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Education

2000	CALIFORNIA INSTITUTE OF TECHNOLOGY Ph.D. Astronomy Thesis: Circumstellar and Circumplanetary Disks	Pasadena, CA
1995	MASSACHUSETTS INSTITUTE OF TECHNOLOGY S.B. Physics, Minor in Theater Arts Thesis: Ionization Nebulae Surrounding Supersoft X-ray Sources	Cambridge, MA

Awards

2014	Berkeley Distinguished Teaching Award
2013	Miller Research Professor
2012	NOVA Lecturer for the Netherlands Research School in Astronomy
2010	AAAS Newcomb Cleveland Prize for outstanding paper in <i>Science</i>
2004	Alfred P. Sloan Research Fellow
2000	Institute for Advanced Study Long-Term (5-Year) Member
2000	Hubble Fellow
1999	Caltech Lewis A. Kingsley Foundation Fellow
1995	National Science Foundation (NSF) Graduate Research Fellow
1995	MIT Orloff Prize for outstanding senior thesis
1995	Alan H. Barrett Prize for astrophysics at MIT

Appointments

2015–2018	UC BERKELEY ASTRONOMY Department Chair	Berkeley, CA
2010–present	UC BERKELEY ASTRONOMY / EARTH AND PLANETARY SCIENCE Professor	Berkeley, CA
2011–2015	BERKELEY CENTER FOR INTEGRATIVE PLANETARY SCIENCE (CIPS) Director	Berkeley, CA
2005–2010	UC BERKELEY ASTRONOMY / EARTH AND PLANETARY SCIENCE Associate Professor	Berkeley, CA
2001–2005	UC BERKELEY ASTRONOMY / EARTH AND PLANETARY SCIENCE Assistant Professor	Berkeley, CA
2000–2001	INSTITUTE FOR ADVANCED STUDY (IAS) Hubble Fellow + Long-Term (5-Year) Member	Princeton, NJ

Research Advising

2001–present

RESEARCH ADVISOR

Berkeley, CA

- POSTDOC COLLABORATORS AT BERKELEY: Yoram Lithwick [Theoretical Astrophysics Center (TAC) Fellow, Associate Professor at Northwestern University], Eric Ford [Miller Fellow, Professor at Penn State], Josh Eisner [Miller Fellow, Associate Professor at University of Arizona], Ruobing Dong [Hubble Fellow, Assistant Professor at the University of Victoria], Rebekah Dawson [Miller Fellow, Assistant Professor at Penn State, Recipient of 2017 AAS Annie Jump Cannon Award], Meredith Hughes [Miller Fellow, Assistant Professor at Wesleyan University], Xylar Asay-Davis [Potsdam Institute for Climate Research], Margaret Pan [TAC and Center for Integrative Planetary Science (CIPS) Fellow, Researcher at MIT], Chris Ormel [Hubble Fellow, VIDI Fellow at the University of Amsterdam], Ji-Ming Shi [CIPS/TAC Fellow, postdoc at Princeton University], Paul Duffell [TAC Fellow], Jeffrey Fung [NASA Sagan Fellow]
- GRADUATE STUDENTS ADVISED AT BERKELEY: Eve Lee [Astronomy, Sherman Fairchild Fellow in Theoretical Astrophysics at Caltech, Assistant Professor at McGill University], Ruth Murray-Clay [Astronomy, Associate Professor at UC Santa Cruz, Recipient of 2015 AAS Warner Prize], Daniel Perez-Becker [Physics, Data Scientist at Microsoft], Edwin Kite [Earth and Planetary Science, Assistant Professor at University of Chicago], Linda Strubbe [Astronomy, Science Teaching and Learning Fellow at University of British Columbia], Holly Maness [Astronomy, NSF/SEES Fellow at Berkeley], Tushar Mittal [Earth and Planetary Science]
- GRADUATE STUDENTS ADVISED AT THE NSF INTERNATIONAL SUMMER INSTITUTE FOR MODELING IN ASTROPHYSICS (ISIMA): Jacques Masson [Ecole Normale Supérieure, France], Pascal Tremblin [CEA, Paris-Saclay, France], Peng Jiang [USTC, China], Sun Zhao [Purple Mountain Observatory, China], Zhi Jia [Beijing University, China], Wei Hao [Beijing University, China]
- GRADUATE STUDENT ADVISED FROM KYOTO UNIVERSITY INTERNATIONAL EXCHANGE PROGRAM: Takaya Tamura [Kyoto University, Japan]
- UNDERGRADUATES ADVISED AT BERKELEY: Ben Vinson [Physics], Jonathan Lin [Engineering Physics, Minor in Astronomy], Skylar Kerzer [Physics and Astronomy], Hyo Min Choi [Mathematics], Amy Jordan [Astronomy], Chris Culter [Physics, honors thesis], Jessica Lovering [Astronomy]
- UNDERGRADUATE ADVISED AT CALTECH: Ryan Moo Kwang Joung [Physics, honors thesis]

2011

ISIMA SUMMER SCHOOL LECTURER AND RESEARCH SUPERVISOR

Beijing, China

- Delivered 6-hour lecture series on planet formation to students, postdocs, and faculty from China, France, Germany, Britain, Japan, and the US, as part of the International Summer Institute for Modeling in Astrophysics (ISIMA, funded by NSF, hosted by the Kavli Institute for Astronomy and Astrophysics at Beijing University).
- Supervised five independent research projects for six graduate students from France and China. Projects resulted in two refereed publications.

2008–2015

HEAD GRADUATE ADVISOR FOR BERKELEY ASTRONOMY

Berkeley, CA

- General-purpose advisor for over 40 graduate students in Astronomy. Enforced deadlines for preliminary and qualifying exams. Mediated student-faculty relationships. Tracked progress of all students and intervened when necessary.
- Author of 58-page manual for curricula and advising for Departmental Self-Study in 2008.

