT Manager at Merchandising Avenue, and for one year as an Application Support Engineer and IT Manager at SciTegic.

Tom Miller, Economics '95, lives in San Rafael with his wife, Fanya, and 1 year old son, Quinn. He has been married for almost four years and works in sales operations for a software company in Alameda, California.



*Richard Carson, Chair
UCSD Economics Department*

The UCSD Economics faculty is growing! We're delighted to welcome five new colleagues in 2003-04:

Associate Professor

Eli Berman comes to us from Harvard, Boston University and Rice. Eli's specialties are labor economics, technological change and the economics of religion. He is currently studying how skill-biased technologies affect workers in developing countries and

how the internal economies of radical religious groups give them an advantage in operating militias, including terrorist organizations.

Assistant Professor Hoyt Bleakley is an MIT graduate concentrating on labor economics, macroeconomics, economic development and corporate finance. Recent research includes analyses of the long-term benefits of public-health interventions in the Southern U.S., an investigation of the role language plays in the assimilation of childhood immigrants, and several studies on the microeconomic roots of financial crises in emerging markets.

Assistant Professor Silke Januszewski is also an MIT Ph.D. Silke's fields are industrial organization, organizational economics and corporate finance. Her recent research concentrates on the U.S. airline industry including quality and pricing, competitive behavior, and deregulation.

Assistant Professor Wolfram Schlenker is a UC Berkeley Ph.D. Wolfram's focus is applied microeconomics, environmental and resource economics. His recent research concentrates on the impacts of climate change on agriculture, and the decisions of oil companies to explore for oil when there is uncertainty on the size of the resulting discoveries as well as the implications for the price of oil. Wolfram joins our growing environmental economics group.

Assistant Professor Julie Cullen comes to UCSD with an MIT Ph.D. after a stop at the University of Michigan. Julie's field is public finance with a concentration on the economics of public education. She joins our education economics group (including Julian Betts and Nora Gordon).

With a burgeoning population of students in Economics and Management Science we're delighted to welcome these new faculty!

Economics in Action

University of California, San Diego
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Editor: Professor Ross Starr

Production Coordinator: Stephanie L. Shaffer

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Mail: Department of Economics, 0508
University of California, San Diego
9500 Gilman Drive
La Jolla, Ca 92093-0508

Phone: (858) 534-4195
Fax: (858) 534-9795

E-mail: slshaffer@ucsd.edu

Web Site: <http://econ.ucsd.edu>

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