CURRICULUM VITAE - Michael J. Ireland

Research School of Astronomy & Astrophysics
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Education

Institution/Date Awarded	Qualification	Awards & Achievements
2006 University of Sydney (supervisors P. Tuthill and W. Tango)	Ph.D.	-Denison Merit Award -Australian Postgraduate Award
2002 University of Sydney	B.Science (Hons)	-1st Class honours -University Medal
1999 University of Newcastle	B.Mathematics/ B. Science	-Ivan Lincoln Rose Prize in Applied Mathematics -High Distinction Average

Major Prizes

Frederick White prize (2016) by the Australian Academy of Science.

Louise Webster prize (2010) by the Astronomical Society of Australia, for outstanding research by a scientist early in their postdoctoral career.

Awarded a Michelson fellowship at the California Institute of Technology (2005) (this scheme was the predecessor of the Sagan fellowships).

Charlene Heisler prize (2006) by the Astronomical Society of Australia for the most outstanding astrophysics PhD in Australia.

Top of the Science faculty and University Medal, University of Sydney, 2002.

Recent Employment

Future Fellow, Research School of Astronomy and Astrophysics, Australian National University, 2014-present

Senior Lecturer in Astrophotonics, Macquarie University and Australian Astronomical Observatory, 2012-2014

Lecturer in Astrophotonics, Macquarie University and Australian Astronomical Observatory, 2011-2012

Australian Research Council Postdoctoral Fellow, University of Sydney, 2008-2011

Michelson Postdoctoral Fellow, Planetary Science, California Institute of Technology, 2005-2008

Major Grants Awarded as Lead of Fellow

"Directly Imaging Exoplanet Birth", $656,000, ARC Future Fellowship Scheme 2014.

"Harnessing Mid-Infrared Photonic Technologies for Exoplanetary Discovery', $428,000, ARC Discovery Scheme 2014, (lead-CI on original grant, Co-CIs Michael Withford and Peter Tuthill)

"Sound and fury: finding planets amidst the noise of their dying stars", $355,000, ARC Discovery Scheme 2012, (lead-CI, Co-CIs Tim Bedding and Quentin Parker)

"How many bright stars of the night sky harbour planets?", $310,000, ARC Discovery Scheme 2010 (Sole-CI)

"Multiplicity in Star and Planet Formation with the PAVO instrument", $503,000, ARC Discovery Scheme 2008, ARC Fellow (CI Tuthill, PI ten Brummelaar)

Lead on Internal Macquarie University Start-Up, Research Development Grant and Research Infrastructure Block Grants (∼$250,000 total)

Instrumentation Grants

"High-cadence near-Infrared imaging: Lucky imaging and high-speed photometry", ARC Linkage, 2015, $264,619 from the ARC

"Veloce - Australia's Next-Generation Planet Foundry", ARC LIEF, 2015, $760,000 from the ARC, $900K from various Universities with $1M to ANU (Tinney lead, Ireland ANU & technical lead)

"Gemini High-Resolution Optical SpecTrograph (GHOST)", instrument scientist (technical lead) then project scientist (scientific lead), 2012-2017, $6M US

"TAIPAN - A spectrograph to survey the southern sky",ARC Linkage, $1.2M total, 2014 (Lead investigator M. Colless)
"Kunlun Infrared Sky Survey", 2015, $760K from the ARC (Lead Investigator J. Mould)

"GNOSIS-J: completing the revolutionary OH suppression spectrograph", $300,000, ARC Linkage Infrastructure, Equipment and Facilities 2012 (Bland-Hawthown lead, 6 Co-CIs)

Instrumentation Leadership:
The instrumentation programs I have led since my PhD are:

- Project Scientist and initial proposal lead for the $7M Gemini High-Resolution Optical Spectrograph.
- Instrument Scientist for the KOALA IFU at the AAT.
- Co-lead of the Veloce planet finder spectrograph at the AAT ($1.6M in funding so far).
- Lead on the PAVO long baseline interferometry instruments (at the CHARA and SUSI optical stellar interferometers), and the SUSI red table implementation (12 refereed papers).
- Polarimetry lead in the VLT/Conica aperture-masking implementation.
- Author of the MACIM software for image reconstruction in optical interferometry (winner of the 2012 SPIE "beauty contest" and frequently used and cited in astrophysics papers).
- PI of the feed-forward "labAO" adaptive optics system for the CHARA interferometer.
- Lead of the integrated optics IONIC beam combiner for the Palomar Testbed Interferometer.
- Instrument scientist for the KOALA integral field unit for the AAT (I took over as instrument scientist after Jon Lawrence led the funding proposal).
- PI of the RHEA spectrograph project (for Subaru and small telescopes)

- Acting "project architect" for the Planet Formation Imager project - a group of about 100 international scientists coming together to plan the worlds next infrared large high angular resolution facility after the extremely large telescopes.

