

**Douglas N.C. Lin**  
 Professor of Astronomy  
 Department of Astronomy and Astrophysics

**INTERESTS AND EXPERTISE**

Fluid dynamics, star formation, galactic structure, planetary systems, accretion disks

**ACADEMIC HISTORY**

1976 Ph.D., Cambridge University, Astrophysics  
 1972 Math Tripos, Part III, Cambridge University  
 1971 B.S., McGill University, Montreal

**POSITIONS HELD**

1985- Professor, University of California, Santa Cruz  
 1982-85 Associate Professor, University of California, Santa Cruz  
 1979-82 Assistant Professor, University of California, Santa Cruz  
 1977-78 Postdoctoral Fellow, Center for Astrophysics, Harvard University  
 1976-79 Science Research Fellow, Trinity Hall and Institute of Astronomy, Cambridge

**VISITING POSITIONS HELD**

2007- Professor, Peking University  
 2005- Member, Aspen Center for Physics  
 2005 Professor, Center for Astrophysics, Harvard University  
 2004 Program Organizer, Planet Formation Program, KITP  
 2001-04 Sackler Visiting Professor, Institute of Astronomy, Cambridge University

**HONORS AND AWARDS**

2002 Member, American Academy of Arts and Science  
 2001 Sackler Distinguished Fellow, Cambridge University  
 1999 SAAS-Fee Lecturer, Geneva Observatory, Switzerland  
 1992 Alexander von Humbolt Fellow (Federal Republic of Germany)  
 Perrant Lecturer, University of London  
 1991 John Simon Guggenheim Fellow  
 Otto Schmidt Medal of the Soviet Academy of Sciences  
 1986 Churchill Overseas Fellowship

**EXTERNAL RESEARCH SUPPORT (\$20,000 and over)**

2007-10	NASA (Outer Planets) "Giant impact and the internal structure of giant planets"	\$261,315
2007-	STScI (Hubble Theory) "Dynamical heat redistribution modeling in hot Jupiter"	\$87,700
2006-09	NASA (Origin) "Dynamical shakeup of planetary systems, the effect of sweeping secular resonances"	\$225,000
2005-08	NASA (PGG) "Internal waves and structure of giant planets"	\$202,041
2005-08	NSF (w/Bodenheimer) "Problems in giant planet formation"	\$279,445
2004-07	NASA (TPF w/Laughlin) "A theoretical evaluation of the frequency of habitable planets"	\$622,000
2003-07	NASA "Space Interferometer Mission Project"	\$140,000
2003-05	NASA "Evolution of the Multi-Phase Interstellar Medium in Young Galaxies"	\$271,162
2002-07	LANL IGPP "Migration of Proto-Planets in Gaseous Disks"	\$60,000
2002-06	NASA "Origin of Dynamical Diversity in Extrasolar Multiple Planetary Systems"	\$120,000
2002-03	CalSpace Center for Origins Studies	\$80,000
2002-03	NASA Space Grant, \$40,000	
2001-04	NASA "The Growth of Planetesimals in a Protostellar Disk Environment"	\$165,000
2001-03	NASA "The Tidal Interaction Between Short-Period Planets and Their Host Stars"	\$80,000
2001-03	JPL "The Search for Young Planetary Systems and the Evidence of Young Stellar Objects"	\$79,988

2001-03	NASA Space Grant Fellowship (Training Grant)	\$80,000
2001-02	Calspace Center for Origins Studies	\$125,000
2001-02	NASA Space Grant	\$40,000
2000-04	NSF (with P. Bodenheimer) "Evolution of Protostellar Disks"	\$250,000

### RECENT PUBLICATIONS (selected)

Tidal dissipation in rotating solar-type stars (G. Ogilvie and D.N.C. Lin). *ApJ.*, **661**, 1180-1191, 2007.

Tidal barrier and the asymptotic mass of proto-gas giant planets (I. Dobbs-Dixon, S. Li, and D.N.C. Lin). *ApJ.*, **660**, 791-806, 2007.

The effect of internal dissipation and surface irradiation on the structure of disks and the location of the snow line around sun-like stars (P. Garaud, D.N.C. Lin). *ApJ.*, **654**, 606-624, 2007

Toward a deterministic model of planetary formation. III. Mass distribution of short-period planets around stars of various masses (S. Ida, and D.N.C. Lin). *Ap.J.*, **626**, 1045-1060, 2005.

