

## Publications and Reviewing

### *First author, refereed publications:*

- [Finding binaries among Kepler pulsating stars from phase modulation of their pulsations](#), **S. J. Murphy**, C. J. Corbally, R. O. Gray, K.P. Cheng, J. E. Neff, C. Koen, C. A. Kuehn, I. Newsome, Q. Riggs (2015b), MNRAS (accepted), arxiv:1508.03633
- [The potential for super-Nyquist asteroseismology with TESS](#), **S. J. Murphy** (2015), MNRAS (accepted), arxiv:1508.02717
- [Deriving the orbital properties of pulsators in binary systems through their light arrival time delays](#), **S.J. Murphy**, H. Shibahashi (2015), MNRAS, 450, 4475
- [A search for non-pulsating, chemically normal stars in the delta Scuti instability strip using Kepler data](#), **S.J. Murphy**, T.R. Bedding, E. Niemczura, D.W. Kurtz and B. Smalley (2015), MNRAS 447, 3948
- [Investigating the A-type stars using Kepler data](#), **S. J. Murphy** (2014), PhD, Springer, ISBN 978-3-319-09417-5
- [Finding binaries among Kepler pulsating stars from phase modulation of their pulsations](#), **S. J. Murphy**, T. R. Bedding, H. Shibahashi, D. W. Kurtz and H. Kjeldsen (2014), MNRAS 441, 2515
- [Frequency analysis of the high-amplitude SX Phe star KIC 11754974](#), **S. J. Murphy**, A. Pigulski, D.W. Kurtz, J.C. Suarez, A. Grigahcène, L.A. Balona, B. Smalley, K. Uytterhoeven, R. Szabo, A.O. Thygesen, V. Elkin, M. Breger, G. Handler, J. Guzik, J.M. Nemec and J. Southworth, (2013b), MNRAS, 432, 2884
- [Super-Nyquist asteroseismology with the Kepler Space Telescope](#), **S. J. Murphy**, H. Shibahashi, D. W. Kurtz, (2013a), MNRAS, 430, 2986
- [Kepler Fourier concepts: The performance of the Kepler data pipeline](#), **S. J. Murphy** (2012b), AN, 333, 1057
- [Pulsational amplitude growth of KIC 3420637 \(HD 178875\) in the context of Am and rho Puppis stars](#), **S. J. Murphy**, A. Grigahcène, E. Niemczura, D. W. Kurtz, K. Uytterhoeven, (2012a), MNRAS 427, 1418
- [Characteristics of Kepler short- and long-cadence data](#), **S. J. Murphy** (2012a), MNRAS 422, 665

### *As co-author:*

- [KIC 4768731: a bright long-period roAp star in the Kepler field](#), B. Smalley, E. Niemczura, **S.J. Murphy**, H. Lehmann, D.W. Kurtz, D.L. Holdsworth, M.S. Cunha, L.A. Balona, M. Briquet, H. Bruntt, P. de Cat, P. Lampens, A.O. Thygesen, K. Uytterhoeven (2015), MNRAS, 452, 3334
- [FM stars II: a Fourier view of pulsating binary stars -- determining binary orbital parameters photometrically for highly eccentric cases](#), Hiromoto Shibahashi, Donald W. Kurtz, **Simon J. Murphy** (2015), MNRAS, 450, 3999
- [A unifying explanation of complex frequency spectra of gamma Dor, SPB and Be stars: combination frequencies and highly non-sinusoidal light curves](#), Donald W. Kurtz, Hiromoto Shibahashi, **Simon J. Murphy**, Timothy R. Bedding, Dominic M. Bowman (2015), MNRAS, 450, 3015
- [Spectroscopic survey of Kepler stars. I. HERMES/Mercator observations of A- and F-type stars](#), E. Niemczura, **S. J. Murphy**, B. Smalley, K. Uytterhoeven, A. Pigulski, H. Lehmann, D. M. Bowman, G. Catanzaro, E. van Aarle, S. Bloemen, M. Briquet, P. De Cat, D. Drobek, L. Eyer, J. F. S. Gameiro, N. Gorlova, K. Kaminski, P. Lampens, P. Marcos-Arenal, P. I. Papics, B. Vandenbussche, H. Van Winckel, M. Steslicki, M. Fagas (2015), MNRAS 450, 2764
- [Asteroseismic measurement of slow, nearly uniform surface-to-core rotation in the main-sequence F star KIC 9244992](#), H. Saio, D.W. Kurtz, M. Takata, H. Shibahashi, **S.J. Murphy**, T. Sekii, T.R. Bedding (2015), MNRAS 447, 3264
- [Validation of the frequency modulation technique applied to the pulsating delta Scuti – gamma Doradus eclipsing binary star KIC 8569819](#), D.W. Kurtz, K.M. Hambleton, H. Shibahashi, **S.J. Murphy**, A. Prsa (2015), MNRAS 446, 1223
- [The role of turbulent pressure as a coherent pulsational driving mechanism: the case of the delta Scuti star HD187547](#), V. Antoci, M. Cunha, G. Houdek, H. Kjeldsen, R. Trampedach, G. Handler, T. Lüftinger, T. Arentoft, **S. Murphy** (2014), ApJ 796, 118
- [Echelle diagrams and period spacings of g modes in gamma Doradus stars from four years of Kepler observations](#), T.R. Bedding, **S.J. Murphy**, I.L. Colman, D.W. Kurtz (2014), arXiv1411.1883
- [Asteroseismic measurement of surface-to-core rotation in a main sequence A star, KIC11145123](#), D.W. Kurtz, H. Saio, M. Takata, H. Shibahashi, **S.J. Murphy**, T. Sekii (2014), MNRAS 444, 102
- [Unusual high-frequency oscillations in the Kepler delta Scuti star KIC 4840675](#), L. A. Balona, M. Breger, G. Catanzaro, M. S. Cunha, G. Handler, Z. Kołaczowski, D. W. Kurtz, **S. J. Murphy**, E. Niemczura, M. Paparo, B. Smalley, R. Szabo, K. Uytterhoeven, J. L. Christiansen, K. Uddin and M. C. Stumpe,

