

RENU MALHOTRA

Regents Professor and Louise Foucar Marshall Science Research Professor
Lunar and Planetary Laboratory, The University of Arizona, Tucson, AZ

EDUCATION

Ph.D. 1988, Physics, Cornell University, Ithaca, NY.

M.S. 1983, Physics, Indian Institute of Technology, Delhi, India.

HONORS

Elected Member of National Academy of Sciences, 2015; Elected Fellow of American Academy of Arts and Sciences, 2015; Lecar Prize, Harvard-Smithsonian Center for Astrophysics, 2018; Thomas Gold Lecturer, Cornell University, 2018; Regents Professor in the Arizona state university system, 2016; Louise Foucar Marshall Science Research Professor, 2016; Galileo Circle Fellow, The University of Arizona, 2010; Distinguished Alumnus, Indian Institute of Technology, Delhi, India, 2006; Kavli Frontiers of Science Fellow, National Academy of Sciences, 2000; Harold C. Urey Prize, American Astronomical Society 1997; Asteroid 6698 named “Malhotra”, International Astronomical Union, 1997; President’s Gold Medal for Physics, IIT-Delhi, 1983.

TEACHING & MENTORING

600+ students in undergraduate and graduate classes

PhD Dissertations: Ian Matheson 2020–; Jose Daniel Castro-Cisneros 2021–; Youngmin JeongAhn 2015; Kathryn Volk 2013; David A. Minton 2009; Amaya Moro-Martin 2004; Matthew Tiscareno 2004.

Postdocs and other Scholars: Dr. Kathryn Volk 2015–, Dr. Tatiana Michtchenko 2004-2005, Dr. Takashi Ito 2002–2004, 2006, S. Kortenkamp 2001–2003, J.M. Hahn 1997–2000

PROFESSIONAL SERVICE

Chair of the Council of Institutions and Member of the Board of Trustees of Universities Space Research Association, 2020–2022; Director of Theoretical Astrophysics Program–University of Arizona, 2011-2016; + numerous university, national and international academic and research committees, and outreach activities

RESEARCH

120+ peer-reviewed publications, 120+ invited professional presentations.

Selected Recent Publications

Jiao, Y., Cheng, B., ..., Malhotra, R., ..., Asteroid (469219) Kamo‘oalewa’s Intriguing Journey from Lunar Crater Giordano Bruno to Earth 1:1 Resonance, *Nature Astronomy* 8, 819-826 (2024)

Castro-Cisneros, J.D., Malhotra, R., Rosengren, A.J., Orbital pathways for a Lunar-Ejecta Origin of the Near-Earth Asteroid Kamo‘oalewa, *Communications Earth & Environment*, 4:372 (2023)

Malhotra, R., Chen, Z., Non-perturbative investigation of low eccentricity exterior mean motion resonances, *MNRAS*, 521(1), 1253-1263 (2023)

Malhotra, R., Ito, T., Pluto on the Edge of Chaos, *PNAS*, 119(15) e2118692119 (2022)

Reiland, N., Rosengren, A., Malhotra, R., Bombardelli, C., Assessing and Minimizing Collisions in Satellite Mega-Constellations, *Advances in Space Research*, 67(11):3755-3774 (2021)