On the surface heating of synchronously spinning short-period jovian planets (A. Burkert, D.N.C. Lin, P.H. Bodenheimer, C.A. Jones, and H.W. Yorke). *Ap.J.*, **618**, 512-523, 2005.

Toward a deterministic model of planetary formation. II. The formation and retention of gas giant planets around stars with a range of metallicities (S. Ida and D.N.C. Lin). *ApJ.*, **616**, 567-572, 2004.

Toward a deterministic model of planetary formation. I. A desert in the mass and semimajor axis distribution of extrasolar planets (S. Ida and D.N.C. Lin). *Ap.J.*, **604**, 388-413, 2004.

Star formation and feedback in dwarf galaxies (S. Dong, D.N.C. Lin, and S.D. Murray). *Ap.J.*, **596**, 930-943, 2003.

Calculating the tidal, spin, and dynamical evolution of extrasolar planetary systems (R.A. Mardling, D.N.C. Lin). *Ap.J.*, **573**, 829-844, 2002.

Nucleation of dwarf galaxies in the virgo cluster (K.S. Oh, D.N.C. Lin). *Ap.J.*, **543**, 620-633, 2000.

### UNIVERSITY SERVICE (selected)

#### Administrative appointments

2006	Chair, Faculty Search Committee
	Faculty Search Committee, Applied Math and Statistics Department
2004	Member, SCIPP Visiting Committee
2001-	Director, Center for Origin Studies, California Space Institute
2001-	Associate Director, Calspace Center for Excellence, Center for Origin Studies
2000	Member, IGPP Director Search Committee
	Member, CODEP Faculty Search Committee

### PROFESSIONAL ACTIVITIES (selected)

#### Consultative or other service to civic, state, or national governmental agencies

2007	Visiting committee, Princeton University
2006	Visiting committee, Harvard University
2005	Visiting committee, NRAO
2004-06	Member, Terrestrial Planet Finder coronagraph science definition team
2004	National Science Foundation, Theory Panel
	Canada Research Chair Program, College of Electors
	Member, visiting committee, Canadian Institute of Theoretical Astrophysics
2003	Reviewed personnel action, Rutgers University
	Reviewed proposal, Liverhulme Foundation
	Chair, TPF precursor science, road map panel
	Member, review panel, NASA astrophysical theory program

- 2000-03 Member, Terrestrial Planet Finder Science Working Group  
 2000 Reviewed proposal for US Civilian Research and Development Foundation for the Independent States of the former Soviet Union

### Five major presentations

- 2008 AAAS, Boston  
 2007 Invited lecture, KITPC, Inaugural Symposium, Beijing  
 2006 Invited lecture, Planet-disk Connection, Cambridge, UK  
 2002 Invited lecture, Center for Astrophysics  
 Invited lecture, Sackler lecture

### STUDENTS AND FELLOWS SUPERVISED (lifetime)

#### Ph.D. Advisees

K. Schlaufman  
 M. Nakajima  
 H. Zhang  
 L. Langland-Shula  
 M. Evonule  
 G. Novak  
 S. Dong  
 M. Weil  
 W. Bradford  
 J. Wang

#### Postdoctoral Fellows

I. Dobbs-Dixon  
 Y. Lu  
 Q-J Yu  
 M. Nagasawa  
 S.F. Dong  
 M. Fellhauer  
 T. Takeuchi  
 P. Gu  
 M. Nagasawa  
 R. S. Klessen  
 H. Klahr  
 D. Trilling  
 G. Bryden  
 I. Jian  
 X.M. Chen  
 C. Terquem  
 G.H. Xu  
 U. Kolb  
 G. Quinlan  
 A. Burkert  
 P. Artymowicz  
 W. Kley  
 C. Tout  
 C. Clarke  
 D. Edwards

#### Students Awarded Ph.D.

I. Dobbs-Dixon  
 S.F. Dong  
 G. Bryden  
 K. Supulver  
 B. Sutin  
 K.R. Bell  
 K.S. Oh  
 S. Murray  
 S.P. Ruden