

Princeton University

HONORS FACULTY MEMBERS
RECEIVING EMERITUS STATUS



May 2019

The biographical sketches were written by staff and colleagues in the departments of those honored.

CONTENTS

Faculty Members Honored in 2019 for Receiving Emeritus Status

Kofi Agawu	3
Ilhan A. Aksay.....	5
R. Douglas Arnold	8
Thomas Funkhouser	12
Martin Gilens	14
Carol Greenhouse.....	18
Hendrik Hartog	21
N. Jeremy Kasdin.....	24
Andrea S. LaPaugh.....	26
Anson Gilbert Rabinbach	28
Harvey Rosen.....	31
Jorge Sarmiento	35
Jacqueline Ilyse Stone	39
James McLellan Stone	42
Eric Wood.....	47
Virginia A. Zakian	51

N. JEREMY KASDIN



N Jeremy Kasdin, the Eugene Higgins Professor of Mechanical and Aerospace Engineering, will transfer to emeritus status on July 1, 2019, after 20 years on the Princeton faculty.

Jeremy was born and raised in Rochester, New York. After receiving a bachelor's degree in mechanical and aerospace engineering from Princeton, he went to Stanford University where he earned a Ph.D. in aeronautical and astronautical sciences with a minor in electrical engineering in 1991.

From 1991–98 Jeremy was a project manager and the chief systems engineer for NASA's Gravity Probe B (GP-B) spacecraft, a satellite built to test Einstein's general theory of relativity. GP-B was launched in April 2004.

Jeremy joined the Princeton faculty in September 1999. Upon his arrival, he initiated a weekly brainstorming session about searching for Earth-like planets. It was an interdisciplinary group that drew from many areas including astrophysics, geology, mechanical and aerospace engineering, biology, and operations research, as well as the Institute for Advanced Study in Princeton. The coronagraph approach to planet imaging was an outcome of these conversations, and it inspired NASA to change its perspective on the best method for exoplanet imaging.

In addition to his position in MAE, Jeremy also has an affiliated appointment in the Department of Astrophysical Sciences. From 2014-16 he served as vice dean of the School of Engineering and Applied Science. He served on many committees including the Committee on Advancements and Appointments (C3), and he chaired the School of Engineering and Applied Science's Strategic Planning Task Force in 2014–15.

At Princeton, Jeremy led a collaborative team investigating high-contrast imaging techniques for detecting and characterizing terrestrial exoplanets. That group has pioneered the use of pupil-plane coronagraphs and external occulters for space-based imaging. The Princeton team has also developed some of the key techniques for wavefront control with a coronagraph. Princeton led the astrophysics mission concept study for THEIA (Telescope for Habitable Exoplanets and Interstellar/Intergalactic Astronomy), a 4-meter telescope with an external occulter for exoplanet

characterization and UV imaging. Jeremy has led several Technology Demonstration for Exoplanet Mission studies for NASA analyzing both coronagraphs with wavefront control and external occulter. He is co-chair of the Science Definition Team for the Wide Field Infra-Red Survey Telescope (WFIRST) mission and adjutant scientist for the Coronagraph Instrument. As a leader in exoplanet research, he was invited to give a TED Talk on exoplanet imaging, “The flower-shaped starshade that might help us detect Earth-like planets,” in 2014.

Jeremy is also principal investigator for the CHARIS instrument (Coronagraphic High Angular Resolution Imaging Spectrograph), a high-contrast exoplanet spectrograph that was installed on the Subaru telescope at Mauna Kea in Hawaii in 2016.

Jeremy teaches classes in introductory and advanced dynamics, space mechanics, and space system design. He is the recipient of the 2000 E. Lawrence Keyes ’51 Faculty Achievement Award and in 2008 he won an Excellence in Teaching Award from the School of Engineering Student Council. Inspired by his passion for teaching dynamics, Jeremy and Derek Paley co-authored a textbook on this subject titled *An Introduction to Engineering Dynamics* (Princeton University Press, 2011). It has become a popular textbook in the field.

Jeremy is an associate fellow of the American Institute of Aeronautics and Astronautics, and member of the American Astronomical Society, the American Society for Engineering Education, and SPIE (the international society for optics and photonics). He has served on numerous NASA committees and was a member of the Particle Astrophysics and Gravitation Program Prioritization panel of the 2010 Decadal Survey for Astronomy and Astrophysics.