Earl Patrick Bellinger, Ph.D.

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INTERESTS	Astrophysics, stellar evolution, asteroseismology, artificial intelligence, machine learning, data science	
POSITION	**Postdoctoral Research Fellow**, Stellar Astrophysics Centre, Aarhus, Denmark	2018 – 2021
EDUCATION	**Ph.D. Astrophysics/Informatics**, Max Planck Institute / Yale University / Uni Göttingen	2018
	M.Sc. Computer Science, Indiana University, USA (GPA: 3.95/4.0)	2014
	B.Sc. Computer Science, SUNY Oswego, USA (GPA: 3.81/4.0, ranked #1 overall)	2012
	B.Sc. Applied Mathematics, SUNY Oswego, USA (*summa cum laude*)	2012
RESEARCH POSITIONS	Research Assistant, **Max Planck Institute for Solar System Research**, Germany	2015 – 2018
	Visiting Assistant in Research, **Yale University**, USA	2016 – 2017
	Research Assistant, **Indiana University**, USA	2013 – 2015
	Guest Researcher, **NIST Information Technology Laboratory**, USA	2013 – 2014
	Research Student, **National Institute of Informatics**, Japan	2013
	SURF Fellow, **NASA Jet Propulsion Laboratory**, USA	2012
	REU Student, **Federal University of Alagoas**, Brazil	2011
	REU Student, **Federal University of Santa Catarina**, Brazil	2010
TEACHING POSITIONS	Assistant, Department of Physics & Astronomy, **Aarhus University**, Denmark	2018
	Teaching Assistant, Department of Astronomy, **Yale University**, USA	2017
	Assistant, Institute for Astrophysics, **University of Göttingen**, Germany	2016
	Associate Instructor, School of Informatics & Computing, **Indiana University**, USA	2012
	Seminar Leader, Honors Department, **SUNY Oswego**, USA	2010
SELECTED HONORS & AWARDS	Stellar Astrophysics Centre Postdoctoral Research Fellowship	2018 – 2021
	National Physical Science Consortium Graduate Fellowship	2012 – 2017
	SUNY Oswego Presidential Scholarship	2008 – 2012
	Oebele Van Dyk Outstanding Computer Science Senior Award	2012
	SUNY Chancellor's Award	2012
	SUNY Oswego Student/Faculty Collaborative Challenge Grant	2011
	NSF IRES / SUNY Oswego Global Laboratory Scholarship	2010, 2011
	SMART Grant	2010, 2011
PUBLISHING	21 publications (11 first author), 138 citations, h-index of 6, Erdős number of 3	
CONFERENCES *invited talk	* TESS-5/Kepler-12 Asteroseismic Science Consortium, MIT, Cambridge, MA, USA	2019
	Cool Stars 20, Boston University, Boston, MA, USA	2018
	TESS-4/Kepler-11 Asteroseismic Science Consortium, Aarhus University, Denmark	2018
	* ERES-III: Emerging Researchers in Exoplanet Science, Yale University, New Haven, CT, USA	2017
	TESS-3/Kepler-10 Asteroseismic Science Consortium, University of Birmingham, England	2017
	* 6th Workshop on Red Giant Branch Modelling, MPI für Sonnensystemforschung, Germany	2016
	TESS-2/Kepler-9 Asteroseismic Science Consortium, Azores, Portugal	2016
	RR Lyrae 2015, Visegrád, Hungary	2015
	American Astronomical Society, Seattle, WA, USA	2015
	* Indo-US Science Workshop on Variable Stars, Delhi University, Delhi, India	2015
	* Workshop on Variable Stars, St. Thomas College, Kerala, India	2014
INVITED SEMINAR TALKS	Florida Gulf Coast University, Fort Myers, Florida, USA	2019
	University of Wisconsin-Madison, Madison, WI, USA	2018
	Yale University, New Haven, CT, USA	2017

Earl Patrick Bellinger — Publications

[21] **Bellinger, E. P.** (2019). A seismic scaling relation for stellar age. *Monthly Notices of the Royal Astronomical Society,* accepted for publication.

[20] **Bellinger, E. P.**, Hekker, S., Angelou, G. C., Stokholm, A., Basu, S. (2019). Stellar ages, masses and radii from asteroseismic modelling are robust to systematic errors in spectroscopy. *Astronomy & Astrophysics,* 622, A130.

[19] **Bellinger, E. P.** (2018). Inverse Problems in Asteroseismology. *Ph.D. Thesis,* International Max Planck Research School in Solar System Science.

[18] **Bellinger, E. P.**, Basu, S., Hekker, S., Ball, W. (2017). Model-independent measurement of internal stellar structure in 16 Cygni A and B. *The Astrophysical Journal,* 851 (2), 80.

