**Spring 2014 Schedule**

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**LUNCH:** Light lunch will be provided for attendees.   
**LOCATION:**Baker 102, except where noted. [MAP](http://www.map.harvard.edu/?ctrx=758105&ctry=2958775&level=9&layers=Campus%20Base%20and%20Buildings,Map%20Text)    
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**Jan 31:** No Seminar: substitute: NBER Productivity Lunch on February 4

**Feb 4:   
JOINT WITH: NBER Productivity Lunch**SPEAKERS:   
     12-12:30pm: Lee Fleming (Harvard Business School)   
     12:30-1:45pm: Heidi Williams (Dept of Economics, MIT)   
LOCATION: NBER, 1050 Mass Ave, 3rd floor (sign in with 3rd floor receptionist)    
NOTE: Seats are limited for Feb 4, please RSVP   
RSVP TO: <jennifer@nber.org>

**Feb 7:**   No Seminar

**Feb 14:**     
**SPEAKER:** John Van Reenen (LSE, CEPR, and NBER)   
**TITLE:** “[Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT and Productivity](https://canvas.harvard.edu/courses/47554/files/7213802/download)”  (paper joint with Nicholas Bloom and Mirko Draca).  
**ABSTRACT:**  We examine the impact of Chinese import competition on broad measures of technical change - patenting, IT and TFP  using new panel data across twelve European countries from 1996-2007. In particular, we establish that the *absolute*volume of innovation increases within the firms most affected by Chinese imports in their output markets. We correct for endogeneity using the removal of product-specific quotas following China's entry into the World Trade Organization in 2011. Chinese import competition led to increased technical change *within firms*and reallocated employment *between firms*towards more technologically advanced firms. These within and between effects were about equal in magnitude, and account for 15% of European technology upgrading over 2000-2007 (and even more when allowing for offshoring to China). Rising Chinese import competition also led to falls in employment and the share of unskilled workers. In contrast to low-wage nations like China, developed countries imports had no significant effect on innovation.

**Feb 21:**  no seminar

**Feb 28:**   
SPEAKER: Paula Stephan (Georgia State Univ and NBER)  
TITLE: ["Mobile Scientists, Networks and Performance"Preview the document](https://canvas.harvard.edu/courses/47554/files/7213800/download?wrap=1)   
ABSTRACT: Innovation policies often support international mobility of the highly skilled as a means for enhancing the overall scientific performance of both source and destination countries.  Despite the importance attributed to such ties, little empirical research has systematically investigated mobility, in large part because of the lack of comparable data across countries.  The seminar will describe the GlobSci survey, fielded in 2011 by the author and two colleagues, to approximately 47,000 scientists and engineers working in 16 countries.  The survey had a response rate of approximately 40 percent and finds that the degree of emigration and immigration varies considerably across countries with Switzerland with more than 50% of scientists in country foreign born.  India, by contrast, heads the list in terms of emigration (39%) but has the lowest percent of immigrant scientists (less than 1%).  We draw on the survey to explore the link between mobility and the presence of international research networks as well as the degree to which performance is related to mobility.   We classify researchers into three mobility states:  foreign-born; returned after one or more periods abroad for a PhD, postdoc or employment; and non-mobile.  We find the incidence of international collaboration to be lowest for non-mobile researchers.  It is generally highest for the foreign born.  We also find non-mobile researchers to report the highest incidence of having had no international scientific collaboration in the past two years.   We use two measures of performance to investigate differentials by mobility status:  two-year citations to the author’s article and the Impact Factor of the journal in which the article was published.   We find that holding all else equal the average foreign-born scientist outperforms a homegrown scientist by .84 in terms of Impact Factor of the journal in which the article appeared and by 2.29 in terms of two-year citations to the paper.  We also find that scientists who have studied or worked abroad and subsequently returned to work and live in their country of origin outperform the nonmobile by .63 in terms of Impact Factor and by 1.69 in terms of total citations.  The results are robust to instrumenting for mobility.