Fifteen Representative Publications

1. "SPECTRAL ENERGY DISTRIBUTIONS OF T TAURI STARS WITH PASSIVE CIRCUMSTELLAR DISKS," Chiang, E. I., & Goldreich, P. *Astrophys. J.*, 490, 368 (1997)
2. "APSE ALIGNMENT OF NARROW ECCENTRIC PLANETARY RINGS," Chiang, E. I., & Goldreich, P. *Astrophys. J.*, 540, 1084 (2000)
3. "RESONANCE OCCUPATION IN THE KUIPER BELT: CASE EXAMPLES OF THE 5:2 AND TROJAN RESONANCES," Chiang, E. I., Jordan, A. B., Millis, R. L., Buie, M. W., Wasserman, L. H., Elliot, J. L., Kern, S. D., Trilling, D. E., Meech, K. M., & Wagner, R. M. *Astron. J.*, 126, 430 (2003)
4. "THE CIRCUMBINARY RING OF KH 15D," Chiang, E. I. & Murray-Clay, R. A. *Astrophys. J.*, 607, 913 (2004)
5. "DUST DYNAMICS, SURFACE BRIGHTNESS PROFILES, AND THERMAL SPECTRA OF DEBRIS DISKS: THE CASE OF AU MICROSCOPII," Strubbe, L. E., & Chiang, E. I. *Astrophys. J.*, 648, 652 (2006)
6. "ATMOSPHERIC ESCAPE FROM HOT JUPITERS," Murray-Clay, R. A., Chiang, E. I., & Murray, N. *Astrophys. J.*, 693, 23 (2009)
7. "FORMING PLANETESIMALS IN SOLAR AND EXTRASOLAR NEBULAE," Chiang, E., & Youdin, A. *Annual Reviews of Earth and Planetary Science*, 38, 493 (2010)
8. "SURFACE LAYER ACCRETION IN CONVENTIONAL AND TRANSITIONAL DISKS DRIVEN BY FAR-ULTRAVIOLET IONIZATION," Perez-Becker, D., & Chiang, E. *Astrophys. J.*, 735, 8 (2011)
9. "CATASTROPHIC EVAPORATION OF ROCKY PLANETS," Perez-Becker, D., & Chiang, E. *MNRAS*, 433, 2294 (2013)
10. "THE MINIMUM-MASS EXTRASOLAR NEBULA: IN-SITU FORMATION OF CLOSE-IN SUPER-EARTHS," Chiang, E., & Laughlin, G. *MNRAS*, 431, 3444 (2013)
11. "HOW EMPTY ARE DISK GAPS OPENED BY GIANT PLANETS," Fung, J., Shi, J.-M., & Chiang, E. *ApJ*, 782, 88 (2014)
12. "A CLASS OF WARM JUPITERS WITH MUTUALLY INCLINED, APSIDALLY ALIGNED CLOSE FRIENDS," Dawson, Rebekah I. & Chiang, Eugene *Science*, 346, 212 (2014)
13. "BREEDING SUPER-EARTHS AND BIRTHING SUPER-PUFFS IN TRANSITIONAL DISKS," Lee, E.J., & Chiang, E. *ApJ*, 817, 90 (2016)
14. "MAGNETOSPHERIC TRUNCATION, TIDAL INSPIRAL, AND THE CREATION OF SHORT-PERIOD AND ULTRA-SHORT-PERIOD PLANETS," Lee, Eve J. & Chiang, Eugene *ApJ*, 842, 40 (2017)
15. "STELLAR WINDS AND DUST AVALANCHES IN THE AU MIC DEBRIS DISK," Chiang, E. & Fung, J. *ApJ*, 848, 4 (2017)

Refereed Publications (101 accepted / Google Scholar h-index: 41 / i10-index: 83)

