

Kyle CONROY

Department of Astrophysics & Planetary Sciences
Villanova University
800 E Lancaster Ave, Villanova PA 19085
kyle.conroy@villanova.edu
[Web Version](#)

EDUCATION

- | | |
|----------|---|
| MAY 2018 | PhD in PHYSICS, Vanderbilt University
Nashville, TN ADVISORS: Keivan Stassun & Andrej Prša
DISSERTATION: <i>Astrophysics of Stellar Multiple Systems</i> |
| MAY 2011 | BS in ASTRONOMY AND ASTROPHYSICS, Villanova University
Villanova, PA ADVISOR: Andrej Prša MINOR: Physics |

TEACHING POSITIONS

- | | |
|----------------------|--|
| FALL 2019 | Adjunct Professor VILLANOVA UNIVERSITY
Taught physics for engineers lab session |
| SPRING 2018, 2012 | Teaching Assistant VILLANOVA UNIVERSITY
Graded and helped teach the senior-level capstone course ‘Modeling Analysis’ |
| JAN 2014, JUNE 2015 | Internship Sponsor VANDERBILT UNIVERSITY
Hosted high-school students for 6-week internships |
| SPRING 2015 | Contributing Lecturer VANDERBILT UNIVERSITY
Planned and cotaught a freshman “Commons Seminar” on exoplanets |
| AUG 2013 - JUNE 2014 | Graduate Teaching Assistant VANDERBILT UNIVERSITY
Intro Nighttime Astronomy Lab - helped create labs and taught the lab |
| FALL 2008 - 2010 | Undergraduate Teaching Assistant VILLANOVA UNIVERSITY
Co-taught and graded labs for AST 1073 Stellar Lab |

RESEARCH POSITIONS

- | | |
|----------------------|--|
| JUNE 2018 - CURRENT | Astronomy Post-Doc Researcher VILLANOVA UNIVERSITY |
| NOV 2016 - MAY 2018 | Research Technician VILLANOVA UNIVERSITY
Dr Andrej Prša |
| JUNE 2012 - MAY 2018 | Graduate Research Assistant VANDERBILT UNIVERSITY
Dr Keivan Stassun |
| AUG 2011 - JUNE 2012 | Research Consultant VILLANOVA UNIVERSITY
Dr Andrej Prša |
| SUMMER 2011 | Research Associate PENNSYLVANIA STATE UNIVERSITY
Dr Richard Wade |
| SUMMER 2010 | SARA NSF REU Intern BUTLER UNIVERSITY
Dr Brian Murphy |
| FEB 2008 - JUNE 2011 | Undergraduate Research Assistant VILLANOVA UNIVERSITY
Dr Edward Guinan and Dr Andrej Prša |

OBSERVING EXPERIENCE

MAY 2015	Arranged world-wide photometric follow-up campaign for triple eclipse event of KIC 2835289
SUMMER 2012	Mayall 4-m at KPNO
SUMMER 2010	SARA 0.9-m at KPNO and remotely at CTIO

SELECTED PUBLICATIONS

Jones, D.; **Conroy, K. E.**, Horvat, M.; et al. 2020, **ApJS** submitted
Physics of Eclipsing Binaries. IV. The impact of interstellar extinction on the light curves of eclipsing binaries

Horvat, M., **Conroy, K. E.**, Pablo, H., et al. 2018, **ApJS**, 237, 26.
Physics of Eclipsing Binaries. III. Spin-Orbit Misalignment

Conroy, K. E., Prša, A., Horvat, M., Stassun K.G., 2016, **ApJ**, 854, 163.
The Effects of Barycentric and Asymmetric Transverse Velocities on Eclipse and Transit Times

Prša, A., **Conroy, K. E.**, Horvat, M., et al. 2016, **ApJS**, 227, 29.
Physics of Eclipsing Binaries. II. Toward the Increased Model Fidelity

Abdul-Masih, M., Prša, A., **Conroy, K.**, et al. 2016, **AJ**, 151, 101.
Kepler Eclipsing Binary Stars. VIII. Identification of False Positive Eclipsing Binaries and Re-extraction of New Light Curves

Kirk, B., **Conroy, K.**, Prša, A., et al. 2016, **AJ**, 151, 68.
Kepler Eclipsing Binary Stars. VII. The Catalog of Eclipsing Binaries Found in the Entire Kepler Data-Set

Conroy, K. E., Prša, A., Stassun, K. G., et al. 2014, **PASP**, 126, 914.
Kepler Eclipsing Binary Stars. V. Identification of 31 Candidate Eclipsing Binaries in the K2 Engineering Dataset

Conroy, K. E., Prša, A., Stassun, K. G., et al. 2014, **AJ**, 147, 45.
Kepler Eclipsing Binary Stars. IV. Precise Eclipse Times for Close Binaries and Identification of Candidate Three-body Systems

Slawson, R. W., Prša, A., Welsh, W. F., ..., **Conroy, K. E.** 2011, **AJ**, 142, 160.
Kepler Eclipsing Binary Stars. II. 2165 Eclipsing Binaries in the Second Data Release

Prša, A., Batalha, N., Slawson, R. W., ..., **Conroy, K. E.** 2011, **AJ**, 141, 83.
Kepler Eclipsing Binary Stars. I. Catalog and Principal Characterization of 1879 Eclipsing Binaries in the First Data Release