**Mar 7:**SPEAKERS:   
Mark C. Poznansky (MD, PhD,  Director - Vaccine and Immunotherapy Ctr, Infectious Diseases Medicine, Harvard Medical School, MGH),  
AND Timothy Brauns (MBA, Associate Director, Vaccine and Immunotherapy Center, MGH)  
TITLE: "Accelerating Innovation and Medical Product Development for Cancer, Diabetes and Infectious Diseases: Case Studies"  
ABSTRACT: The dominant paradigm of early stage technology development that emerged over the first twenty-five years of the medical biotechnology industry has collapsed in the face of significant shifts in investment capital, the restructuring of big pharma R&D, and declines in Federal research support. In response, academic medical centers, which have traditionally served as a source of innovation for the biotechnology sector, are increasingly stepping into the role of early stage developers of technology. One example is the Vaccine and Immunotherapy Center at the Massachusetts General Hospital, which was established in 2009 to accelerate the advancement of promising technologies for infectious diseases, cancer and diabetes from the preclinical to the clinical stage of development and to enhance the transition of these technologies to industry. VIC is building a model of managed development that emphasizes the creation of networks between academic investigators, Federal and non-profit funders, philanthropists, and life science companies. It currently has six innovative technologies under management. To date it has graduated one technology, created a spin off company around another, and partnered development of two others. This presentation will address the environment in which VIC functions, its approach to technology development, and the opportunities and challenges of this model.  
BIOS:  
Mark Poznansky M.D., Ph.D. is Associate Professor of Medicine at Harvard Medical School and Attending Physician in Infectious Diseases Medicine at MGH and Director of the Vaccine and Immunotherapy Center. He is the discoverer of fugetaxis, the principle of immunorepulsion that forms the basis of the Company's products. His laboratory defines molecular mechanisms for novel immune processes and explores the relevance of these mechanisms to novel approaches to vaccines and immunotherapies for cancer and infectious diseases. Dr. Poznansky and his lab team have focused on translation of novel vaccines/immunotherapies from discovery to first-in-human studies. He has helped found a number of spinoff companies at MGH including Celtaxsys and ACTx and was formerly a scientific consultant to Novelos, K2 Therapeutics and the St. Joseph's Translational Research Institute in Atlanta. Dr. Poznansky also serves on the Commercialization Council at MGH which works at the interface between inventive scientists at MGH and the Partners Innovation Office of Partners HealthCare.  
Timothy Brauns, MBA, is Associate Director of the Vaccine and Immunotherapy Center at MGH. Mr. Brauns has over 15 years of experience in operational management of research programs in both the non-profit and for-profit sectors. Previous to his current position this has included development and management of translational research programs at Tufts Medical Center and the Center for Integration of Medicine and Innovative Technology (CIMIT) at MGH. His executive experience includes Boston BioCom, a life sciences startup, where he served as Vice President for Strategic Planning, and BL Healthcare, an emerging medtech company, where as VP Marketing and Commercialization he helped develop a strategic marketing strategy and the B2B marketing plan. For the past decade he has also consulted with emerging life sciences companies on marketing, strategic planning and grant funding. He brings experience in program operations, project management, marketing, strategic planning and sponsored programs management to the team. He holds a B.A. in Geological Sciences from Northwestern University and an MBA from Suffolk University.

**Mar 14:**   
SPEAKER: Jeremy M. Levin (former President and CEO, Teva Pharmaceutical Industries)   
TITLE: "Global markets and local companies".  
BIO: Until recently, Dr. Levin was the President and CEO of Teva Pharmaceutical Industries Ltd. (NYSE: TEVA, a global pharmaceutical company with 47,000 employees , operations in over 70 countries and over $20 Bn in revenue).  He is a physician and scientist by training and has worked in the pharmaceutical industry for more than 25 years. He is deeply interested in discovery, development and commercialization of novel medicines, global markets, development of modern sustainable companies and the intersection of digital technologies with the healthcare and pharmaceutical industries worldwide.  
Prior to joining Teva, Dr. Levin served on the executive committee of Bristol-Myers Squibb (BMS) and had global responsibilities for strategy, alliances and all transactions. In this position he was responsible for the String of Pearls strategy to rebuild the companys pipeline and product capabilities. He previously held the position of Global Head of Strategic Alliances at Novartis Institutes of Biomedical Research. In this role, he was the strategic point of contact for worldwide alliances with academia and biotechnology, and also established multiple strategic collaborations.  Prior to Novartis Dr. Levin was the CEO of several public and private biotechnology companies.  
Dr. Levin is the recipient of numerous awards and Prizes. During his academic career at Cambridge University he was the recipient of the Kermode Prize for work on novel hypertension drugs.  More recently Dr. Levin was awarded the Albert Einstein Award for Leadership in Life Sciences and in 2012, FierceBiotech voted him as one of the 25 most influential people in the biopharmaceutical industry. In 2013, Bnai Brith awarded him the Award for Distinguished Achievement and Dr Levin was awarded the Officer's Cross of the Order of Merit of the Republic of Hungary.  
Dr. Levin holds a BA Hons (First Class) and MA, as well as a D. Phil in Cell Biology and Chromatin Structure, from the University of Oxford. He completed his medical and surgical training at the University of Cambridge and is a practicing Physician.

