

Nora Bailey

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Research Interests

Applying numerical and analytical methods to develop theories related to exoplanet systems; planetary dynamics; planetary system architectures, resonances, stability, and habitability.

Education

University of Chicago / Ph.D., Astronomy & Astrophysics

September 2017 - PRESENT, Chicago, IL

Advisor: Prof. Daniel Fabrycky

Advanced to candidacy July 2019.

United States Naval Academy / B.S., Physics (Astrophysics track)

June 2005 - May 2009, Annapolis, MD

Graduated with merit. Language Study Minor in Spanish. GPA: 3.92 (4.0 Upper Division).

Awards/Honors

Eckhardt Graduate Scholar

2017

Invited Member, Phi Kappa Phi

2009

Publications

Bailey, N. & Fabrycky, D. "Nodal Precession in Closely Spaced Planet Pairs" 2020, AJ, 159, 217

Bailey, N. & Fabrycky, D. "Stellar Flybys Interrupting Planet-Planet Scattering Generates Oort Planets." 2019, AJ, 158, 94

Albert, C.E., Munn, J., Larsen, J.A., **Bailey, N.A.**, et al. Minor Planet Electronic Circular 2007-W41: 2007 WY3

Talks

"Closely Spaced Exoplanets: Inclined to Precess." Lake Michigan Exoplanet Meeting, University of Chicago, Chicago, IL - November 2019

"Stellar Flybys Interrupting Planet-Planet Scattering Generates Oort Planets." Emerging Researchers in Exoplanet Science (ERES) V, Cornell University, Ithaca, NY - June 2019

Posters

"Nodal Precession in Closely Spaced Planet Pairs." Exoplanets III, Heidelberg University and MPIA, Online - July 2020

"Stellar Flybys Interrupting Planet-Planet Scattering Generates Oort Planets." Exoplanets II, Cornell University, Cambridge, UK - July 2018

Teaching

Lecturer, Intro to Global Warming (PHSC 13410), University of Chicago

Fall 2020

Teaching Assistant, Exoplanets (ASTR 12720), University of Chicago

Spring 2018

Teaching Assistant, Galaxies (ASTR 12710), University of Chicago

Winter 2018

Teaching Assistant, Stars (ASTR 12700), University of Chicago

Fall 2017

Service

Physical Sciences Division Science Writing and Digital Media Intern, University of Chicago	Winter 2021
Member, Dean's Student Advisory Committee, University of Chicago	2020-2021
Organizer, Exoplanet Journal Club, University of Chicago	2019-2020
President, Very Exciting Research by Astronomers (graduate student organization), University of Chicago	2018-2020
Member, Brinson Committee, University of Chicago	2017-2018
President, Astronomy Club, United States Naval Academy	2007-2009

Outreach

Volunteer, Soapbox Science, Chicago, IL	2018
Group Leader, Expanding Your Horizons, Chicago, IL	2018
Organizer, AstroKids, Annapolis, MD	2008-2009

Other Employment

Booz Allen Hamilton / Associate, Project Management/Systems Engineering
August 2014 - May 2017, San Diego, CA

Consulted for Navy/DoD clients, including the Space and Naval Warfare Chief Engineer and the Commercial Broadband Satellite Program.

United States Navy, USS Carl Vinson (CVN-70) / Reactor Mechanical Division Officer
June 2012 - June 2014, San Diego, CA

Led a division of 20+ nuclear-trained personnel. Supervised the operation of onboard A4W nuclear reactor. Certified Nuclear Engineer Officer by Departments of Energy and Defense in March 2014, receiving recognition for outstanding performance during examination.

United States Navy, USS Green Bay (LPD-20) / Combat Information Center Officer, Fire Control Officer, Public Affairs Officer
June 2009 - May 2011, San Diego, CA

Led 30+ personnel in performance of operational duties. Handled the ship's military-public interface. Supervised the ship's at-sea operation, navigation, and maneuvering. Qualified Surface Warfare Officer. Ranked first in peer group.

Other Education

University of California San Diego Extension / Certificate, Accounting
March 2015 - May 2016, San Diego, CA

Completed with 98% average.

Navy Prototype School

December 2011 - June 2012, Charleston, SC

In-depth, hands-on training in theory and operations, including casualty response and integrated plant operations, on an operating S5G nuclear reactor.

Graduated #1 in class.

Navy Nuclear Power School

May 2011 - December 2011, Charleston, SC

Graduate level training in math, thermodynamics, chemistry, physics, material sciences, reactor dynamics, and nuclear plant operations.

Graduated #2 in class.