CONTRIBUTED PUBLICATIONS

LaCourse, D. M., Jek, K. J., Jacobs, T. L., ..., **Conroy, K. E.** 2015, arXiv:1503.01829
Kepler Eclipsing Binary Stars. VI. Identification of Eclipsing Binaries in the K2 Campaign 0 Data-set

Hambleton, K. M., Kurtz, D. W., Prša, A., ..., **Conroy, K. E.** 2013, MNRAS, 434, 925.
KIC 4544587: an eccentric, short-period binary system with δ Sct pulsations and tidally excited modes

ORAL PRESENTATIONS

Conroy, K. E. 2016, Hotwiring the Transient Universe V., Villanova University
Model-Centric All-Sky EB Catalog: collaborative open-science and optimizing follow-up efforts

Conroy, K. E. 2016, Binary Stars in Cambridge, University of Cambridge
Modeling Triple Star Systems in PHOEBE 2.0

Conroy, K. E., Prša, A., & Stassun, K. 2015, AAS Meeting Abstracts, 225, #415.06.
A Triple Eclipsing System as a Test Case for Close Binary Formation Through Kozai Cycles

Conroy, K. E., Prša, A., Stassun, K. 2015, ASP Conference Series, 496, 99C
A Triple Eclipsing System as a Test Case for Close Binary Formation Through Kozai Cycles

Conroy, K., Degroote, P., Hambleton, K., et al. 2013, EAS Publications Series, 64, 295.
PHOEBE 2.0 - Triple and Multiple Systems

Conroy, K. E., Prša, A., Orosz, J., et al. 2012, AAS Meeting Abstracts 220, #406.03.
Eclipse Timing Variations of Short-Period Binaries in the Kepler Field

POSTER PRESENTATIONS

Conroy, K. E., Jones, D.; Horvat, M.; Pablo, H.; Kochoska, A.; Giammarco, J.; Prsa, A. 2020, AAS Meeting Abstracts 235, #114.05.
New Physics and Features in the 2.2 Release of the PHOEBE Eclipsing Binary Modeling Code

Conroy, K., Horvat, M., Hambleton, K., Kochoska, A., Giammarco, J., Prša, A. 2019, AAS Meeting Abstracts 233, #348.27.
Considerations and Design Principles for the 2.1 Release of the PHOEBE Eclipsing Binary Modeling Code

Conroy, K., Prša A., Horvat, M., Stassun K. 2018, AAS Meeting Abstracts, 231, #244.25.
The Effect of Transverse Motion on Eclipse and Transit Times

Conroy, K. E., Prša, A., Horvat, M., & Stassun, K. 2016, AAS Meeting Abstracts, 229, #344.22.
Robust Modeling of Stellar Triples in PHOEBE

Conroy, K. E., Prša, A., & Stassun, K. 2014, AAS Meeting Abstracts, 223, #155.20.
A Triple Eclipsing System as a Test Case for Close Binary Formation Through Kozai Cycles

Conroy, K. E., Darragh, A. N., Liu, Z. J., & Murphy, B. W. 2011, Bulletin of the AAS, 43, #152.18.
Variable Stars in the Globular Cluster M14

Conroy, K., Engle, S., Ballouz, R., & Prša, A. 2010, Bulletin of the AAS, 42, #419.36.
Surface Activity Analysis of the Eclipsing Binary UV Leonis Based On New Spectrophotometric Data

INVITED TALKS

OCTOBER 2019	Invited Speaker University of Liege, Belgium
JUNE 2018, JULY 2019	Co-Lead Workshops, including giving tutorials and talks PHOEBE Workshop VILLANOVA UNIVERSITY
DECEMBER 2017	Invited Colloquium Speaker Department of Mathematics and Physics LJUBLJANA UNIVERSITY, Slovenia
APRIL 2015	Invited to lead workshop on using PHOEBE Space-Inn Workshop KU LEUVEN, Belgium

CODE PRODUCTS

PHOEBE	Member of the development team github.com/phoebe-project
PHOEBE Website	Author and maintainer of PHOEBE website phoebe-project.org
autofig	Author and maintainer of <code>autofig</code> python plotting package github.com/kecnry/autofig
nparray	Author and maintainer of <code>nparray</code> python package github.com/kecnry/nparray
KeplerEBs Website	Author and maintainer of Kepler Eclipsing Binaries web portal keplerEBs.villanova.edu

PROFESSIONAL DEVELOPMENT

Refereed Articles	Astronomical/Astrophysical Journal (6), Astronomy & Astrophysics (3), Monthly Notices of the Royal Astronomical Society (8), Information Bulletin on Variable Stars (1), Publications of the Astronomical Society of Japan (2), MDPI Data (1), Astrophysics & Space Science (1), New Astronomy (1)		
Grant Review Panels	NSF AAG (1)		
Scientific Organizing Committees	Universe of Binaries Telč, Czech Republic September 2019		
Local Organizing Committees	PHOEBE Workshop	VILLANOVA UNIVERSITY	June-July 2020
	PHOEBE Workshop	VILLANOVA UNIVERSITY	July 2019
	PHOEBE Workshop	VILLANOVA UNIVERSITY	June 2018
SUMMER 2015	Started departmental ASTROHACKS VANDERBILT UNIVERSITY weekly meetings to work on collaborative code projects (GitHub repository)		