**Fall 2013, Detailed Schedule**

**September 13, 2013**

**SPEAKER:** Nirupama Rao, Robert F. Wagner School of Public Service, New York Univ **SEMINAR TITLE:** ["Do Tax Credits Stimulate R&amp;D Spending? The R&amp;D Tax Credit in its First Decade" Preview the document](https://canvas.harvard.edu/courses/47554/files/7213775/download?wrap=1)   
**LOCATION:**  Baker 102, HBS campus, [MAP](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)

**September 20, 2013  
SPEAKER:**  no seminar  
  
**September 27, 2013  
SPEAKER:**  no speaker

**October 4, 2013  
No seminar, HBS holiday  
  
  
OCTOBER 11, 2013**

**SPEAKER:**Sen Chai, Post-Doc Labor & Worklife Program at the Harvard Law School, and NBER   
**SEMINAR TITLE:**["Moving Beyond Bibliometrics: Understanding Breakthrough Emergence Through Missed Opportunities"Preview the document](https://canvas.harvard.edu/courses/47554/files/7213788/download?wrap=1)   
**LOCATION:**  Baker 102, HBS campus, [MAP](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)**ABSTRACT:**Who is most likely to discover a breakthrough? Why are some scientists more successful than others at discovering them?  By using extant theories of breakthrough emergence to predict a groundbreaking discovery in biology, RNA interference, I show that the explanatory power of combining all current theories are weak because they sample on rare successes rather than the multiple instances of failure in the discovery process.  Instead, I focus on understanding these failures by interviewing scientists with high potential of discovering breakthroughs in a case historical analysis.  My findings suggest that the seminal discovery was missed several times not only due to difficulties in solving a particular problem but also due to failures to identify breakthrough opportunities.  I propose a cognitive framework with institutional underpinnings at the basis of these failures.  In the problem identification stage, framing barriers from pursuing normal science and existing boundary barriers between communities of scientists contribute to difficulties in identifying the breakthrough opportunity by misrepresenting the magnitude of the problem.  In the problem-solving stage, scientists are constrained by paradigmatic pressures to avoid being wrong, and coupled with boundary barriers similar anti-dogmatic observations stay isolated and unsubstantiated, thus diminishing confidence to identify a new revolutionary paradigm.   
**BIO:**Sen Chai is a post-doctoral fellow in the Labor and Worklife Program at HLS and the National Bureau of Economic Research (NBER), and recently obtained her doctorate from the Technology and Operations Management unit at Harvard Business School. Her research interests are the emergence, diffusion and commercialization of creative breakthroughs. Her current project focuses on understanding where scientific breakthroughs come from and which scientists are more likely to discover them by focusing on missed opportunities. In the context of innovation policy, she is also studying innovative performance and productivity effects of academic-industry collaboration funding, as well as understanding which managerial and structural factors of these grants make them more successful.

**OCTOBER 18, 2013**   
  
**SPEAKER:** George Borjas, Malcolm Wiener Center for Social Policy, HKS (paper joint with Kirk B. Doran)  
**SEMINAR TITLE:** ["Prizes and Productivity: How Winning the Fields Medal Affects Scientific Output"Preview the document](https://canvas.harvard.edu/courses/47554/files/7213816/download?wrap=1)   
**LOCATION:** Baker 102, HBS campus, [MAP](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)   
**BIO:**  George J. Borjas is the Robert W. Scrivner Professor of Eocnomics and Social Policy at the Harvard Kennedy School. He is the recipient of the 2011 IZA Prize in Labor Economics. Professor Borjas is also a Research Associate at the National Bureau of Economic Research and a Research Fellow at IZA. Professor Borjas is the author of several books, including Heaven's Door: Immigration Policy and the American Economy (Princeton University Press, 1999), the widely used textbook Labor Economics(McGraw-Hill, 2012), now in its sixth edition. and the forthcoming Immigration Economics (Harvard University Press, 2014). He has published over 125 articles in books and scholarly journals. His professional honors include citations in Who's Who in the World and Who's Who in America. Professor Borjas was elected a fellow of the Econometric Society in 1998 and a fellow of the Society of Labor Economists in 2004.

