

Bryan Penprase is currently a visiting scholar at Harvard University, researching the future of higher education and working on a new book on future universities. Bryan serves as Vice President for External Academic Relations and Sponsored Research at Soka University of America, where he focuses on building strategic partnerships and expanding external funding to advance undergraduate education and research. Bryan formerly served as Dean of Faculty for three years at Soka University of America, where he worked to create new academic programs, and managed the curriculum design, hiring and implementation of a new Concentration in Life Sciences. Bryan also has been actively developing global liberal arts collaborations, which includes founding the Pacific Alliance of Liberal Arts Colleges (PALAC), and organizing international conferences at Soka University of America, Singapore, India, and at Yale University. He previously was a Professor of Science and founding faculty member and founding Director of the Teaching and Learning Center at Yale-NUS College in Singapore and served as an American Council on Education (ACE) fellow at Yale University in 2012-13, where he was mentored by Yale's President, Peter Salovey. During the ACE fellowship, Bryan was part of the team that designed the curriculum for the new Yale-NUS College in Singapore and advised the Yale leadership on topics including online learning, teaching and learning centers and programs for first-generation and underrepresented minority students.

Bryan served for 20 years as a professor of Physics and Astronomy at Pomona College, where he served as a department chair, and was the inaugural co-director the Liberal Arts Consortium for Online Learning (LACOL). Bryan received both a BS in Physics and an MS in Applied Physics from Stanford University in 1985, and a PhD from the University of Chicago in Astronomy and Astrophysics in 1992. Bryan's astronomy research includes nearly all aspects of observational astrophysics, using telescopes such as the Hubble Space Telescope and the Keck Telescope in Hawaii. Bryan has lectured across the world in conferences and public talks about emerging models of higher education, global liberal arts, the Fourth Industrial Revolution, the intersections between culture and astronomy, and astrophysics research. He has taught a wide range of courses in Archaeoastronomy, Astronomy, Physics, and Astrophysics, led expeditions to study the astronomy of Native American groups across the Southwestern US, as well as numerous solar eclipse expeditions. Bryan has authored or co-authored over 55 peer-reviewed research articles, in the *Astrophysical Journal*, *Astronomical Journal*, in *Nature* and *Science* and other publications. His most recent research program is a collaboration with Caltech to develop the Zwicky Transient Facility (ZTF) and a Global Relay of Observatories known as GROWTH for studying gamma ray bursts, new supernovae, and the electromagnetic counterparts of gravitational wave sources.

He is the author of four books, including two recently published books, *The New Global Universities – Reinventing Higher Education for the 21st Century*, with co-author Noah Pickus, published by Princeton University Press and *Models of Time and Space - the Foundations of Astrophysical Reality from Across the Centuries*, published by Springer, Inc. He is also the author of *STEM Education for the 21st Century*, and *The Power of Stars – How Celestial Observations Have Shaped Civilization*, both published by Springer, Inc. His new research centers on the future of higher education, and how academic culture and governance can promote creativity in students and faculty to advance STEM innovation and improve undergraduate education. In his work at Harvard he is studying how universities can be to maximize the efficiency of student learning and to pioneer new business models and learning modalities.