1. "ON THE LI AND BE TESTS FOR BROWN DWARFS," Nelson, L. A., Rappaport, S., & Chiang, E. *Astrophys. J.*, 413, 364 (1993)
2. "TIME-DOMAIN HOLOGRAPHIC IMAGE STORAGE," Shen, X. A., Chiang, E., & Kachru, R. *Optics Letters*, 19, 1246 (1994)
3. "IONIZATION NEBULAE SURROUNDING SUPERSOFT X-RAY SOURCES," Rappaport, S., Chiang, E., Kallman, T., & Malina, R. *Astrophys. J.*, 431, 237 (1994)
4. "A λ 3.6 CM RADIO SURVEY OF LOW-MASS WEAK T TAURI STARS IN TAURUS-AURIGA," Chiang, E., Phillips, R., & Lonsdale, C. *Astron. J.*, 111, 355 (1996)
5. "TIME-DEPENDENT CALCULATIONS OF IONIZATION NEBULAE SURROUNDING SUPERSOFT X-RAY SOURCES," Chiang, E., & Rappaport, S. *Astrophys. J.*, 469, 255 (1996)
6. "SPECTRAL ENERGY DISTRIBUTIONS OF T TAURI STARS WITH PASSIVE CIRCUMSTELLAR DISKS," Chiang, E. I., & Goldreich, P. *Astrophys. J.*, 490, 368 (1997)
7. "KECK PENCIL-BEAM SURVEY FOR FAINT KUIPER BELT OBJECTS," Chiang, E.I., & Brown, M. E. *Astron. J.*, 118, 1411 (1999)
8. "SPECTRAL ENERGY DISTRIBUTIONS OF PASSIVE T TAURI DISKS: INCLINATION," Chiang, E.I., & Goldreich, P. *Astrophys. J.*, 519, 279 (1999)
9. "ANGULAR MOMENTUM TRANSPORT IN PARTICLE AND FLUID DISKS," Quataert, E., & Chiang, E. I. *Astrophys. J.*, 543, 432 (2000)
10. "APSE ALIGNMENT OF NARROW ECCENTRIC PLANETARY RINGS," Chiang, E. I., & Goldreich, P. *Astrophys. J.*, 540, 1084 (2000)
11. "SPECTRAL ENERGY DISTRIBUTIONS OF PASSIVE T TAURI AND HERBIG AE DISKS: GRAIN MINERALOGY, PARAMETER DEPENDENCES, AND COMPARISON WITH OBSERVATIONS," Chiang, E. I., Joung, M. K., Creech-Eakman, M., Qi, C., Kessler, J., Blake, G., & van Dishoeck, E. F. *Astrophys. J.*, 577, 1077 (2001)
12. "APSIDAL ALIGNMENT IN UPSILON ANDROMEDAE," Chiang, E. I., Tabachnik, S., & Tremaine, S. *Astron. J.*, 122, 1607 (2001)
13. "INFRARED VIEWS OF THE TW HYA DISK," Weinberger, A. J., Becklin, E. E., Schneider, G., Chiang, E. I., Lowrance, P. J., Silverstone, M., Zuckerman, B., Hines, D., & Smith, B. A. *Astrophys. J.*, 566, 409 (2002)
14. "ISO LWS SPECTRA OF T TAURI AND HERBIG AEBE STARS," Creech-Eakman, M.J., Chiang, E.I., Joung, R.M.K., Blake, G.A., & van Dishoeck, E.F. *Astron. & Astrophys.*, 385, 546 (2002)
15. "EXCITATION OF ORBITAL ECCENTRICITIES OF EXTRASOLAR PLANETS BY REPEATED RESONANCE CROSSINGS," Chiang, E. I., Fischer, D., & Thommes, E. *Astrophys. J. Letters*, 564, L105 (2002)
16. "ECCENTRICITY EXCITATION AND APSIDAL RESONANCE CAPTURE IN THE PLANETARY SYSTEM UPSILON ANDROMEDAE," Chiang, E. I., & Murray, N. *Astrophys. J.*, 576, 473 (2002)
17. "A COLLISIONAL FAMILY IN THE CLASSICAL KUIPER BELT," Chiang, E. I. *Astrophys. J. Letters*, 573, L65 (2002)
18. "ON THE PLUTINOS AND TWOTINOS OF THE KUIPER BELT," Chiang, E. I., & Jordan, A. B. *Astron. J.*, 124, 3430 (2002)
19. "EXCITATION OF ORBITAL ECCENTRICITIES BY REPEATED RESONANCE CROSSINGS: REQUIREMENTS," Chiang, E. I. *Astrophys. J.*, 584, 465 (2003)
20. "RESONANCE OCCUPATION IN THE KUIPER BELT: CASE EXAMPLES OF THE 5:2 AND TROJAN RESONANCES," Chiang, E. I., Jordan, A. B., Millis, R. L., Buie, M. W., Wasserman, L. H., Elliot, J. L., Kern, S. D., Trilling, D. E., Meech, K. M., & Wagner, R. M. *Astron. J.*, 126, 430 (2003)