**OCTOBER 25, 2013**   
SPEAKER:   tba  
SEMINAR TITLE:  tba  
LOCATION:   Baker 102, HBS campus, [MAP](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)

**NOVEMBER 1, 2013  
  
SPEAKER**: Eric Olson, Chief Scientific Officer, Syros Pharmaceuticals  
**PRESENTATION TITLE:**Working with a non-profit disease organization to bring a new therapy to patients;  the Vertex-Cystic Fibrosis Foundation collaboration.  
**LOCATION:**  Baker 102, HBS campus, [**MAP**](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)**BIO:** Eric Olson, PhD, is Chief Scientific Officer at Syros Pharmaceuticals, a new biopharmaceutical company focused on creating personalized therapeutics for patients whose disease is driven by alterations in gene regulation.   Prior to joining Syros in May of this year Eric held various positions at Vertex Pharmaceuticals with research, development and commercial responsibilities focused on developing and bringing new cystic fibrosis therapies to patients.  Previous work at Pfizer, Warner-Lambert and Upjohn included an emphasis on gene regulation in bacteria and antibiotic drug discovery.  His PhD is in Microbiology and Immunology from the University of Michigan Medical School and his post-doctoral work was at McGill University in Montreal.  
**ABSTRACT:**Vertex Pharmaceuticals and the Cystic Fibrosis Foundation have been collaborating for more than 10 years to discover, develop, and market new drugs that treat the underlying cause of cystic fibrosis.  The collaboration is held up as one of the success stories of how a for-profit company can work with a non-profit disease organization.  From inception of the collaboration in the late 90's, to a marketed drug in 2012, to two additional drugs in late clinical studies, a wide range of issues common and unique to each organization were encountered and addressed.   From the perspective of my involvement in the program through the research, development and commercial phases, including chairing the joint committee responsible for oversight of the development of the drugs, I will summarize the major aspects of the program and some of the important issues that were addressed.