Research Supervision – PhD Students

Rajika Kuruwita 2015 –
Supervisor (for approx 40% of her project)

Dary Ruiz-Rodriguez 2014 –
Supervisor and Panel Chair

Tobias Feger 2012–
Primary Supervisor (on paper while Macquarie, and effectively after leaving)

Aaron Rizzuto 2011–2014
Primary Supervisor (on paper while at Macquarie, and effectively after leaving). Postdoctoral position at the University of Texas at Austin

Izabela Spaleniak 2011-2013
Associate Supervisor 2011, Primary supervisor 2012-2013. Graduated 2014 with a postdoctoral position at Heriot-Watt University.

Yitping Kok 2010-2013
Primary Supervisor (on paper while at U. Syd, and effectively while at Macquarie). Postdoctoral positions at the European Southern Observatory then the University of Western Australia

Carlos Bacigalupo 2013-2014
Primary supervisor 2013, Associate supervisor 2014

Daniel Huber 2008-2011
Associate Supervisor (for approx 30% of his project). Postdoctoral position at NASA Ames then ARC DECRA fellow at U. Sydney

Vicente Maestro 2009-2013
Associate Supervisor. Chose to work in finance (CBA) after graduating in 2014.

Henry Woodruff 2008-2010
Associate Supervisor. Used his skills to move to medical physics (now a medical radiation physicist at U. Sydney)

Research Supervision – Masters Students

Timothy Smallhorn 2015 – (part time)
Supervisor and Panel Chair
Adam Rains 2015 –
Supervisor and Panel Chair
Eloise Birchall 2015 –
Supervisor, 2015 semester 2
Tom Evans 2010-2011
Primary Supervisor, Completed a PhD at Oxford 2014, postdoctoral position at Exeter from late 2014

Teaching Experience

ASTR178 2012-2013
Other Worlds: Planets and Planetary Systems. Course co-ordinator (for ∼400 students) and lecturer for 50% of the course

ASTR377 2013
Astrophysics 1. Course co-ordinator, lecturer for 50% of the course and computer laboratory co-ordinator.

ASTR278 2011-2012
Advanced Astronomy, Macquarie University. Course co-ordinator, ∼30-50% lecturer and laboratory co-ordinator.

Astrophysics - 3rd year (several course codes) 2009-2010
2 credit point unit (1/3rd of a standard unit), University of Sydney, including an advanced stream. The only 3rd year astrophysics unit at the University of Sydney. Course co-ordinator.

COSC1001/1901 2008-2010
Computational science in MATLAB and computational science in MATLAB (advanced), University of Sydney. Sole lecturer and laboratory co-ordinator, but with an excellent template by Prof Geraint Lewis and mentoring from A./Prof Michael Wheatland.

Mentoring

I have had a wide range of mentors during my career. Apart from my PhD supervisors (Peter Tuthill and William Tango) these have included Prof. John Davis and Prof. Tim Bedding while at the University of Sydney, Prof. Shrivinas Kulkarni and Prof. Lynne Hillenbrand while at Caltech, Prof. Michael Withford and Prof. Mark Wardle while at Macquarie University. At ANU, I have mentors in my primary supervisor Matthew Colless, as well as Lisa Kewley, Martin Asplund and Brian Schmidt.

I briefly acted as a mentor to Lee Spitler and Richard McDermid when they started lecturing at Macquarie University, and have acted as mentors to my employee research associates Arwen Nicholson, Benjamin Warrington and Joao Bento.

