

Thea Kozakis

ASTROPHYSICIST · ASTROBIOLOGIST

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"Imagination will often carry us to worlds that never were, but without it we go nowhere." - Carl Sagan

Education

PhD Astrophysics

Ithaca, New York, USA

CARL SAGAN INSTITUTE, CORNELL UNIVERSITY

Expected Spring 2020

- Advisor: Lisa Kaltenegger
- Thesis: Stellar UV Environments and Planetary Habitability Throughout Stellar Evolution

MS Astrophysics

Ithaca, New York, USA

CARL SAGAN INSTITUTE, CORNELL UNIVERSITY

May 2017*

- Advisor: Lisa Kaltenegger
- Funded by New York Space Grant

*medical exemption granted from the University for the 2015-2016 academic year

BS Astrophysics, BS Physics

Charleston, South Carolina, USA

COLLEGE OF CHARLESTON

May 2013

- Advisor: Joseph Carson
- Thesis: Directly Imaging Planets Around High-Mass Stars
- Minor: Mathematics

Research Interests

terrestrial planets, planetary habitability throughout stellar evolution, photochemical/climate atmospheric modeling, effects of UV light on surface life, planet-star interactions, biosignature modeling and detection

Academic Honors & Grants

2019	NASA New York Space Grant , NASA New York Space Grant Consortium	Cornell University
2017, 2018	Simons Collaboration on the Origins of Life Grant , Simons Foundation	Cornell University
2016	Eleanor York Prize , Astronomy and Space Sciences Department	Cornell University
2015	Exemplary Poster Award , Emerging Researchers in Exoplanet Science Symposium	Pennsylvania State University
2013-2014	NASA New York Space Grant , NASA New York Space Grant Consortium	Cornell University
2014, 2015	NSF Graduate Fellowship Honorable Mention , National Science Foundation	Cornell University
2013	Outstanding Undergraduate Research Award , South Carolina Academy of Science	College of Charleston
2013	Department Honors Award , Department of Physics & Astronomy	College of Charleston
2013	Outstanding Student Award , School of Sciences and Mathematics	College of Charleston
2012	Major Academic Year Support Grant , School of Sciences and Mathematics	College of Charleston
2012	Summer Undergraduate Research with Faculty Grant , School of Sciences and Mathematics	College of Charleston
2012	Goldwater Scholarship Honorable Mention , Scholarship & Excellence in Education Foundation	College of Charleston

Publications

Planetary Spectra and Biosignatures of Earth-like Planets Orbiting in the White Dwarf Habitable Zone, **T. Kozakis**, Z. Lin, L. Kaltenegger, in review with ApJL

High resolution Spectra of Earth-Like Planets Orbiting Red Giant Host Stars, **T. Kozakis** & L. Kaltenegger, in review with ApJ

Atmospheres and UV Environments of Earth-like Planets throughout Post-main-sequence Evolution, **T. Kozakis** & L. Kaltenegger. 2019, ApJ, 875, 99

UV Surface Environments and Atmospheres of Earth-like Planets Orbiting White Dwarfs, **T. Kozakis**, L. Kaltenegger, & D.W. Hoard. 2018, ApJ, 862, 69

Planet Hunters X. KIC 8462852: Where's the flux?, T. Boyajian, ... **T. Kozakis**, +47 co-authors 2016, MNRAS

Direct Imaging Discovery of a 'Super-Jupiter' Around the late B-Type Star κ And, J. Carson, C. Thalmann, M. Janson, **T. Kozakis**, +52 co-authors, 2013, Astrophysical Journal Letters, 763, 32