21. "RESONANT AND SECULAR FAMILIES OF THE KUIPER BELT," Chiang, E. I., Lovering, J.L., Millis, R. L., Buie, M. W., Wasserman, L. H., & Meech, K. J. *Earth, Moon, & Planets*, First Decadal Review of the Edgeworth-Kuiper Belt special issue, 92, 49 (2003)
22. "PROCEDURES, RESOURCES AND SELECTED RESULTS OF THE DEEP ECLIPTIC SURVEY," Buie, M.W., Millis, R.L., Wasserman, L.H., Elliot, J.L., Kern, S.D., Clancy, K.B., Chiang, E.I., Jordan, A.B., Meech, K.J., Wagner, R.M., & Trilling, D.E. *Earth, Moon, & Planets*, 92, 113 (2003)
23. "THE DYNAMIC NEPTUNIAN RING ARCS," de Pater, I., Gibbard, S., Chiang, E. I., Hammel, H., Macintosh, B., Marchis, F., Martin, S., Roe, H. G., & Showalter, M. *Icarus*, 174, 263 (2005)
24. "THREE-DIMENSIONAL DYNAMICS OF NARROW PLANETARY RINGS," Chiang, E. I. & Culter, C. J. *Astrophys. J.*, 599, 675 (2004)
25. "PARTICLE PILE-UPS AND PLANETESIMAL FORMATION," Youdin, A. N. & Chiang, E. I. *Astrophys. J.*, 601, 1109 (2004)
26. "THE CIRCUMBINARY RING OF KH 15D," Chiang, E. I. & Murray-Clay, R. A. *Astrophys. J.*, 607, 913 (2004)
27. "A SIGNATURE OF PLANETARY MIGRATION: THE ORIGIN OF ASYMMETRIC CAPTURE IN THE 2:1 RESONANCE," Murray-Clay, R. A. & Chiang, E. I. *Astrophys. J.*, 619, 623 (2005)
28. "THE DEEP ECLIPTIC SURVEY: A SEARCH FOR KUIPER BELT OBJECTS AND CENTAURS. II. DYNAMICAL CLASSIFICATION, THE KUIPER-BELT PLANE, AND THE CORE POPULATION," Elliot, J.L., Kern, S.D., Clancy, K.B., Gulbis, A.A.S., Millis, R.L., Buie, M.W., Wasserman, L.H., Chiang, E. I., Jordan, A.B., Trilling, D.E., & Meech, K.J. *Astron. J.*, 129, 1117 (2005)
29. "NEPTUNE TROJANS AS A TESTBED FOR PLANET FORMATION," Chiang, E. I., & Lithwick, Y. *Astrophys. J.*, 628, 520 (2005)
30. "ON THE LOCATION OF THE SNOW-LINE IN PROTOPLANETARY DISKS," Lecar, M., Podolak, M., Sasselov, D., & Chiang, E. *Astrophys. J.*, 640, 1115 (2006)
31. "SPATIALLY RESOLVING THE INNER DISK OF TW HYDRAE," Eisner, J. A., Chiang, E. I., & Hillenbrand, L. A. *Astrophys. J. Letters*, 637, 133 (2006)
32. "DUST DYNAMICS, SURFACE BRIGHTNESS PROFILES, AND THERMAL SPECTRA OF DEBRIS DISKS: THE CASE OF AU MICROSCOPII," Strubbe, L. E., & Chiang, E. I. *Astrophys. J.*, 648, 652 (2006)
33. "BROWNIAN MOTION IN PLANETARY MIGRATION," Murray-Clay, R. A., & Chiang, E. I. *Astrophys. J.*, 651, 1194 (2006)
34. "A BRIEF HISTORY OF TRANS-NEPTUNIAN SPACE," Chiang, E. I., Lithwick, Y., Murray-Clay, R., Buie, M., Grundy, W., & Holman, M. Refereed review chapter in *Protostars and Planets V*, eds. B. Reipurth, D. Jewitt, & K. Keil, University of Arizona Press, 895 (2007)
35. "COLLISIONAL PARTICLE DISKS," Lithwick, Y., & Chiang, E. *Astrophys. J.*, 656, 524 (2007)
36. "SPECTRALLY DISPERSED K-BAND INTERFEROMETRIC OBSERVATIONS OF HERBIG AE/BE SOURCES: INNER DISK TEMPERATURE PROFILES," Eisner, J. A., Chiang, E. I., Lane, B. F., & Akeson, R. L. *Astrophys. J.*, 657, 347 (2007)
37. "BINARIES IN THE KUIPER BELT," Noll, K. S., Grundy, W. M., Chiang, E. I., Margot, J.-L., & Kern, S. D. Refereed review chapter in *The Kuiper Belt*, University of Arizona Press (2007)
38. "THE FORMATION OF ICE GIANTS IN A PACKED OLIGARCHY: INSTABILITY AND AFTERMATH," Ford, E. B., & Chiang, E. I. *Astrophys. J.*, 661, 602 (2007)
39. "THE ORIGIN OF THE YOUNG STARS IN THE NUCLEUS OF M31," Chang, P., Murray-Clay, R., Chiang, E., & Quataert, E. *Astrophys. J.*, 668, 236 (2007)
40. "INSIDE-OUT EVACUATION OF TRANSITIONAL PROTOPLANETARY DISKS BY THE MAGNETO-ROTATIONAL INSTABILITY," Chiang, E. I., & Murray-Clay, R. A. *Nature Physics*, 3, 604 (2007)