[17] **Bellinger, E. P.**, Angelou, G., Hekker, S., Basu, S., Ball, W., & Guggenberger, E. (2017). Fundamental Parameters in an Instant with Machine Learning: Application to Kepler LEGACY Targets. In *Proceedings of Seismology of the Sun and Distant Stars 2016.*

[16] **Bellinger, E. P.**, Angelou, G. C., Hekker, S., Basu, S., Ball, W., & Guggenberger, E. (2016). Fundamental Parameters of Main-Sequence Stars in an Instant with Machine Learning. *The Astrophysical Journal,* 830 (1), 20.

[15] **Bellinger, E. P.**, Wysocki, D., & Kanbur, S. M. (2015). Measuring amplitudes of harmonics and combination frequencies in variable stars. *Communications from the Konkoly Observatory of the Hungarian Academy of Sciences,* 105.

[14] **Bellinger, E. P.**, Conner, D., Mittman, D., Magee, K., & Heventhal, B. (2012). CASSIUS: the Cassini Uplink Scheduler. *Jet Propulsion Laboratory: National Aeronautics and Space Administration,* hdl:2014/43122.

[13] **Bellinger, E. P.**, Kanbur, S. M., & Ngeow, C. C. (2012). New insights into the Cepheid PL Relation through the use of multiphase relations. In *Proceedings of the 20th Stellar Pulsations Conference.*

[12] **Bellinger, E. P.** (2012). Multiphase Relations of Magellanic Cloud Cepheids. In *Proceedings of the 2012 National Conference on Undergraduate Research.*

[11] **Bellinger, E. P.**, Kanbur, S. M., & Ngeow, C. C. (2011). Multiphase Comparison of Period-Luminosity Relations for Magellanic Cloud Cepheids. In *Proceedings of the 9th Pacific Rim Conference on Stellar Astrophysics,* 451 (311).

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[10] Tang, Y., Basu, S., Davies, G. R., **Bellinger, E. P.**, Gai, Ning (2018). Asteroseismology of KIC 8263801: Is it a member of NGC 6866 and a red clump star? *The Astrophysical Journal,* 866 (1), 59.

[9] Bhardwaj, A., Kanbur, S. M., Marconi, M., Das, S., **Bellinger, E. P.**, Singh, H. P., Rejkuba, M., Ngeow, C.-C. (2018). Time-series analyses of Cepheid and RR Lyrae variables in the wide-field variability surveys. In *Proceedings of IAUS347, Early Science with ELTs.*

[8] Angelou, G. C., **Bellinger, E. P.**, Hekker, S., & Basu, S. (2017). On the Statistical Properties of the Lower Main Sequence. *The Astrophysical Journal,* 839 (2) 116. (co-first author)

[7] Hekker, S., Elsworth, Y., Basu, S., & **Bellinger, E. P.** (2017). Evolutionary states of red-giant stars from grid-based modelling. In *Proceedings of Seismology of the Sun and Distant Stars 2016.*

[6] Guggenberger, E., Hekker, S., Basu, S., Angelou, G. C., & **Bellinger, E. P.** (2017). Mitigating the mass dependence in the $\Delta\nu$ scaling relation of red-giant stars. *Monthly Notices of the Royal Astronomical Society,* 470 (2).

[5] Guggenberger, E., Hekker, S., Basu, S., & **Bellinger, E. P.** (2016). Significantly improving stellar mass and radius estimates: A new reference function for the $\Delta\nu$ scaling relation. *Monthly Notices of the Royal Astronomical Society,* 461 (2).

[4] Ji, C., Li, Y., **Bellinger, E. P.**, Li, S., Arnold, R., Radivojac, P., & Tang, H. (2015). A maximum-likelihood approach to absolute protein quantification in mass spectrometry. In *Proceedings of the 6th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics* (pp. 296-305).

[3] Glover, M., **Bellinger, E. P.**, Radivojac, P., & Clemmer, D. (2015). Penultimate Proline in Neuropeptides. *Analytical Chemistry,* 87 (16), 8466-8472.

[2] Ngeow, C. C., Kanbur, S. M., **Bellinger, E. P.**, Marconi, M., Musella, I., Cignoni, M., & Lin, Y. H. (2012). Period-luminosity relations for Cepheid variables: from mid-infrared to multi-phase. *Astrophysics and Space Science,* 341(1), 105-113.

[1] Reyner, S., **Bellinger, E. P.**, & Kanbur, S. M. (2012). The approximation of RR Lyrae and eclipsing binary light curves using cubic polynomials. In *Proceedings of the 20th Stellar Pulsations Conference.*