(2012), MNRAS 424, 1187

- [The Kepler characterization of the variability among A- and F-type stars. I. General overview](#), K. Uytterhoeven, A. Moya, A. Grigahcène, J. A. Guzik, J. Gutiérrez-Soto, B. Smalley, G. Handler, L. A. Balona, E. Niemczura, L. Fox Machado, S. Benatti, E. Chapellier, A. Tkachenko, R. Szabó, J. C. Suárez, V. Ripepi, J. Pascual, P. Mathias, S. Martín-Ruiz, H. Lehmann, J. Jackiewicz, S. Hekker, M. Gruberbauer, R. A. García, X. Dumusque, D. Díaz-Fraile, P. Bradley, V. Antoci, M. Roth, B. Leroy, **S. J. Murphy**, P. De Cat, J. Cuypers, H. Kjeldsen, J. Christensen-Dalsgaard, M. Breger, A. Pigulski, L. L. Kiss, M. Still, S. E. Thompson, and J. Van Cleve (2011), A&A 534, 125

**Reviewing:** External examiner for one thesis. Reviewer for MNRAS, ApJ, PASA, IBVS, and Geoplanet: Earth & Planetary Sciences.

### Conferences and presentations

- **Invited review** at the KASC 8 conference, Aarhus, Denmark “[12 Months of Rapid Advances in our Knowledge of Main-Sequence A and F Stars](#)”, June 2015. All travel, accommodation and subsistence externally funded.
- Seminar at U Tokyo, Tokyo, Japan: “[Finding Binaries Among Pulsating Stars](#)”, Jan 2015. Externally funded collaborative visit (162,000 Yen).
- Contributed talk at CoRoT-3/KASC-7, Toulouse, France: “[Finding Binaries Among Pulsating Stars](#)”, July 2014.
- “Visiting Astronomer” outreach talks (total 4x 1 hr) at Bourne Grammar School, Lincs, UK, July 2014.
- Seminar at UCLan, Preston, UK: “[Finding Binaries Among Pulsating Stars](#)”, June 2014.
- Attended Aarhus Spectroscopy Workshop, Aarhus, Denmark, May 2014. All travel, accommodation and subsistence externally funded (cf. seminar, below).
- Seminar at Aarhus University, Denmark: “[Finding Binaries Among Pulsating Stars](#)”, May 2014.
- SkyMapper Workshop, Australia National University, Canberra, Australia, April 2014.
- Invited Seminar at Australia National University, Canberra, Australia: “[Beyond Transits \(the cool stuff you can do with Kepler data\)](#)”, March 2014.
- Sydney Institute for Astronomy seminar, “[The Intriguing A stars](#)”, October 2013.
- **Invited review** at the KASC 6 conference, Sydney “[Main sequence A-F pulsators](#)”, June 2013. Externally (RAS) funded to sum of £1250.
- Public talk at the Society for Popular Astronomy 60<sup>th</sup> Anniversary Meeting “[Planets and Pulsations](#)”, May 2013.
- Invited Seminar at (1) University of Birmingham, UK; (2) University of Wroclaw, Poland; (3) Polish Academy of Sciences, Poland. “[Investigating the Intriguing A-type stars](#)”, Feb/Apr/Apr 2013.
- Invited Seminar at University of Porto, Portugal. “[Pulsating A-type stars seen with Kepler](#)”, November 2012. Part of an externally funded, 3-month research visit.
- 10th NEON Observing School, Asiago, Italy. Group oral presentation on [symbiotic stars](#), Sept 2012.
- UCLan graduate research conference 2012, Preston, UK. Contributed talk in “experienced presenter” category: “[Highlights of research with the Kepler space telescope](#)” (runner up prize), July 2012.
- KASC 5, Balaton, Hungary. Contributed talk “[KIC 3429637 and the problem of pulsating Am stars](#)”, June 2012.
- The Modern Era of Helio- and Asteroseismology, Obergurgl, Austria. Contributed talk “[Kepler Fourier Concepts](#)” (extended) + conference proceedings (see Publications), May 2012.
- National Astronomy Meeting, Manchester, UK. Poster “[Are the constant stars in the delta Scuti instability strip chemically peculiar?](#)” (An update), March 2012.
- Exoplanets and their host stars, Oxford, UK. Contributed talk: “[Kepler Fourier concepts](#)”; solo oral presentation of group work: “[Stellar population synthesis](#)”, March 2012.
- First Kepler Science Conference, NASA Ames, California, USA. Poster “[Are the constant stars in the delta Scuti instability strip chemically peculiar?](#)”, Dec 2011.
- KASC 4, Boulder, Colorado, USA. Contributed talk “[A highly non-linear delta Scuti star](#)”, July 2011.
- UCLan graduate research conference 2011, Preston, UK. Poster + 5-min oral contribution “[A highly non-linear delta Scuti star](#)” (first place prize), May 2011
- IAC winter school in asteroseismology, Tenerife, Spain, Nov 2010.