Professional Experience

Reviewing/Refereeing:
I have served on a NASA APRA review panel, have acted as a reviewer for ARC, NASA and NSF grants and have acted as a referee numerous times for the journals of the Monthly Notices of the Royal Astronomical Society, Astronomy and Astrophysics, The Astrophysical Journal, IEEE Signal Processing Society, Applied Optics, Experimental Astronomy and Applied Optics.

Scientific Community:
In 2014, I was the chair of the "Stars and Planets" working group of Australia's National Committee for Astronomy's Decadal Review, and also served on the executive committee of the International Facilities Working group. I am a current member at large (one of two invited non-Europeans) of the European Southern Observatory's La Silla Paranal Subcommittee - making recommendations about the world's largest collection of large telescopes (four 8m telescopes and a dozen 1-4 m telescopes). From 2012 to 2014, I served on Astronomy Australia Limited's Antarctic Astronomy Advisory Committee. I served by invitation on the scientific organising committee for the Optical and Infrared Interferometry session of the 2006 and 2012 SPIE conferences, the 2015 International Astronomical Union symposium 314 (Young Stars and Planets Near the Sun) and have been an elected committee member 2012-2015 for IAU commission 54 (Optical/Infrered Interferometry). I was the initial host and one of the main organisers for the Australian Exoplanet Workshop series that began in February 2012 and is now an annual series,

bringing together the growing community of exoplanet researchers in Australia.

Invited Speaker Roles:
International invitations as a speaker included *Why Galaxies Care about AGB Stars* in Vienna 2011, the SPIE astronomical telescopes and instrumentation meeting in 2012 (the invited speaker for aperture-masking in both the adaptive optics and interferometry sessions), the 2013 Observatoire Haute Provence colloquium on "Improving the Performances of Current Optical Interferometers and Future Designs", and the 2014 ESO conference "Astronomy at High Angular Resolution – a cross-disciplinary approach". I have also been invited to give talks at many Australian meetings and institutions.

Refereed Journal Articles and Conference Proceedings

I have a total of 101 refereed journal articles since 2004 in astronomy and photonics, 43 refereed conference proceedings and a h-index of 38. For a summary, please see:
`http://scholar.google.com.au/citations?user=aXHttGUAAAAJ`.

Six Most Significant Articles

1. "Phase errors in diffraction-limited imaging: contrast limits for sparse aperture masking", **Ireland, M. J.**, 2013, *Monthly Notices of the Royal Astronomical Society*, **433**, 1718–172 (22 citations) [100% contribution]

2. "LkCa 15: A Young Exoplanet Caught at Formation?", Kraus A., **Ireland M.J.**, 2012, *The Astrophysical Journal*, **745**, 5 (203 citations) [50% contribution]

3. "A close halo of large transparent grains around extreme red giant stars", Norris, B. R. M., Tuthill, P. G., **Ireland, M. J.**, Lacour, S., Zijlstra, A. A., Lykou, F., Evans, T. M., Stewart, P., Bedding, T. R., 2012, *Nature*, **484**, 220–222 (63 citations) [30% contribution]

4. "Mapping the Shores of the Brown Dwarf Desert. II. Multiple Star Formation in Taurus-Auriga", Kraus A., **Ireland M.J.**, Martinache F., Hillenbrand L.A., 2011, *Astrophysical Journal*, **731**, 8 (145 citations) [40% contribution]

5. "Two Wide Planetary-mass Companions to Solar-type Stars in Upper Scorpius" **Ireland M.J.**, Kraus A., Martinache F., Law N., Hillenbrand L.A., 2011, *Astrophysical Journal*, **726**, 113 (81 citations) [50% contribution]

6. "The Disk Around CoKu Tauri/4: Circumbinary, Not Transitional" **Ireland M.J.**, Kraus A., 2008, *Astrophysical Journal Letters*, **678**, 59 (157 citations) [60% contribution]

Other Refereed Journal Articles

Citations are from NASA's Astrophysical Data System.