41. "VERTICAL SHEARING INSTABILITIES IN RADIALLY SHEARING DISKS: THE DUSTIEST LAYERS OF THE PROTOPLANETARY NEBULA," Chiang, E. I. *Astrophys. J.*, 675, 1549 (2008)
42. "THE WARPED PLANE OF THE CLASSICAL KUIPER BELT," Chiang, E. I., & Choi, H. *Astron. J.*, 136, 350 (2008)
43. "OPTICAL IMAGES OF AN EXOSOLAR PLANET 25 LIGHT-YEARS FROM EARTH," Kalas, P., Graham, J. R., Chiang, E. I., Fitzgerald, M. P., Clampin, M., Kite, E. S., Stapelfeldt, K., Marois, C., & Krist, J. *Science*, 302, 1345 (2008)
44. "ATMOSPHERIC ESCAPE FROM HOT JUPITERS," Murray-Clay, R. A., Chiang, E. I., & Murray, N. *Astrophys. J.*, 693, 23 (2009)
45. "HIGH ALBEDOS OF LOW INCLINATION CLASSICAL KUIPER BELT OBJECTS," Brucker, M. J., Grundy, W. M., Stansberry, J. A., Spencer, J. R., Sheppard, S. S., Chiang, E. I., & Buie, M. W. *Icarus*, 201, 284 (2009)
46. "FOMALHAUT'S DEBRIS DISK AND PLANET: CONSTRAINING THE MASS OF FOMALHAUT B FROM DISK MORPHOLOGY," Chiang, E., Kite, E., Kalas, P., Graham, J. R., & Clampin, M. *Astrophys. J.*, 693, 734 (2009)
47. "HUBBLE SPACE TELESCOPE IMAGING OF THE ERODING DEBRIS DISK HD 61005," Maness, H., Kalas, P., Peek, K. M. G., Chiang, E. I., et al. *Astrophys. J.*, 707, 1098 (2009)
48. "FORMING PLANETESIMALS IN SOLAR AND EXTRASOLAR NEBULAE," Chiang, E., & Youdin, A. *Annual Reviews of Earth and Planetary Science*, 38, 493 (2010)
49. "FORMING PLANETESIMALS BY GRAVITATIONAL INSTABILITY. I. THE ROLE OF THE RICHARDSON NUMBER IN TRIGGERING THE KELVIN-HELMHOLTZ INSTABILITY," Lee, A. T., Chiang, E., Asay-Davis, X., & Barranco, J. *Astrophys. J.*, 718, 1367 (2010)
50. "FORMING PLANETESIMALS BY GRAVITATIONAL INSTABILITY. II. HOW DUST SETTLES TO ITS MARGINALLY STABLE STATE," Lee, A. T., Chiang, E., Asay-Davis, X., & Barranco, J. *Astrophys. J.*, 725, 1938 (2010)
51. "THE PROPELLER AND THE FROG," Pan, M., & Chiang, E. *Astrophys. J. Letters*, 722, L178 (2010)
52. "SURFACE LAYER ACCRETION IN TRANSITIONAL AND CONVENTIONAL DISKS: FROM POLYCYCLIC AROMATIC HYDROCARBONS TO PLANETS," Perez-Becker, D., & Chiang, E. *Astrophys. J.*, 727, 2 (2011)
53. "SURFACE LAYER ACCRETION IN CONVENTIONAL AND TRANSITIONAL DISKS DRIVEN BY FAR-ULTRAVIOLET IONIZATION," Perez-Becker, D., & Chiang, E. *Astrophys. J.*, 735, 8 (2011)
54. "CARE AND FEEDING OF FROGS," Pan, M., & Chiang, E. *Astron. J.*, 143, 9 (2012)
55. "CONFIRMING THE PRIMARILY SMOOTH STRUCTURE OF THE VEGA DEBRIS DISK AT MILLIMETER WAVELENGTHS," Hughes, M., et al. *Astrophys. J.*, 750, 82 (2012)
56. "POSSIBLE DISINTEGRATING SHORT-PERIOD SUPER-MERCURY ORBITING KIC 12557548," Rappaport, S., Levine, A., Chiang, E., et al. *Astrophys. J.*, 752, 1 (2012)
57. "STOCHASTIC FLIGHTS OF PROPELLERS," Pan, M., Rein, H., Chiang, E., & Evans, S.N. *MNRAS*, 427, 2788 (2012)
58. "COLLIDING PLANETARY AND STELLAR WINDS: CHARGE EXCHANGE AND TRANSIT SPECTROSCOPY IN NEUTRAL HYDROGEN," Tremblin, P., & Chiang, E. *MNRAS*, 428, 2565 (2013)
59. "MILLIMETER EMISSION STRUCTURE IN THE FIRST ALMA IMAGE OF THE AU MIC DEBRIS DISK," MacGregor, M.A., et al. *Astrophys. J. Letters*, 762, L21 (2013)
60. "FROM DUST TO PLANETESIMALS: CRITERIA FOR GRAVITATIONAL INSTABILITY OF SMALL PARTICLES IN GAS," Shi, J.-M., & Chiang, E. *Astrophys. J.*, 764, 20 (2013)
61. "THE MINIMUM-MASS EXTRASOLAR NEBULA: IN-SITU FORMATION OF CLOSE-IN SUPER-EARTHS," Chiang, E., & Laughlin, G. *MNRAS*, 431, 3444 (2013)
62. "CATASTROPHIC EVAPORATION OF ROCKY PLANETS," Perez-Becker, D., & Chiang, E. *MNRAS*, 433, 2294 (2013)

63. "HOW EMPTY ARE DISK GAPS OPENED BY GIANT PLANETS," Fung, J., Shi, J.-M., & Chiang, E. *ApJ*, 782, 88 (2014)
64. "FAST RADIAL FLOWS IN TRANSITION DISK HOLES," Rosenfeld, K.A., Chiang, E., & Andrews, S.M. *ApJ*, 782, 62 (2014)
65. "MULTIWAVELENGTH OBSERVATIONS OF THE PUTATIVE DISINTEGRATING SUB-MERCURY KIC 12557548B," Croll, B., et al. *ApJ*, 786, 100 (2014)
66. "GRAVITO-TURBULENT DISKS IN 3D: TURBULENT VELOCITIES VS. DEPTH," Shi, J.-M. & Chiang, E. *ApJ*, 789, 34 (2014)
67. "A CLASS OF WARM JUPITERS WITH MUTUALLY INCLINED, APSIDALLY ALIGNED CLOSE FRIENDS," Dawson, Rebekah I. & Chiang, Eugene *Science*, 346, 212 (2014)
68. "MAKE SUPER-EARTHS, NOT JUPITERS: ACCRETING NEBULAR GAS ONTO SOLID CORES AT 0.1 AU AND BEYOND," Lee, Eve J., Chiang, E., & Ormel, Chris W. *ApJ*, 797, 95 (2014)
69. "FAST MODES AND DUSTY HORSESHOES IN TRANSITIONAL DISKS," Mittal, T. & Chiang, E. *ApJL*, 798, L25 (2015)
70. "A METALLICITY RECIPE FOR ROCKY PLANETS," Dawson, R.I., Chiang, E., & Lee, E.J. *MNRAS*, 453, 1471 (2015)
71. "TO COOL IS TO ACCRETE: ANALYTIC SCALINGS FOR NEBULAR ACCRETION OF PLANETARY ATMOSPHERES," Lee, Eve J., & Chiang, Eugene *ApJ*, 811, 41 (2015)
72. "DISCOVERY AND SPECTROSCOPY OF THE YOUNG JOVIAN PLANET 51 ERI B WITH THE GEMINI PLANET IMAGER," Macintosh, B., et al. *Science*, 350, 6256 (2015)
73. "GEMINI PLANET IMAGER OBSERVATIONS OF THE AU MICROSCOPII DEBRIS DISK: ASYMMETRIES WITHIN ONE ARCSECOND," Wang, Jason J., et al. *ApJL*, 811, L19 (2015)
74. "BETA PICTORIS' INNER DISK IN POLARIZED LIGHT AND NEW ORBITAL PARAMETERS FOR BETA PICTORIS B," Millar-Blanchaer, Maxwell A., et al. *ApJ*, 811, 18 (2015)
75. "ECCENTRIC JUPITERS VIA DISK-PLANET INTERACTIONS," Duffell, P.C, & Chiang, E. *ApJ*, 812, 94 (2015)
76. "SPIRAL ARMS IN GRAVITATIONALLY UNSTABLE PROTOPLANETARY DISKS AS IMAGED IN SCATTERED LIGHT," Dong, R., Hall, C., Rice, K., & Chiang, E. *ApJL*, 812, L32 (2015)
77. "WEAK TURBULENCE IN THE HD 163296 PROTOPLANETARY DISK REVEALED BY ALMA CO OBSERVATIONS," Flaherty, K.M., Hughes, A.M., Rosenfeld, K.A., Andrews, S.M., Chiang, E., et al. *ApJ*, 813, 99 (2015)
78. "RESOLVED MILLIMETER-WAVELENGTH OBSERVATIONS OF DEBRIS DISKS AROUND SOLAR-TYPE STARS," Steele, A., et al. *ApJ*, 816, 27 (2016)
79. "BREEDING SUPER-EARTHS AND BIRTHING SUPER-PUFFS IN TRANSITIONAL DISKS," Lee, E.J., & Chiang, E. *ApJ*, 817, 90 (2016)
80. "CORRELATIONS BETWEEN COMPOSITIONS AND ORBITS ESTABLISHED BY THE GIANT IMPACT ERA OF PLANET FORMATION," Dawson, R.I., Lee, E.J., & Chiang, E. *ApJ*, 822, 54 (2016)
81. "DUST DYNAMICS IN 2D GRAVITO-TURBULENT DISKS," Shi, J.-M., Zhu, Z., Stone, J.M., & Chiang, E. *MNRAS*, 459, 982 (2016)
82. "AN M-DWARF COMPANION AND ITS INDUCED SPIRAL ARMS IN THE HD 100543 PROTOPLANETARY DISK," Dong, R., et al. *ApJL*, 816, L12 (2016)
83. "HOW SPIRALS AND GAPS DRIVEN BY COMPANIONS IN PROTOPLANETARY DISKS APPEAR IN SCATTERED LIGHT AT ARBITRARY VIEWING ANGLES," Dong, R., Fung, J., & Chiang, E. *ApJL*, 826, 75 (2016)
84. "TWO TRANSITING LOW-DENSITY SUB-SATURNS FROM K2," Petigura, E.A., et al. *ApJ*, 818, 36 (2016)

