

# Kyle CONROY

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

## EDUCATION

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

## TEACHING POSITIONS

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

## RESEARCH POSITIONS

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

## OBSERVING EXPERIENCE

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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

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**Conroy, K.E.**, Kochoska, A., et al. 2020, **ApJS**, 250, 2.

*Physics of Eclipsing Binaries. V. General Framework for Solving the Inverse Problem*

Jones, D.; **Conroy, K. E.**, Horvat, M.; et al. 2020, **ApJS**, 247, 63.

*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

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Abdul-Masih, M.; Sana, H.; **Conroy, K. E.**; et al. 2020, **A&A**, 636, A59.

*Spectroscopic patch model for massive stars using PHOEBE II and FASTWIND*

LaCourse, D. M., Jek, K. J., Jacobs, T. L., ..., **Conroy, K. E.** 2015, **MNRAS**, 452, 3561.

*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  $\delta$  Sct pulsations and tidally excited modes*

## ORAL PRESENTATIONS

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**Conroy, K. E.** 2020, Contributions of the Astronomical Observatory Skalnaté Pleso, 50, 530  
*Upcoming support for triple stellar systems in PHOEBE*

**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

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**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

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AUGUST 2020	Invited Summer School Tutor <a href="#">ERASMUS GATE Summer School</a>
JULY 2020	Invited Colloquium Speaker Radboud University, Nijmegen
OCTOBER 2019	Invited Speaker University of Liege, Belgium
SUMMER 2018, 2019, 2021	Co-Lead Workshops, including giving tutorials and talks  <a href="#">PHOEBE Workshop</a>   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

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PHOEBE	Member of the development team <a href="https://github.com/phoebe-project">github.com/phoebe-project</a>
PHOEBE Website	Author and maintainer of PHOEBE website <a href="https://phoebe-project.org">phoebe-project.org</a>
<code>distl</code>	Author and maintainer of <code>distl</code> python distributions package <a href="https://github.com/kecnry/distl">github.com/kecnry/distl</a>
<code>crimpl</code>	Author and maintainer of <code>crimpl</code> python compute resource management package <a href="https://github.com/kecnry/crimpl">github.com/kecnry/crimpl</a>
<code>autofig</code>	Author and maintainer of <code>autofig</code> python plotting package <a href="https://github.com/kecnry/autofig">github.com/kecnry/autofig</a>
<code>nparray</code>	Author and maintainer of <code>nparray</code> python package <a href="https://github.com/kecnry/nparray">github.com/kecnry/nparray</a>
KeplerEBs Website	Author and maintainer of Kepler Eclipsing Binaries web portal <a href="https://keplerEBs.villanova.edu">keplerEBs.villanova.edu</a>

## PROFESSIONAL DEVELOPMENT

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