7. Pope, B., Tuthill, P., Hinkley, S., Ireland, M. J., Greenbaum, A., Latyshev, A., Monnier, J. D., Martinache, F., 2016, "The Palomar kernel-phase experiment: testing kernel phase interferometry for ground-based astronomical observations", *Monthly Notices of the Royal Astronomical Society*, **455**, 1647–1653 [20% contribution]

8. Cheetham, A. C., Kraus, A. L., Ireland, M. J., Cieza, L., Rizzuto, A. C., Tuthill, P. G., 2015, "Mapping the Shores of the Brown Dwarf Desert. IV. Ophiuchus", *The Astrophysical Journal*, **813**, 83– (1 citation)[20% contribution]

9. Jones, J., White, R. J., Boyajian, T., Schaefer, G., Baines, E., Ireland, M., Patience, J., ten Brummelaar, T., McAlister, H., Ridgway, S. T., Sturmann, J., Sturmann, L., Turner, N., Farrington, C., Goldfinger, P. J., 2015, "The Ages of A-Stars. I. Interferometric Observations and Age Estimates for Stars in the Ursa Major Moving Group", *The Astrophysical Journal*, **813**, 58–[15% contribution]

10. Haubois, X., Wittkowski, M., Perrin, G., Kervella, P., Mérand, A., Thiébaut, E., Ridgway, S. T., Ireland, M., Scholz, M., 2015, "Resolving asymmetries along the pulsation cycle of the Mira star X Hydrae", *Astronomy and Astrophysics*, **582**, A71–[5% contribution]

11. Kraus, A. L., Cody, A. M., Covey, K. R., Rizzuto, A. C., Mann, A. W., Ireland, M. J., 2015, "The Mass-Radius Relation of Young Stars. I. USco 5, an M4.5 Eclipsing Binary in Upper Scorpius Observed by K2", *The Astrophysical Journal*, **807**, 3– (7 citations) [15% contribution]

12. Hinkley, S., Kraus, A. L., **Ireland, M. J.**, Cheetham, A., Carpenter, J. M., Tuthill, P., Lacour, S., Evans, T., Haubois, X., 2015, "Discovery of Seven Companions to Intermediate-mass Stars with Extreme Mass Ratios in the Scorpius-Centaurus Association", *The Astrophysical Journal*, **806**, L9 (5 citations) [30% contribution]

13. Bowler, B. P., Andrews, S. M., Kraus, A. L., **Ireland, M. J.**, Herczeg, G., Ricci, L., Carpenter, J., Brown, M. E., 2015, "An ALMA Constraint on the GSC 6214-210 B Circum-substellar Accretion Disk Mass", *The Astrophysical Journal*, **805**, L17 [5% contribution]

14. De Silva, G. M., Freeman, K. C., Bland-Hawthorn, J., Martell, S., de Boer, E. W., Asplund, M., Keller, S., Sharma, S., Zucker, D. B., Zwitter, T., Anguiano, B., Bacigalupo, C., Bayliss, D., Beavis, M. A., Bergemann, M., Campbell, S., Cannon, R., Carollo, D., Casagrande, L., Casey, A. R., Da Costa, G., D'Orazi, V., Dotter, A., Duong, L., Heger, A., **Ireland, M. J.**, Kafle, P. R., Kos, J., Lattanzio, J., Lewis, G. F., Lin, J., Lind, K., Munari, U., Nataf, D. M., O'Toole, S., Parker, Q., Reid, W., Schlesinger, K. J., Sheinis, A., Simpson, J. D., Stello, D., Ting, Y.-S., Traven, G., Watson, F., Wittenmyer, R., Yong, D., Žerjal, M., 2015, "The GALAH survey: scientific motivation", *Monthly Notices of the Royal Astronomical Society*, **449**, 2604–2617 (23 citations) [5% contribution]

15. Dupuy, T. J., Liu, M. C., Leggett, S. K., **Ireland, M. J.**, Chiu, K., Golimowski, D. A., 2015, "The Mass-Luminosity Relation in the L/T Transition: Individual Dynamical Masses for the New J-band Flux Reversal Binary SDSSJ105213.51+442255.7AB", *The Astrophysical Journal*, **805**, 56 (5 citations) [10% contribution]

16. Rizzuto, A. C., **Ireland, M. J.**, Kraus, A. L., 2015, "New pre-main-sequence stars in the Upper Scorpius subgroup of Sco-Cen", *Monthly Notices of the Royal Astronomical Society*, **448**, 2737–2748 (5 citations) [40% contribution]

17. Gross, S., Jovanovic, N., Sharp, A., **Ireland, M.**, Lawrence, J., Withford, M. J., 2015, "Low loss mid-infrared ZBLAN waveguides for future astronomical applications", *Optics Express*, **23**, 7946–(3 citations) [20% contribution]