85. "SIGNATURES OF GRAVITATIONAL INSTABILITY IN RESOLVED IMAGES OF PROTOSTELLAR DISKS," Dong, R., et al. *ApJ*, 823, 141 (2016)
86. "A PRIMER ON UNIFYING DEBRIS DISK MORPHOLOGIES," Lee, Eve J. & Chiang, Eugene *ApJ*, 827, 125 (2016)
87. "BRINGING "THE MOTH" TO LIGHT: A PLANET-SCULPTING SCENARIO FOR THE HD 61005 DISK," Esposito, T.M., et al. *AJ*, 152, 85 (2016)
88. "GAP OPENING IN 3D: SINGLE-PLANET GAPS," Fung, Jeffrey & Chiang, Eugene *ApJ*, 832, 105 (2016)
89. "THE SIZES AND DEPLETIONS OF THE DUST AND GAS CAVITIES IN THE TRANSITIONAL DISK J160421.7-213028," Dong, R., et al. *ApJ*, 836, 201 (2017)
90. "SAVE THE PLANET, FEED THE STAR: HOW SUPER-EARTHS SURVIVE MIGRATION AND DRIVE DISK ACCRETION," Fung, Jeffrey & Chiang, Eugene *ApJ*, 839, 100 (2017)
91. "MAGNETOSPHERIC TRUNCATION, TIDAL INSPIRAL, AND THE CREATION OF SHORT-PERIOD AND ULTRA-SHORT-PERIOD PLANETS," Lee, Eve J. & Chiang, Eugene *ApJ*, 842, 40 (2017)
92. "MULTIPLE DISK GAPS AND RINGS GENERATED BY A SINGLE SUPER-EARTH," Dong, R., Li, S., Chiang, E., & Li, H. *ApJ*, 843, 127 (2017)
93. "A THREE-DIMENSIONAL VIEW OF TURBULENCE: CONSTRAINTS ON TURBULENT MOTIONS IN THE HD 163296 PROTOPLANETARY DISK USING DCO⁺," Flaherty, K.M., et al. *ApJ*, 843, 150 (2017)
94. "STELLAR WINDS AND DUST AVALANCHES IN THE AU MIC DEBRIS DISK," Chiang, E. & Fung, J. *ApJ*, 848, 4 (2017)
95. "OPTICALLY THIN CORE ACCRETION: HOW PLANETS GET THEIR GAS IN NEARLY GAS-FREE DISCS," Lee, E.J., Chiang, E. & Ferguson, J. *MNRAS* 476, 2199 (2018)
96. "SECULAR DYNAMICS OF AN EXTERNAL TEST PARTICLE: THE INVERSE KOZAI AND OTHER ECCENTRICITY-INCLINATION RESONANCES," Vinson, B. & Chiang, E. *MNRAS* 474, 4855 (2018)
97. "A DECADE OF MWC 758 DISK IMAGES: WHERE ARE THE SPIRAL-ARM-DRIVING PLANETS?," Ren, B., et al. *ApJL* 857, L9 (2018)
98. "THE ECCENTRIC CAVITY, TRIPLE RINGS, TWO-ARMED SPIRALS, AND DOUBLE CLUMPS OF MWC 758," Dong, R., et al. *ApJ* 860, 124 (2018)
99. "DIRECT IMAGING OF THE HD 35841 DEBRIS DISK: A POLARIZED DUST RING FROM GEMINI PLANET IMAGER AND AN OUTER HALO FROM HST/STIS," Esposito, T., et al. *AJ* 156, 47 (2018)
100. "MULTIPLE DISK GAPS AND RINGS GENERATED BY A SINGLE SUPER-EARTH: II. SPACINGS, DEPTHS, AND NUMBER OF GAPS, WITH APPLICATION TO REAL SYSTEMS," Dong, R., Li, S., Chiang, E., & Li, H. *ApJ*, in press (2018)
101. "A BALANCED BUDGET VIEW ON FORMING GIANT PLANETS BY PEBBLE ACCRETION," Lin, J.W., Lee, E.J., & Chiang, E. *MNRAS*, in press (2018)

