

JULIA C. LEE

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Professional Summary

Accomplished researcher with strong analytic skills and 17-years professional experience at top-tier academic institutions worldwide, including Harvard, MIT and Cambridge University (U.K.). Adept at developing cross-disciplinary research- and education-focused global projects. Lived/studied/worked in many countries (England, France, Germany, United States, Vietnam), and routinely engaged in international research collaborations--very comfortable with, and knowledgeable about global interactions and defining and managing projects to engage the expertise of top level researchers world-wide in top tier institutions, both public (including government), and private.

Core Qualifications

- Management on global scales
- Global integration
- Quantitative Research & Problem Solving
- Multidisciplinary research
- Grant & Proposal writing
- Excellent Public Speaking
- Multi-lingual
- University teaching & research
- Laboratory skills
- Experimental Physics
- Astrophysics
- Atomic & Condensed matter physics
- Computer Skills: IDL, UNIX, LaTeX
- Word, Excel, PPT, Keynote

Notable Experience and Activities

- Career proposal funding: ~\$30M (includes operational expenses) in research funding over 21 different national and international facilities; ~\$2M in direct cash funding
- Invited topical reviews [9] & keynote [1] lectures at major international conferences worldwide.
- Invited seminars/colloquia at 28 major universities spanning U.S., Europe and Asia.
- Served on NASA science committees for new X-ray satellite mission [1], NASA advisory committees [2], proposal review committees [7], and prize fellowship selection committees [2].
- Author & co-author of (career total) 60+ publications in main professional astrophysics journals in U.S. & U.K., including many “first” discoveries; additional 30+ conference proceedings & 6 press releases.
- Successful national and international proposals for research time on space satellites, at major telescopes, and synchrotron facilities: 80-90% success rate for proposals with average greater than 6-to-1 oversubscription; 40+ successful proposals as principal investigator; 30 as primary co-investigator.

Experience

Executive Vice Provost for Strategic Initiatives (concurrent with Harvard appointment) **01/2016 to Current**
Universidad de Ingeniería y Tecnología (UPEC) **Lima, Peru**

- Lead curriculum change for 21st Century Engineering University.
- Help develop major industry-university collaborative research centers.
- Participate as a key member of the team in charge of the design and implementation of the University strategy that is led directly by the CEO. Key elements of the strategy are the “educational model” and the transformation of the University into an open platform.
- Participate in the elaboration and prioritization of a blue print on UPEC advancements (including new faculty advancement model and curricular assessment).
- Based on the academic vision define which departments needs to be enforced, the necessity of new professors as well as new tools and techniques.
- Co-lead the design and implementation of policies related to faculty development, promotion and salaries structures.
- Co-lead –with the CEO and the Provost- a Steering Committee to appoint departmental chairs/leaders.
- Review and redefine the international alliances based on the strategy of the University for the next years.

- Participate in the design and implementation of the fund raising strategy.
- Turn Industry and students into active players in the University. Establish a productive relationship with both and incorporate them in the design and implementation of the strategy.
- Be involved in the definition of the appropriate administrative tools and how they can be improved. Also into the identification of opportunities to gain efficiency.

Executive Director for Education and Research

07/2014 to Current

Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS)

Cambridge, MA

- Develop new research initiatives/collaborations for industry and international engagement.
- Develop new education programs and degrees.
- Develop SEAS collaborations within Harvard (for research and joint degrees), and external to it (international experiences for students and collaborations for faculty).
- Serve on Harvard Vice Provost working group for teaching and learning.
- Serve on Harvard committees for undergraduate research
- Act informally in the capacity of legal counsel for IP, NDAs, contracts etc. for faculty, student, and clubs.
- Advise and help SEAS graduate council develop new academic and social programs.
- Support existing and develop new international experiences for undergraduates.
- Develop policies and connections for SEAS career office; oversee activities of the Director of Experiential and Career Development
- Develop programs to support non-ladder faculty cohort, in collaboration with BOK Center for Teaching and Learning
- Oversee Office of Student Life and activities of the Assistant Director of Diversity and Student Engagement which include SEAS-affiliated clubs, tours, undergraduate events, etc.; this includes developing best practices for SEAS students clubs and funding mechanisms as informed by Harvard University best practices.

Professor (Asst : 2005-2009; Assoc.: 2009-2014)

07/2005 to 01/2014

Harvard University Department of Astronomy

Cambridge, MA

- Pioneered new multi-disciplinary (astrophysics, condensed matter physics, physical and cosmo-chemistry, computation, theory and experiment) method for studying cosmic dust.
- Lead(ing) international team with senior members (deans, national laboratory directors, and professors) spanning the U.S., Europe and Asia (on-going).
- Designed and led up to 10 different research programs simultaneously across several astrophysics disciplines.
- Financially supported internal group of postdocs, graduate students, undergraduates
- Led international collaboration of 30-40 on projects of own design.
- Proposed successfully for numerous experimental programs using satellites and ground based experimental facilities, including national observatories and major synchrotron facilities.
- Served on the Executive Committee for the American Astronomical Society High Energy Astrophysics Division. (This is a national committee where executive members are peer-elected via poll of its thousands of members.)
- Engage with staffers and representatives annually during the Science, Engineering and Technology congressional visit week, which include briefings at NASA Head Quarters and the National Science Foundation.
- University teaching of undergraduates, graduate students and postdoctoral fellows.
- Thesis advisor to graduates students. The majority have gone on to win major (inter)national prizes and top placements.
- Undergraduate prize fellowship selection committees
- Teaching: undergraduates & graduates courses
- Research mentorship: undergraduates, graduates, postdocs
- Ph.D thesis committees & defense, including as chair
- Harvard departmental graduate admissions committee
- Undergraduate concentration advising