18. Muirhead, P. S., Mann, A. W., Vanderburg, A., Morton, T. D., Kraus, A., **Ireland, M.**, Swift, J. J., Feiden, G. A., Gaidos, E., Gazak, J. Z., 2015, "Kepler-445, Kepler-446 and the Occurrence of Compact Multiples Orbiting Mid-M Dwarf Stars", 2015 *The Astrophysical Journal*, **801**, 18–(4 citations) [5% contribution]

19. Huélamo, N., de Gregorio-Monsalvo, I., Macias, E., Pinte, C., **Ireland, M.**, Tuthill, P., Lacour, S., 2015, "High-resolution observations of the outer disk around T Chamaeleontis: the view from ALMA", *Astronomy and Astrophysics*, **575**, L5–(2 citations) [10% contribution]

20. Boyajian, T., von Braun, K., Feiden, G. A., Huber, D., Basu, S., Demarque, P., Fischer, D. A., Schaefer, G., Mann, A. W., White, T. R., Maestro, V., Brewer, J., Lamell, C. B., Spada, F., López-Morales, M., **Ireland, M.**, Farrington, C., van Belle, G. T., Kane, S. R., Jones, J., ten Brummelaar, T. A., Ciardi, D. R., McAlister, H. A., Ridgway, S., Goldfinger, P. J., Turner, N. H., Sturmann, L., 2015, "Stellar diameters and temperatures - VI. High angular resolution measurements of the transiting exoplanet host stars HD 189733 and HD 209458 and implications for models of cool dwarfs", *Monthly Notices of the Royal Astronomical Society*, **447**, 846–857 (2 citations) [10% contribution]

21. Kenworthy, M. A., Lacour, S., Kraus, A., Triaud, A. H. M. J., Mamajek, E. E., Scott, E. L., Ségransan, D., **Ireland, M.**, Hambsch, F.-J., Reichart, D. E., Haislip, J. B., LaCluyze, A. P., Moore, J. P., Frank, N. R., 2015, "Mass and period limits on the ringed companion transiting the young star J1407", *Monthly Notices of the Royal Astronomical Society*, **446**, 411–427 (4 citations) [10% contribution]

22. Kraus, A. L., Andrews, S. M., Bowler, B. P., Herczeg, G., Ireland, M. J., Liu, M. C., Metchev, S., Cruz, K. L., 2015, "An ALMA Disk Mass for the Candidate Protoplanetary Companion to FW Tau", *The Astrophysical Journal*, **798**, L23–(6 citations) [10% contribution]

23. Schaefer, G. H., Brummelaar, T. T., Gies, D. R., Farrington, C. D., Kloppenborg, B., Chesneau, O., Monnier, J. D., Ridgway, S. T., Scott, N., Tallon-Bosc, I., McAlister, H. A., Boyajian, T., Maestro, V., Mourard, D., Meilland, A., Nardetto, N., Stee, P., Sturmann, J., Vargas, N., Baron, F., **Ireland, M.**, Baines, E. K., Che, X., Jones, J., Richardson, N. D., Roettenbacher, R. M., Sturmann, L., Turner, N. H., Tuthill, P., van Belle, G., von Braun, K., Zavala, R. T., Banerjee, D. P. K., Ashok, N. M., Joshi, V., Becker, J., Muirhead, P. S., 2014, "The expanding fireball of Nova Delphini 2013", *Nature*, **515**, 234–236 (5 citations) [5% contribution]

24. Dupuy, T. J., Liu, M. C., **Ireland, M. J.**, 2014, "New Evidence for a Substellar Luminosity Problem: Dynamical Mass for the Brown Dwarf Binary Gl 417BC", *The Astrophysical Journal*, **790**, 133–(10 citations) [20% contribution]

25. Scholz, M., **Ireland, M. J.**, Wood, P. R., 2014, "Effects of moderate abundance changes on the atmospheric structure and colours of Mira variables", *Astronomy and Astrophysics*, **565**, A119–(2 citations) [30% contribution]