Presentations

Extreme Solar Systems IV, poster

DYING TO LIVE: POST-MAIN SEQUENCE HABITABILITY

Reykjavík, Iceland

August 2019

Exoclimates V, poster

DYING TO LIVE: POST-MAIN SEQUENCE HABITABILITY

University of Oxford, Oxford, UK

August 2019

Astrobiology Graduate Conference, talk

ATMOSPHERES AND UV ENVIRONMENTS OF PLANETS THROUGHOUT POST-MAIN SEQUENCE EVOLUTION

Salt Lake City, Utah, USA

July 2019

Emerging Researchers in Exoplanet Science Symposium, talk

ATMOSPHERES AND UV ENVIRONMENTS OF PLANETS THROUGHOUT POST-MAIN SEQUENCE EVOLUTION

Cornell University, Ithaca, New York, USA

June 2019

AAS Winter Meeting, talk

HABITABILITY OF POST-MAIN SEQUENCE PLANETARY SYSTEMS

Seattle, Washington, USA

January 2019

Planetary Lunch Talk Series, talk

LIFE AFTER (STELLAR) DEATH: HABITABILITY AROUND WHITE DWARFS

Cornell University, Ithaca, New York, USA

August 2018

Graduate Student/Post-Doctorate Seminar, talk

DYING TO LIVE: POST-MAIN SEQUENCE HABITABILITY

Cornell University, Ithaca, New York, USA

August 2018

Cool Stars 20, poster

ATMOSPHERES AND UV GROUND ENVIRONMENT FOR PLANETS ORBITING RED GIANTS

Boston, Massachusetts, USA

August 2018

University of St Andrews, invited talk

UV SURFACE ENVIRONMENTS AND ATMOSPHERES OF EARTH-LIKE PLANETS ORBITING WHITE DWARFS

University of St Andrews, St Andrews, UK

July 2018

University of Edinburgh, invited talk

UV SURFACE ENVIRONMENTS AND ATMOSPHERES OF EARTH-LIKE PLANETS ORBITING WHITE DWARFS

University of Edinburgh, Edinburgh, UK

July 2018

Exoplanets II, poster

UV SURFACE ENVIRONMENTS AND ATMOSPHERES OF EARTH-LIKE PLANETS ORBITING WHITE DWARFS

Cambridge University, Cambridge, UK

July 2018

Graduate Student/Post Doctorate Seminar, talk

DO YOU BELIEVE IN LIFE AFTER (STELLAR) DEATH?: WHITE DWARF HABITABILITY

Cornell University, Ithaca, New York, USA

June 2018

Emerging Researchers in Exoplanet Science Symposium, poster

ATMOSPHERES AND UV GROUND ENVIRONMENT FOR PLANETS ORBITING RED GIANTS

Pennsylvania State University, State College, Pennsylvania, USA

June 2018

Emerging Researchers in Exoplanet Science Symposium, talk

BIOSIGNATURES AND UV ENVIRONMENTS OF EARTH-LIKE PLANETS ORBITING WHITE DWARFS

Pennsylvania State University, State College, Pennsylvania, USA

June 2017

Astrobiology Graduate Conference, talk

BIOSIGNATURES AND UV ENVIRONMENTS OF EARTH-LIKE PLANETS ORBITING WHITE DWARFS

Charlottesville, Virginia, USA

June 2017

Astrobiology Science Conference, poster

BIOSIGNATURES AND UV ENVIRONMENTS OF EARTH-LIKE PLANETS ORBITING WHITE DWARFS

Mesa, Arizona, USA

April 2017

Astrobiology Science Conference, poster

AGE ROTATION-ACTIVITY RELATIONSHIP OF KEPLER FIELD STARS

Chicago, Illinois, USA

June 2015

Emerging Researchers in Exoplanet Science Symposium, poster

AGE ROTATION-ACTIVITY RELATIONSHIP OF KEPLER FIELD STARS

Pennsylvania State University, State College, Pennsylvania, USA

May 2015

South Carolina Academy of Science Conference, talk

DIRECT IMAGING DISCOVERY OF A 'SUPER-JUPITER' AROUND A LATE B-TYPE STAR

Columbia, South Carolina, USA

April 2013

AAS Winter Meeting, poster

THE SUBARU SEEDS IMAGING SEARCH FOR EXOPLANETS AROUND HIGH-MASS STARS

Long Beach, California, USA

January 2013

AAS Winter Meeting, poster

THE SUBARU SEEDS IMAGING SEARCH FOR EXOPLANETS AROUND HIGH-MASS STARS

Austin, TX, USA

January 2012

Teaching

Teaching Assistant: From New Worlds to Black Holes

LECTURER: DR LISA KALTENEGGER

Cornell University, Ithaca, NY, USA

Fall 2015 (Head TA), 2018

- Introductory astronomy class focusing on the Universe as a whole
- Organized other TAs, managed course website, and dealt with logistical issues
- Assisted in writing and grading homework assignments and exams
- Taught recitation sections and held office hours

Teaching Assistant: Our Solar System

LECTURERS: DRS STEVE SQUYRES AND PHIL NICHOLSON

Cornell University, Ithaca, NY, USA

Spring 2015

- Introductory astronomy class focusing on the Solar System
- Taught recitation sections and lab sections and held office hours
- Assisted in writing and grading homework assignments and exams

Teaching Assistant: A Spacecraft Tour of the Solar System: Science, Policy and Exploration

LECTURER: DR ALEXANDER HAYES

Cornell University, Ithaca, NY, USA

Fall 2014

- Writing class focused on exploration of the Solar System
- Assisted in teaching students how to write popular science articles
- Graded written work and gave feedback and held office hours
- Managed course website

Outreach

Expanding Your Horizons

WORKSHOP DESIGNER/ORGANIZER

Cornell University, Ithaca, NY, USA

2015-present

- Yearly outreach event attended by middle school girls from New York to learn about the different STEM fields
- Part of the original astronomy workshop design team, team leader for the past 2 years
- Wrote yearly applications for event approval, recruit/train volunteers and run event

Mental Health Counselor Training (EARS)

CERTIFIED MENTAL HEALTH COUNSELOR/TRAINER

Ithaca, NY, USA

2015-present

- Semester long training offered by EARS (Empathy Assistance and Referral Service), a walk-in mental health counseling program
- Give presentations on empathetic listening and communication skills to Cornell students of all levels
- Small group teaching of Cornell graduate students and post doctoral researchers skills of mental health counseling

Museum in the Dark

Ithaca, NY, USA

ORGANIZER

2014-2017

- Halloween-themed outreach event at a local museum with astronomy related demos
- Liaison between the museum and the astronomy department
- Recruited/trained volunteers to run science demos and obtained/organized all materials for the event

4-H Focus for Teens Workshop

Cornell University, Ithaca, NY, USA

ORGANIZER

2014-2017

- Summer outreach event for high school students in the New York 4-H program to attend STEM related workshops
- Helped design/modify the 3 day workshop
- Recruited/trained graduate student volunteers

Academic Service

SOC/LOC/session chair

Cornell University

EMERGING RESEARCHERS IN EXOPLANET SCIENCE SYMPOSIUM

June 2019

LOC/session chair

Pennsylvania State University

EMERGING RESEARCHERS IN EXOPLANET SCIENCE SYMPOSIUM

June 2018

LOC/session chair

Yale University

EMERGING RESEARCHERS IN EXOPLANET SCIENCE SYMPOSIUM

June 2017

SOC/LOC/session chair

Cornell University

EMERGING RESEARCHERS IN EXOPLANET SCIENCE SYMPOSIUM

June 2016

Reviewer

Astrophysical Journal