**NOVEMBER 8, 2013  
  
SPEAKERS:**  Gabriel Chan and Laura Diaz Anadon (Belfer Ctr for Science & Intl Affairs, J.F.Kennedy School, Harvard University)  
**SEMINAR TITLE:**["A New Method for Supporting Public Decision-Making on R&D: An Example in Energy" Preview the document](https://canvas.harvard.edu/courses/47554/files/7213797/download?wrap=1)  
**LOCATION:**  Baker 102, HBS campus, [MAP](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)**ABSTRACT:**We propose four criteria for evaluating an R&D decision making process. We then describe and evaluate current practice regarding U.S. federal energy R&D investments at the United States Department of Energy (DOE), giving specific attention to organizational constraints that can explain it. Finally, we propose and demonstrate a novel and implementable method to support decisions regarding the design of a publically-funded R&D portfolio performs significantly better than the existing process along the four evaluation criteria.  Our method utilizes inputs from a major expert elicitation exercise that collected inputs from 100 experts in a range of sectors about the probabilistic distribution of the future cost and performance of 25 energy technologies conditional on U.S. public energy R&D investments. We use this expert assessment to parameterize the MARKAL model, a bottom-up energy system model of the U.S. economy, which we run under several policy scenarios. We then implement a novel sampling and optimization method to generate decision-relevant R&D portfolio allocations across technology areas. The results of applying our methodology indicate that (1) while there are decreasing returns to R&D investment, a 10-fold expansion from 2012 levels in the R&D budget for utility-scale storage, bioenergy, advanced vehicles, fossil, nuclear, and solar photovoltaics is justified by social economic efficiency, if investments are optimally allocated to optimize net economic surplus; (2) the greatest social returns to R&D investment are in energy storage, solar photovoltaics, and biofuels; and (3) at the DOE’s current budget level, the optimal allocation of energy R&D funds is very different from the current allocation.  
**BIO:  Laura Diaz Anadon** is an Assistant Professor of Public Policy at the Harvard Kennedy School (HKS) and Associate Director of the Science, Technology and Public Policy program and co-Principal Investigator of the Energy Technology Innovation Policy research group at the Belfer Center for Science and International Affairs, also at HKS.  Her research focuses on energy- and environment-oriented technological progress and the role of government policy.  Her work in technological progress seeks to identify and quantify its diverse benefits, map the complex factors that contribute to it, and create tools for policymakers and analysts to manage the systemic uncertainties that accompany it.  Diaz Anadon also studies the coupling between water, energy and food systems, its environmental impacts, and its implications for policy.  Her articles have been published a variety of journals including *Environmental Science & Technology, Energy Economics, Research Policy,*and *Issues in Science & Technology*.  She has also co-edited a book forthcoming in *Cambridge University Press* on Transforming U.S. Energy Innovation and contributed to other books and international efforts, such as the 2012 Global Energy Assessment. Diaz Anadon was on the advisory board of the project on "Accelerating Energy Innovation" at the International Energy Agency and has worked as a consultant for various organizations (e.g., Climate Strategies on a World Bank project). She has been consulted by government officials around the world regarding their policies to support innovation in energy.  She was a speaker at the 2013 U.S. National Academy of Engineering *Frontiers of Engineering* Symposium.  Diaz Anadon holds a Ph.D. in Chemical Engineering from the Magnetic Resonance and Catalysis Group at the University of Cambridge (UK), a Master in Public Policy from the Harvard Kennedy School, and a Master in Chemical Engineering from the University of Manchester (UK). She has also studied and worked on research at the University of Stuttgart (Germany).  Before starting her work on systems analysis in energy and technology policy, Laura has published in chemical engineering and nuclear magnetic resonance journals, carried out process engineering research projects at DuPont and Bayer Pharmaceuticals, collaborated extensively with Johnson Matthey Catalysts, and worked as a financial consultant for banks on credit risk models for financing technology projects.  
**BIO:  Gabe Chan** is a Public Policy Ph.D. student at the Harvard Kennedy School of Government where he studies energy technology innovation economics and policy. Prior to coming to Harvard, Gabe graduated from the Massachusetts Institute of Technology (MIT) where he received Bachelor of Science degrees in Earth, Atmospheric, and Planetary Science, and Political Science. In 2007 and 2009, Gabe worked at the U.S. Department of Energy where he worked in the Climate Change Technology Program (CCTP), an interagency group tasked with prioritizing the federal government’s investments and policies for mitigating climate change through accelerated technology innovation and deployment. Current research projects are looking at how expert elicitation can be leveraged for energy modeling and decision-making, the impact of venture capital and federal R&D financing for early-stage energy innovation, and evaluation of the performance of national lab innovation using patent data. 

**NOVEMBER 15, 2013  
  
SPEAKER:**  no seminar  
**SEMINAR TITLE:**   
**LOCATION:**  Baker 102, HBS campus, [MAP](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)  
  
**NOVEMBER 22, 2013  
  
SPEAKER:**  no seminar  
**SEMINAR TITLE:**tba  
**LOCATION:**  Baker 102, HBS campus, [MAP](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)  
**NOVEMBER 29, 2013**Thanksgiving Break

**DECEMBER 6, 2013**

**SPEAKER:**  Sifan Zhou, Fellow, Labor and Worklife Program at the Harvard Law School, and PhD Candidate, SUNY Albany

**SEMINAR TITLE:  "**Why Do Women Scientists Get Fewer Cites?"   
**LOCATION:   Baker 102, HBS campus,**[**MAP**](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)**ABSTRACT:** It has been documented that women in academia publish less than men do. If women take longer to publish, a natural question to ask is, do they publish better papers? We study a large sample of journal articles from MEDLINE published between 2002 and 2007, and find that women receive less forward citations than men do. Observable gender difference in fields, working style, experience, and institutions can explain two thirds of the gap. We also find that both genders are more likely to be cited by authors of the same gender. Given that there are more active male  researchers than female, and males publish more, the "gender-biased" citation behavior may result in the gender gap in total citations received, even free of quality difference in publications. We then show that citations from distant citing author (foreign, or outside the cited author's collaboration network) are more gender neutral than citations from close citing author (domestic, or inside the cited author' collaboration network).    
**BIO:**  Sifan Zhou received her Bachelor's degree in Economics and Mathematics from Xiamen University, China. She is now a PhD student in Economics from University at Albany, State University of New York. Her current research relates to how scientists and engineers, in R&D and in other work areas, impact economic productivity and the returns to investments in science and engineering.