26. "Three Wide Planetary-mass Companions to FW Tau, ROXs 12, and ROXs 42B", Kraus A.L., **Ireland M.J.**, Cieza L.A., Hinkley S., Dupuy T.J., Bowler B.P., Liu M.C., 2014, *The Astrophysical Journal*, **781**, 20 (17 citations) [30% contribution]

27. "Long-baseline interferometric multiplicity survey of the Sco-Cen OB association", Rizzuto, A. C., **Ireland, M. J.**, Robertson, J. G., Kok, Y., Tuthill, P. G., Warrington, B. A., Haubois, X., Tango, W. J., Norris, B., ten Brummelaar, T., Kraus, A. L., Jacob, A., Laliberte-Houdeville, C., 2013, *Monthly Notices of the Royal Astronomical Society*, **436**, 1694–1707 (8 citations) [40% contribution]

28. Spaleniak, I., Jovanovic, N., **Ireland, M.**, Gross, S., Lawrence, J., Withford, M., 2014, "Enhancing performance of metre-class telescopes by using photonic devices", *Contributions of the Astronomical Observatory Skalnate Pleso*, **43**, 228–228 [30% contribution]

29. Hinkley, S., Pueyo, L., Faherty, J. K., Oppenheimer, B. R., Mamajek, E. E., Kraus, A. L., Rice, E. L., **Ireland, M. J.**, David, T., Hillenbrand, L. A., Vasisht, G., Cady, E., Brenner, D., Veicht, A., Nilsson, R., Zimmerman, N., Parry, I. R., Beichman, C., Dekany, R., Roberts, J. E., Roberts, L. C., Jr., Baranec, C., Crepp, J. R., Burruss, R., Wallace, J. K., King, D., Zhai, C., Lockhart, T., Shao, M., Soummer, R., Sivaramakrishnan, A., Wilson, L. A., 2013, "The κ Andromedae System: New Constraints on the Companion Mass, System Age, and Further Multiplicity", *The Astrophysical Journal*, **779**, 153–(21 citations) [10% contribution]

30. Harris, H. C., Dahn, C. C., Dupuy, T. J., Canzian, B., Guetter, H. H., Hartkopf, W. I., **Ireland, M. J.**, Leggett, S. K., Levine, S. E., Liu, M. C., Luginbuhl, C. B., Monet, A. K. B., Stone, R. C., Subasavage, J. P., Tilleman, T., Walker, R. L., 2013, "The Binary White Dwarf LHS 3236", *The Astrophysical Journal*, **779**, 21–(2 citations) [5% contribution]

31. Spaleniak, I., Jovanovic, N., Gross, S., **Ireland, M. J.**, Lawrence, J. S., Withford, M. J., 2013, "Integrated photonic building blocks for next-generation astronomical instrumentation II: the multimode to single mode transition", *Optics Express*, **21**, 27197–(10 citations) [30% contribution]

32. Antoci, V., Handler, G., Grundahl, F., Carrier, F., Brugamyer, E. J., Robertson, P., Kjeldsen, H., Kok, Y., **Ireland, M.**, Matthews, J. M., 2013, "Searching for solar-like oscillations in the δ Scuti star ρ Puppis", *Monthly Notices of the Royal Astronomical Society*, **435**, 1563–1575 (5 citations) [10% contribution]

33. Maestro, V., Che, X., Huber, D., **Ireland, M. J.**, Monnier, J. D., White, T. R., Kok, Y., Robertson, J. G., Schaefer, G. H., ten Brummelaar, T. A., Tuthill, P. G., 2013, "Optical interferometry of early-type stars with PAVO@CHARA - I. Fundamental stellar properties", *Monthly Notices of the Royal Astronomical Society*, **434**, 1321–1331 (7 citations) [20% contribution]

34. White, T. R., Huber, D., Maestro, V., Bedding, T. R., **Ireland, M. J.**, Baron, F., Boyajian, T. S., Che, X., Monnier, J. D., Pope, B. J. S., Roettenbacher, R. M., Stello, D., Tuthill, P. G., Farrington, C. D., Goldfinger, P. J., McAlister, H. A., Schaefer, G. H., Sturmann, J., Sturmann, L., ten Brummelaar, T. A., Turner, N. H., 2013, "Interferometric radii of bright Kepler stars with the CHARA Array: θ Cygni and 16 Cygni A and B", *Monthly Notices of the Royal Astronomical Society*, **433**, 1262–1270 (19 citations) [10% contribution]

