

Curriculum Vitae: Dong Lai

Department of Astronomy
Cornell University
Ithaca, NY 14853

Phone: (607) 255-4936
E-mail: DL57@cornell.edu
<https://donglai6.github.io/research.html>

Current Position

Benson Jay and Mary Ellen Simon Professor, Professor of Astronomy, Cornell University
T.-D. Lee Chair Professor, Tsung-Dao Lee Institute, Shanghai

Education

1988 B.Sc. (Physics) University of Science and Technology of China, P. R. China.
1991 M.S. (Physics) Cornell University.
1994 Ph.D. (Theoretical Astrophysics) Cornell University.
Thesis: “Hydrodynamical Processes in Coalescing Binary Stars”
Ph.D. Advisors: Stuart L. Shapiro and Edwin E. Salpeter

Academic Positions

1994 - 1997 Postdoctoral Research Fellow in Theoretical Astrophysics, Caltech
(Mentors: P. Goldreich, E.S. Phinney, K.S. Thorne).
1997 - 2002 Assistant Professor, Department of Astronomy, Cornell University.
2002 - 2008 Associate Professor, Department of Astronomy, Cornell University.
2008 - Professor, Department of Astronomy, Cornell University.

Short-Term Visiting Positions

Kavli Institute for Theoretical Physics (2000,2005,2010), Institute for Advanced Study (1999,2004,2016),
Canadian Institute for Theoretical Astrophysics (2005), National Astronomical Observatories of
China (2004-2007), Tsinghua Center for Astrophysics (2004-2005), Institute for Nuclear Theory
(2001,2007), Tsinghua Center for Advanced Study (2015-2017), Shanghai Astronomical Observa-
tory (2014-2018), Observatoire de la Cote d’Azur (2016-17), Harvard Institute for Theory and
Computation (2017), Shanghai Jiao Tong University (2017-2018), Kavli Institute for Astronomy
and Astrophysics (2018), T.-D. Lee Institute, Shanghai (T.D.Lee visiting professor, 2019-2020,
2023- sabbatical), UC Berkeley (Miller Professor, 2020)

Awards and Scholarships

1988 Winner of China-U.S. Physics Examination & Application Program (CUSPEA)
1988 - 1989 Sage Graduate Fellowship, Cornell University
1991 Liu Memorial Award for Academic Excellence, Cornell University
1994 - 1997 Richard C. Tolman Fellowship in Theoretical Astrophysics, Caltech
1998 - 2000 Alfred P. Sloan Research Fellowship, A.P. Sloan Foundation
2004 - 2007 Oversea Outstanding Young Scientist, P.R. China
2016 - 2017 Simons Fellow in Theoretical Physics, Simons Foundation
2018 Distinguished Alumni Lecturer, University of Science and Technology of China
2020 Miller Visiting Professor, UC Berkeley
2021 Provost Award for Teaching/Mentoring Excellence in Graduate and Professional
Degree Programs, Cornell University
2023 Tsung-Dao Lee lecturer, University of Chinese Academy of Science, Beijing
2024 Dirk Brouwer Career Award in dynamical astronomy, American Astronomical
Society

Research

Various areas of theoretical astrophysics:

- Compact objects: neutron stars, black holes, white dwarfs, gravitational waves, neutrinos, radiative transfer, equation of state of dense matter
- Exoplanets: dynamics, formation, star-planet interactions, protoplanetary disks
- Astrophysical dynamics in general: celestial mechanics, fluid dynamics

Mentoring

Ph.D. Advisees:

Phil Arras (Ph.D. 1999 with Ira Wasserman; now faculty at U. Virginia), Wynn Ho (Ph.D. 2003; now faculty at Univ. Southampton (UK) and Haverford College), Harald Pfeiffer (Ph.D. 2003 with Saul Teukolsky; now faculty Albert Einstein Institute), Matt Van Adelsberg (Ph.D. 2006), Akiko Shirakawa (Ph.D. 2007), Chen Wang (Ph.D. 2007 NAOC with JL Han; now faculty NAOC), Zach Medin (Ph.D. 2008; now scientist at LANL), David Tsang (Ph.D. 2009; now faculty at Univ. Bath), Francois Foucart (Ph.D. 2011 with Saul Teukolsky; now faculty at Univ. of New Hampshire), Wen Fu (Ph.D. 2012), Jim Fuller (Ph.D. 2013; now faculty at Caltech), Natalia Storch (Ph.D. 2015), Bin Liu (Ph.D. 2016 from USTC; now faculty at Zhejiang Univ), Ryan Miranda (Ph.D. 2017), John Zanzetti (Ph.D. 2018; now at UC Berkeley), Kassandra Anderson (Ph.D. 2019), Michelle Vick (Ph.D. 2020; now at Brown Univ), Bonan (Michael) Pu (Ph.D. 2020), Yubo Su (Ph.D. 2022; now at Princeton Univ), Jiaru Li (Ph.D. 2023; now at Northwestern Univ), Chris O'Connor (Ph.D. 2024; now at Northwestern Univ), Jordan T. Laune (Ph.D. 2025), Nick Corso (Ph.D. 2027 expected), Xiumin Huang (Ph.D. 2029 expected)

Undergraduate Thesis Advisees:

Paul Wiggins ('99), Carolyn Sealfon ('01), Brian Cameron ('03), Marcus Woo ('03), David Schwab ('04), Tony Li ('08), Yuanjian Zheng ('13), Michael Hammer ('15), Grigory Tabak ('16), Wenrui Xu ('17), Haiyang Wang ('22), Stephon Qian ('24), Julian Turner ('25), Fangyuan Yu ('25)

Postdoctoral Fellows/Research Associates:

Chen Wang (2008), David Tsang (2009), Cong Yu (2011) Jiri Horak (2012), Diego Munoz (2013-2016), Jean Teyssandier (2017), Bin Liu (2017), Janosz Dewberry (2019), Laetitia Rodet (2019), Rixin Li (2020), Darryl Seligman (2022), Zhiqiang Miao (2023), Hongzhe Zhou (2024)

Select Recent Professional Activities and Services

- Chair of SOC, Exoplanets and Planet Formation II, Shanghai, China, 12/2025
- Astrophysics Editor, Physics Report, 2024-
- Chair of SOC, Physical Processes and Activities around SMBHs, Shanghai, China, 7/2024
- Chair of SOC, 32th Texas Symposium on Relativistic Astrophysics, Shanghai, 12/2023
- Academic Advisory Committee of the Institute of Astronomy and Astrophysics at Academia Sinica (ASIAA); Academia Sinica Central Advisory Committee, 1/2023-
- SOC Chair, International Conference on Astrophysical Dynamics, Shanghai, 7/2019
- International Advisory Committee, Texas Symposium on Relativistic Astrophysics, 2016-
- Chair of SOC, International Conference on "Exoplanets and Planet Formation" Shanghai, 12/2017
- Reviewer and committee for NASA, NSF and various international science (funding) agencies (including prize/award selection committees): 2-3 per year since 2000
- Various department/university committees (graduate advising/admission, faculty search, faculty review, colloquia, prize lecturers, University lecturers, strategic planning, etc) at Cornell University: 1997-present