Minor Planet Electronic Circulars / International Astronomical Union Circulars

1. Co-author of over 100 MPECs announcing discoveries of Kuiper Belt Objects
2. Chiang, E. IAU Circular 8044, 3 (2003): Announcement of discovery of first Neptunian Trojan 2001 QR₃₂₂

Teaching Experience

2001–present

BERKELEY ASTROPHYSICS COURSES (12 DIFFERENT CLASSES IN 17 YEARS)

Berkeley, CA

- INTRODUCTION TO ASTROPHYSICS II (UNDERGRADUATE)
astro.berkeley.edu/~echiang/Astro7B/7B.html
Gateway to the double major in Astronomy and Physics. Interacting binaries, accretion disks, black holes, gravitational lensing, galaxies, cosmology. Tour of experimental CMB labs.
- INTRODUCTION TO ASTROPHYSICS I (ADVANCED UNDERGRADUATE)
astro.berkeley.edu/~echiang/Astro7A/7A.html
Gateway to the double major in Astronomy and Physics. Instrumentation, radiation, stellar structure, compact objects. Field trip to Lick Observatory.
- PLANETARY ASTROPHYSICS (UNDERGRADUATE)
astro.berkeley.edu/~echiang/planet/planet.html
Upper division course on planetary physics, treating radiometric dating, atmospheres, interiors, minor bodies, extrasolar planets, and planet formation. Student blackboard presentations.
- ORDER-OF-MAGNITUDE PHYSICS (GRADUATE AND ADVANCED UNDERGRADUATE)
astro.berkeley.edu/~echiang/oom/oom.html
The art of estimating any quantity under the sun (from the cost of Obama's inaugural ball to the minimum water depth for cliff diving). Attracts graduate students from Physics, Astronomy, Earth and Planetary Science, Electrical Engineering, and Applied Science and Technology.
- ASTROPHYSICAL FLUID DYNAMICS (GRADUATE AND ADVANCED UNDERGRADUATE)
astro.berkeley.edu/~echiang/fluid/fluid.html
Core graduate course on hydrodynamics and magnetohydrodynamics. Order-of-magnitude and technical problems, emphasis on developing familiarity with the literature. Oral exams.
- RADIATIVE PROCESSES IN ASTROPHYSICS (GRADUATE AND ADVANCED UNDERGRADUATE)
astro.berkeley.edu/~echiang/rad/rad.html
Core graduate course on how we see what we see. Continuum processes, atomic and molecular line radiation, radiative transfer algorithms. Oral exams.
- GALACTIC DYNAMICS (GRADUATE)
coma.berkeley.edu/courses/ay250_f07
Lecture and round-table discussions on spiral structure, N-body algorithms, relaxation mechanisms, Schwarzschild's method, dynamical friction, galaxy formation. Students posed and answered their own questions by constructing their own wiki pages. Beta-tested Binney & Tremaine's Second Edition of *Galactic Dynamics*.
- PLANETARY DYNAMICS (GRADUATE)
astro.berkeley.edu/~echiang/classmech/classmech.html
Combines lecture with round-table discussions of papers on extrasolar planets, orbital perturbation theory, resonances, chaos, planet formation. Students blackboard derivations.
- PHYSICS OF SUPER-EARTHS (GRADUATE)
cips.berkeley.edu/events/superearths.html
Reading seminar on formation and evolution of Earth and Earth-like planets, attracting students from Astronomy and Earth and Planetary Science. Problem sets and weekly readings.
- ACCRETION DISKS (GRADUATE)
Reading seminar on mechanisms of angular momentum transport in astrophysical disks. Mini-lectures accompany weekly readings.
- CLASSIC PAPERS IN THEORETICAL ASTROPHYSICS (GRADUATE)
Reading seminar on seminal papers in theoretical astrophysics, ranging from Parker's solar wind to Press-Schechter cosmological structure formation.
- CLASSIC PAPERS IN EARTH AND PLANETARY SCIENCE (GRADUATE)
cips.berkeley.edu/events/previous03_04.html
Reading seminar on seminal papers in geophysics, from chaos to mantle convection.

- Coached students on how to improve their prose. Critiqued scientific papers, essays, resumes and cover letters.