**Mar 21:** Spring Break

**Mar 28:**   
**SPEAKER:**Ralf Martin (Imperial College and London School of Economics)  
**TITLE:**[“Knowledge Spillovers from Clean and Dirty Technologies: A Patent Citation Analysis”Preview the document](https://canvas.harvard.edu/courses/47554/files/7213814/download?wrap=1) (paper joint with Antoine Dechezleprêtre and Myra Mohnen)  
ABSTRACT: How much should governments subsidize the development of new clean technologies? We use patent citation data to investigate the relative intensity of knowledge spillovers in clean and dirty technologies in four technological fields: energy production, automobiles, fuel and lighting. We find that clean patents receive on average 43% more citations than dirty patents. Clean patents are also cited by more prominent patents. These results hold for all four technological areas. Two factors are shown to explain the clean superiority: clean technologies have more general applications, and they are radically new compared to more incremental dirty innovation. Knowledge spillovers from clean technologies are comparable in scale to those observed in the IT sector. Our results mean that stronger public support for clean R&D is warranted. They also suggest that green policies might be able to boost economic growth.

**April 4:  No seminar**Dan Wang (Columbia) seminar moved to April 25

**April 7: Monday, additional seminar  
SPEAKER:**Catherine de Fontenay (University of Melbourne)  
TITLE: "The Deteriorating Career Prospects of Scientists" (paper joint with Kwanghui Lim, Univ of Melbourne)  
**ABSTRACT:**Junior scientists in academia face increasingly challenging prospects. They are more likely to cycle through several stints as post-doctoral researchers working in the laboratories of established lab heads, with less chance of independence as the head of their own laboratory.  The costs are high exit rates from science in mid-career, and possibly a loss of creative output in early career. One possible explanation is that laboratories have grown in numbers of staff, implying that scientists must climb to the top of a larger pyramid. We suggest that an alternative explanation may lie in the increasing "noisiness" of signals in science. In science and in other academic fields, collaboration has grown more common; thus the number of authors listed on each scientific paper has been increasing.  As a result, funding agencies have less information on the quality of junior scientists than in the past. In response, funding agencies direct a greater share of funding toward senior scientists. Thus the larger laboratories observed are a result, not a cause, of the gloomier prospects for junior scientists.

**April 11:**    
**SPEAKER:** Jordan Smith (Harvard University)  
**TITLE:  "**Analysis Techniques for Optimal Allocation in Dynamical Systems"   
**ABSTRACT:**High-impact outlier events pose a distinct challenge in forecasting future period-specific states in dynamical systems. While conventional risk assessment techniques provide a basis for quantifying variance, addressing uncertainty remains a fundamental barrier yet poorly understood distinction in many predictive models. Improved methods of data forecasting and probability assessment which include more developed considerations of extreme value components have broad-ranging applications in the social and natural sciences. Isolation of high-risk or high-uncertainty future time periods can reveal opportunities for proactive steps in preceding periods, often presenting low-cost means of altering the probability of  future outcomes for certain variables. In addition to conventional techniques such as reliance upon empirical data, counterfactual conditionals can provide insight for further defining uncertainty and elucidating grey variable-dependent or period-specific model regions. In many models, the extension of extreme value theory from independent variable series to dynamical systems allows for stability inferences and extrapolations from assessment of geometric orbit.