**NASA (Chandra) Postdoctoral Prize Fellow
MIT and Harvard**

**09/2002 to 07/2005
Cambridge, MA**

- 5 of these prize fellowships are awarded annually in an international competition. Fellows are funded by NASA to develop their own independent research program at their choice of US institutions. I was based at MIT between 2002-2004. I was offered the Harvard faculty position in 2004 but deferred it to spend last fellowship year at Institut Astrophysique de Paris & UC Berkeley, with Harvard as my official host institution.

Postdoctoral research associate

12/1999 to 09/2002

Massachusetts Institute of Technology

Cambridge, MA

- Research focused primarily on X-ray spectroscopy based on data from the Chandra X-ray satellite to study cosmic black hole environments.

Staff Research Associate

06/1994 to 08/1996

Lawrence Berkeley National Laboratory Institute for Nuclear & Particle Physics

Berkeley, CA

- Assisted with research efforts that ultimately led to a co-authorship on the paper that was awarded the 2011 Nobel prize in Physics for the discovery of cosmic acceleration attributed to a dark energy force.
- Coding in IDL, C, Pascal, UNIX
- Designed on-line educational programs for Hands-on-Universe for middle and high school students

Education

Certification in : Management and Leadership

2014

Massachusetts Institute of Technology Sloan School of Management

Cambridge, MA, USA

Courses include: "Entrepreneurship Development Program", "Essential Law for Executives", "Strategy in a Global World", "Negotiation for Executives"

Ph.D.: Astrophysics

2000

University of Cambridge

Cambridge, United Kingdom

Fully funded by 3 scholarships that covered tuition and living expenses: (1) the Isaac Newton Scholarship, (2) Overseas Research Scholarship awarded by the U.K. government, and (3) Cambridge Trust Bursary Astrophysics

Bachelor of Science: Astrophysics

1994

UCLA

Los Angeles, CA, USA

Bachelor of Science: Mathematics

1994

UCLA

Los Angeles, CA, USA

Awards and Recognition

- 2015 Breakthrough Prize in Fundamental Physics (shared)
- 2007 Gruber Cosmology Prize (co-recipient) as Co-author on 2011 Physics Nobel prize paper for discovery of cosmic acceleration by a dark energy force
- Chandra (NASA) postdoctoral prize fellowship
- Sigma Xi Honor Society (MIT Chapter)
- Issac Newton Scholarship (Cambridge University)
- Overseas Research Scholarship and Cambridge University Trust Bursary

Professional Service and Affiliations

- Sigma Xi Scientific Research Society Life member
- American Astronomical Society High Energy Astrophysics Division: Executive Committee (peer-elected nationally) 2009-2011
- NASA & European Space Agency Science Advisory Committees 2010-2013
- NASA Satellite User Advisory Committees 2003-2007
- Review committee for national prize fellowships 2007-current
- Proposal review committees for astrophysics and atomic physics 2001-current
- Peer review for professional journals 2000-current

- Science Organizing Committees
- New England Board of Higher Education Minority program - served as advisor to high school students and undergraduates 2001

Publications

- 60 peer-reviewed publications on 6 distinct astrophysics specializations including one new subfield based in condensed matter developed by self. (See <http://scholar.harvard.edu/jclee/publications>)
- Notable Papers: Brief summaries of significant field discoveries in select papers at <http://scholar.harvard.edu/jclee/pages/notable-publications>

Personal Interests

The Arts: Piano--classical training at level of Chopin etudes (placement offered to SF conservatory), Art (scholarship offered to art school), Sports: Volleyball--HS co-captain, Cambridge University team starter, tennis, table tennis, swimming, gliding; 6 languages/dialects from very basic to fluent proficiency; Wine, Food/Cooking.