Committees and Professional Service

1. BERKELEY ASTRONOMY DEPARTMENT CHAIR (2015–2018)
2. BERKELEY ASTRONOMY CLIMATE ADVISOR (2015–present; one of seven Astronomy advisors who promote equity and inclusion)
3. DIRECTOR, BERKELEY CENTER FOR INTEGRATIVE PLANETARY SCIENCE (CIPS) (2011–2015; organizer of weekly CIPS Planet and Star Formation Seminar; led 2013 review which restored annual budget)
4. HEAD GRADUATE ADVISOR, BERKELEY ASTRONOMY (2008–2015)
5. SAGAN FELLOWSHIP SELECTION COMMITTEE (panelist to select national prize postdoctoral fellows in exoplanet science)
6. HUBBLE FELLOWSHIP SELECTION COMMITTEE (panelist to select national prize postdoctoral fellows across all fields of astrophysics)
7. INVITED SCIENCE FRONTIER PANELIST FOR STAR AND PLANET FORMATION, NATIONAL ACADEMY OF SCIENCES ASTRO2010 DECADAL SURVEY (2010)
8. SCIENTIFIC ORGANIZING COMMITTEE FOR BAY AREA CONSORTIUM FOR EXOPLANET SCIENCE (BACES) (2012–2015)
9. CHAIR OF GRADUATE ADMISSIONS, BERKELEY ASTRONOMY (2010–2014)
10. ASTRONOMY LIAISON AND CO-I FOR BERKELEY SCIENCE DIVERSITY PROGRAMS (2010–present, PI Colette Patt)
11. BERKELEY COMMITTEE ON COURSES OF INSTRUCTION AND ACADEMIC PROGRAM (COCI; 2011–2015)
12. BERKELEY COMMITTEE ON UNDERGRADUATE SCHOLARSHIPS, HONORS, AND FINANCIAL AID (CUSHFA; 2011–2015)
13. POSTDOCTORAL FELLOW SELECTION, BERKELEY ASTRONOMY (2001–2014; CIPS, Miller, TAC)
14. OPEN FACULTY SEARCH COMMITTEE, BERKELEY ASTRONOMY (2010)
15. CHAIR, EDUCATION COMPONENT OF BERKELEY ASTRONOMY SELF-STUDY (2008)
16. FACULTY SEARCH COMMITTEE, BERKELEY CIPS/EPS (2006, 2007)
17. REFEREE FOR NSF AND NASA GRANT PROPOSALS (NSF Planetary Astronomy, NASA Origins, NASA Planetary Geology and Geophysics, and NASA Outer Planets Research)
18. REFEREE FOR GRANT PROPOSALS FOR US-ISRAELI BINATIONAL SCIENCE FOUNDATION, NETHERLANDS ORGANIZATION FOR SCIENTIFIC RESEARCH (NWO), AND HONG KONG RESEARCH GRANTS COUNCIL
19. REFEREE FOR *Nature*, *Science*, *Astrophysical Journal*, *Astronomy & Astrophysics*, *MNRAS*

Selected Presentations (average 4 invited colloquia/seminars per year)

1. "FUTURE DIRECTIONS IN PLANET FORMATION"
Heising-Simons 51 Peg b Planetary Science Fellowship Symposium (San Francisco 2018)
2. "GENESIS OF THE SUPER-EARTHS"
Kavli ExoFrontiers Symposium (Cambridge UK 2017); Exoplanets I (Davos, Switzerland 2016)
3. "CLOSE-IN PLANETS"
Caltech Theoretical Astrophysics seminar (2015), University of Toronto at Scarborough 'Planet Day' (2015), NOVA Lecturer for the Netherlands Research School for Astronomy (2012)
4. "PROTOPLANETARY DISKS"
Caltech Planetary Science seminar (2015)
5. "PLANETESIMAL FORMATION AND DISK ACCRETION"
Cornell (2009), Harvard Institute for Theory and Computation (2009), UCLA (2010), University of Toronto (2011)
6. "PLANET FORMATION: OBSERVATIONS AND THEORY"
Invited 6-hour lecture series for the ISIMA Summer School on "Star and Planet Formation," at the Kavli Institute for Astronomy and Astrophysics at Beijing University (2011)
7. "RESONANT RINGS: THE KUIPER BELT AND BEYOND"
Invited colloquium at 15+ institutions, including MIT (2006), UC Berkeley (EPS Distinguished Speaker, 2006), American Museum of Natural History (2006), Caltech (2005), Institute for Advanced Study (2004), Ohio State University (2004)
8. "PROTOPLANETARY DISKS: FROM T TAURI STARS TO DEBRIS SYSTEMS"
Invited 5-hour lecture series for the 24th Jerusalem Winter School on "Lives of Low-Mass Stars and Their Planets," at Hebrew University in Israel (2006/2007).
9. "ORDER-OF-MAGNITUDE ADVENTURES IN PLANETARY SCIENCE"
Invited 3-hour lecture series for the International Planetary School in Kobe, Japan (2005).
10. "ARCHITECTURES OF EXTRA-SOLAR PLANETARY SYSTEMS"
Invited speaker and co-organizer for the Aspen Center for Physics Conference on Origin and Evolution of Planets (2005) and the Sackler Conference at Harvard on Astrophysics of Planetary Systems (2004).

Public Outreach

1. ORDER-OF-MAGNITUDE ESTIMATION AND THE DEEPWATER HORIZON OIL SPILL

Estimated correctly the oil spill rate from the April 2010 British Petroleum oil rig explosion in the Gulf of Mexico. Provided source material for the Final Report of President Obama's Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. See links to news articles and a history of events at astro.berkeley.edu/~echiang/bp/bp.html.

2. "ASHES TO ASHES, DUST TO DUST: THE BIRTH AND DEATH OF PLANETS"

Miller Institute for Basic Science (2013)

3. "CLOSE-IN PLANETS: FROM HOT JUPITERS TO SUPER-MOONS"

Mount Diablo Astronomical Society (2012); SETI Institute (2013)

4. "ACTION AND REACTION: HOW GRAVITY SHAPES PLANETARY SYSTEMS"

Berkeley COMPASS Project for undergraduates (2010), San Francisco Amateur Astronomers (2009), Berkeley Astrophysics Roundtable (for donors; 2009)

5. "BEYOND PLUTO"

Berkeley CIPS Public Lecture (2006), Mount Tamalpais Astronomical Society (2006), Silicon Valley Astronomy Lecture Series (audience of 600+) (2004), Sonoma State "What Physicists Do" Lecture Series (2004), Mount Diablo Astronomical Society (2003), Cal Day Astronomy Department Open House (2002)

Languages Conversational Mandarin Chinese

References Available upon request