35. Kok, Y., Maestro, V., **Ireland, M. J.**, Tuthill, P. G., Robertson, J. G., 2013, "Simulating a dual beam combiner at SUSI for narrow-angle astrometry", *Experimental Astronomy*, **36**, 195–221 (0 citations) [10% contribution]

36. Kraus, S., **Ireland, M. J.**, Sitko, M. L., Monnier, J. D., Calvet, N., Espaillat, C., Grady, C. A., Harries, T. J., Hönig, S. F., Russell, R. W., Swearingen, J. R., Werren, C., Wilner, D. J., 2013, "Resolving the Gap and AU-scale Asymmetries in the Pre-transitional Disk of V1247 Orionis", *The Astrophysical Journal*, **768**, 80–(11 citations) [10% contribution]

37. Kok, Y., **Ireland, M. J.**, Robertson, J. G., Tuthill, P. G., Warrington, B. A., Tango, W. J., 2013, "Low-cost scheme for high-precision dual-wavelength laser metrology", *Applied Optics*, **52**, 2808–(1 citations) [30% contribution]

38. Hinkley, S., Hillenbrand, L., Oppenheimer, B. R., Rice, E. L., Pueyo, L., Vasisht, G., Zimmerman, N., Kraus, A. L., **Ireland, M. J.**, Brenner, D., Beichman, C., Dekany, R., Roberts, J. E., Parry, I. R., Roberts, L. C., Jr., Crepp, J. R., Burruss, R., Wallace, J. K., Cady, E., Zhai, C., Shao, M., Lockhart, T., Soummer, R., Sivaramakrishnan, A., 2013, "High-resolution Infrared Imaging and Spectroscopy of the Z Canis Majoris System during Quiescence and Outburst", *The Astrophysical Journal*, **763**, L9–(6 citations) [30% contribution]

39. Cieza, L. A., Lacour, S., Schreiber, M. R., Casassus, S., Jordán, A., Mathews, G. S., Cánovas, H., Ménard, F., Kraus, A. L., Pérez, S., Tuthill, P., **Ireland, M. J.**, 2013, "Sparse Aperture Masking Observations of the FL Cha Pre-transitional Disk", *The Astrophysical Journal*, **762**, L12–(16 citations) [10% contribution]

40. Kok, Y., **Ireland, M. J.**, Tuthill, P. G., Robertson, J. G., Warrington, B. A., Rizzuto, A. C., Tango, W. J., 2013, "Phase-Referenced Interferometry and Narrow-Angle Astrometry with SUSI", *Journal of Astronomical Instrumentation* , **2**, 1340011–(1 citations) [30% contribution]

41. Che, X., Sturmann, L., Monnier, J. D., Ten Brummelaar, T. A., Sturmann, J., Ridgway, S. T., **Ireland, M. J.**, Turner, N. H., McAlister, H. A., 2013, "Optical and Mechanical Design of the CHARA Array Adaptive Optics", *Journal of Astronomical Instrumentation* , **2**, 1340007–(2 citations) [10% contribution]

42. Baines, E. K., White, R. J., Huber, D., Jones, J., Boyajian, T., McAlister, H. A., ten Brummelaar, T. A., Turner, N. H., Sturmann, J., Sturmann, L., Goldfinger, P. J., Farrington, C. D., Riedel, A. R., Ireland, M., von Braun, K., Ridgway, S. T., 2012, "The CHARA Array Angular Diameter of HR 8799 Favors Planetary Masses for its Imaged Companions", *The Astrophysical Journal*, **761**, 57–(29 citations) [10% contribution]

43. Jovanovic, N., Tuthill, P. G., Norris, B., Gross, S., Stewart, P., Charles, N., Lacour, S., Ams, M., Lawrence, J. S., Lehmann, A., Niel, C., Robertson, J. G., Marshall, G. D., **Ireland, M.**, Fuerbach, A., Withford, M. J., 2012, "Starlight demonstration of the Dragonfly instrument: an integrated

photonic pupil-remapping interferometer for high-contrast imaging", *Monthly Notices of the Royal Astronomical Society*, **427**, 806–815 (19 citations) [5% contribution]

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