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EDUCATION	<ul style="list-style-type: none"> • Ph.D. Astrophysics, University of Cambridge, U.K. 1996-2000 • B.S. Astrophysics, UCLA 1990-1994 • B.S. Mathematics 1990-1994
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RESEARCH INTERESTS AS RELEVANT TO PUBLISHED WORK	<ul style="list-style-type: none"> • Experimental condensed matter physics as applied to X-ray studies of interstellar dust • Neutron stars, micro-quasars, supermassive black holes • The interstellar and intergalactic medium • Cosmology - Dark energy
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AWARDS & RECOGNITION	<ul style="list-style-type: none"> • 2015 Breakthrough Prize in Fundamental Physics (shared) Nov 2014 • Gruber Cosmology Prize: discovery of cosmic acceleration (aka dark energy) 2007 <i>co-authorship on discovery paper later awarded 2011 Nobel prize in physics</i> • Chandra (NASA) postdoctoral prize fellowship 2002-2005 • Sigma Xi Honor Society (MIT Chapter) 1997-1999 • Issac Newton Scholarship (Cambridge University) 1997-1999 • Overseas Research Scholarship (ORS) and Cambridge Trust Bursary 1997-1999
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EMPLOYMENT	<ul style="list-style-type: none"> • Executive Vice Provost for Strategic Initiative (concurrent) Jan'16 - present Universidad de Ingenieria y Tecnologia, Peru • Executive Director for Education and Research (concurrent) 2014 - present Harvard John A. Paulson School of Engineering and Applied Sciences • Professor (Asst. 2005-09, Assoc. 2009-14), Harvard Dept. of Astronomy 2005-2014 • Chandra/NASA postdoctoral prize fellow (Host institutions: MIT & Harvard) 2002-2005 • Postdoctoral research associate, MIT 2000-2002 • Staff Research Associate, Lawrence Berkeley National Laboratory 1994-1996 <i>Institute for Nuclear & Particle Physics</i> • Research Assistant, UCLA Department of Physics & Astronomy 1992-1994
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SELECT PROFESSIONAL ACTIVITIES	<ul style="list-style-type: none"> • Executive Committee (peer-elected nationally) 2009-2011 <i>American Astronomical Society High Energy Astrophysics Division</i> • NASA & European Space Agency Science Advisory Committees 2010-2013 • NASA Satellite User Advisory Committees 2003-2007 • Review committee for national prize fellowships 2007 -- • Proposal review committees for astrophysics and atomic physics 2001 -- • Peer review for professional journals 2000 -- • Science Organizing Committees • New England Board of Higher Education Minority program 2001 <i>Served as advisor to high school students and undergraduates</i>
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SELECT HARVARD SERVICE & COMMITTEES	<ul style="list-style-type: none"> • Undergraduate prize fellowship selection committees • <i>Goldwater, Wendell, PRISE, HCRP</i> (SEAS representative from 2014) • Freshman research advising (SEAS representative from 2014) • Teaching: undergraduates & graduates courses • Research mentorship: undergraduates, graduates, postdocs • Standing Committee on Women (FAS) • Ph.D thesis committees & defense, including chair • Graduate Admissions Committee (Dept. of Astronomy) • Undergraduate Concentration Advising 	<p>on-going</p> <p>on-going</p> <p>2005-2014</p> <p>2005-2014</p> <p>2010-2014</p> <p>2005-2014</p> <p>2006-2008</p> <p>2005-2013</p>
PUBLICATIONS	<ul style="list-style-type: none"> • 60 peer-reviewed publications on 6 distinct astrophysics specializations including one new subfield based in condensed matter developed by self • See http://scholar.harvard.edu/jclee/publications 	
CHRONOLOGICAL LIST BY RESEARCH TOPIC	<ul style="list-style-type: none"> • See https://www.cfa.harvard.edu/~jclee/cv/jcleepublications.pdf • See https://www.cfa.harvard.edu/~jclee/cv/jcleepub_bytopic.pdf 	
COLLOQUIA	<ul style="list-style-type: none"> • 28 Universities, including Harvard, MIT, Yale, Europe and Asia 	
INVITED REVIEWS AND TALKS	<ul style="list-style-type: none"> • 1 Keynote Lecture: The OCPA8 international conference on Physics Educations and Frontier Physics • 9 Invited Topical Reviews on 3 different topics in US, Europe, and Asia 	<p>June 2014 Singapore</p>
SUCCESSFUL PROPOSALS	<ul style="list-style-type: none"> • Funding: \$30M (factoring in facilities), \$2M in direct funds • Success rate: 80-90% for proposals with average >6-1 oversubscription • 40+ successful PI proposals; 30 as primary CoI (e.g. if students/postdocs science PI) 	
SPACE SATELLITES & TELESCOPES	<ul style="list-style-type: none"> • X-ray satellite time (U.S., Europe, and Japanese programs): 25+ (PI); 19 (primary CoI) • UV satellite time: 4 (PI), 3 (CoI) • Optical telescopes (major facilities in US and Europe): 2 (PI), 1 (CoI) • IR satellite time: 5 (CoI) • Radio telescopes (major facilities): 4 (PI), 2 (CoI) 	
SYNCHROTRON FACILITIES	<ul style="list-style-type: none"> • SLAC Stanford Synchrotron Radiation Light Source: 358 hrs awarded as PI • Brookhaven National Laboratory National Synchrotron Light Source: 312 hrs (PI) • Lawrence Berkeley Nation Laboratory Advanced Light Source 216 hrs (PI) 	
ADDITIONAL INFORMATION VIA WEBSITE	<p>See http://scholar.harvard.edu/jclee/ for details</p> <ul style="list-style-type: none"> • Research: brief summaries of research topics conducted within my group & links to relevant papers • Notable Papers: brief summaries of significant discoveries in select papers • Group: present positions occupied by former group members • CV and Publications: detailed CV and publication list and links 	