**April 18:**

**SPEAKER:** Pian Shu (HBS)   
**TITLE:** "Are the 'Best and Brightest' Going into Finance? Career Choice and Skill Development of MIT Graduates"   
**ABSTRACT:** Using detailed data on MIT bachelor's graduates from 2006 to 2012, I examine whether the financial sector attracts the same type of talent from MIT as the science, technology, engineering, and mathematics (STEM) industries and graduate programs. I explore the recent financial crisis as an exogenous shock that dramatically decreased the availability of entry-level jobs in finance for students who graduated after 2008, which allows me to identify potential financiers' alternative career paths. The decrease was mostly concentrated in less quantitative positions such as investment banking analysts. I find that the crisis mainly affected management and economics students who did not have a second major in science and/or engineering, and that they did not enter the STEM sectors after the crisis. Compared to the 2006-2008 cohorts, the mathematics and engineering majors who graduated between 2010 and 2012 were 3% less likely to enter finance. In parallel, there was an increase in their likelihood to take a job in the science and engineering industries. However, compared to the average students who entered graduate programs in science and engineering, marginal financiers had significantly worse academic qualifications both at the time of college entry and at the time of graduation. This is in part because students who are interested in finance are significantly less likely to develop academic skills during college and more likely to participate in extracurricular activities, such as sports and fraternities/sororities. Taken together, the results suggest that finance and the STEM sectors mostly attract different types of talent. Although there may be some overlap, recent MIT bachelor's graduates who entered finance would not have been most likely to become productive scientists and engineers at the time of graduation.

**April 25:    
SPEAKER:** Dan J. Wang (Dept of Business/Manaqgement and Sociology, Columbia Univ)  
**TITLE:** [“Preview the documentActivating Brokerage: Inter-Organizational Knowledge Transfer Through Skilled Return Migration”Preview the document](https://canvas.harvard.edu/courses/47554/files/7213818/download?wrap=1)  
**ABSTRACT:**Scholarship suggests that skilled return migrants are ideally positioned as cross-border brokers to conduct knowledge transfer from abroad to their home countries. Many, however, face challenges in doing so. Using an original dataset of 4,183 former J1 Visa holders from 81 different countries -- all of whom had worked in the U.S. -- I argue that returnees' knowledge transfer success depends on their embeddedness in their home and host country workplaces. I find that not only do host and home country embeddedness increase knowledge transfer success, they also interact positively. However, at the organizational level, the presence other returnees in a home country workplace decreases the positive effect of a returne's host country embeddedness whereas the similarity of a returnee's industry background increases it. At the country level, high xenophobia in a given home country diminishes the positive effect of host country embeddedness and by contrast, increases the positive effect of home country embeddedness. These findings inform an interpersonal perspective on knowledge transfer, contributing to work on brokerage, organizational learning, employee mobility, and the globalization of expert knowledge.

**May 2: no seminar**

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**DATE tba:  Fall 2014**SPEAKERS: Sen Chai (Wertheim Post-Doctoral Fellow, Labor and Worklife Program at the Harvard Law School, and NBER), Marissa Suchtya (Harvard University), Richard B. Freeman (Dept of Economics, Harvard University)   
TITLE: "Conferences as a Vehicle for Collaboration”

**DATE tba: FAll 2014**   
SPEAKER: Ajay Agrawal (Univ of Toronto and NBER)  
TITLE: "How Might Immigration Harm US Science? An Examination of Spillovers" (with John McHale and Alex Oettl)  
ABSTRACT:  The propensity of star scientists to immigrate to the US may be in decline. Would such a decline help or harm US science? We develop a model in which foreign born scientists enhance national welfare by increasing the labor supply. At the same time, they may harm domestic science if there are displacement effects on domestic scientists and if local spillovers generated by foreign born scientists are lower than those from their domestic counterparts, perhaps due to their different social networks. Using data from a variety of scientific disciplines, we examine four spillover channels: 1) citations, 2) collaborations, 3) peer effects, and 4) recruiting. Although we do find evidence that foreign born star scientists generate more spillovers internationally than do domestic scientists, we do not find evidence that they generate less spillovers domestically. Combining these findings with existing evidence of limited displacement effects at the faculty level, we conclude that a decline in star scientist immigration would likely harm US science.