

James E. Klemaszewski

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Professional Summary

James E. Klemaszewski enjoys a successful career as a creative and approachable leader, educator, writer, and research scientist. During NASA's Galileo Mission to Jupiter, Jim was part of the team that discovered oceans on Jupiter's moons—the first oceans to be discovered in nearly 500 years. Jim, also known as "Klem," has presented scientific results at dozens of conferences in the U.S. and abroad, including as an invited speaker at the Russian Academy of Sciences in Moscow, Cornell University, California Institute of Technology, and other institutions. Klem has been quoted by CNN, NASA HQ, ABC News, and other news outlets worldwide.

As a writer, Klem has been a productive member of the SMS Marketing and Communications team for the past several years, having published nearly 90 articles since 2020. He is a member of The College Development Success Network, working with Lisa Roubal-Brown and the Development team to build strategic relationships with donors. Klem is also part of the newly formed "Outreach Hub" team to develop alumni relations and a philanthropy culture for SMS, representing the Natural Sciences division, that will become a model for The College. This includes working with Michelle Stermole, Senior Director of Public Relations & Strategic Communications on recent donations to SMS with which I have been involved, such as the \$1.3M Dow in-kind donation, and Paul Liddell's estate gift. For many years he has organized Open Door and Homecoming activities for SMS, helped organize Sun Devil Giving Day (the SMS team was recognized for its accomplishments during Sun Devil Giving Day), created Wikipedia pages for SMS and several faculty, edited the SMS newsletter, and participated in a variety of outreach events. Additionally, he has authored and co-authored many news articles, scientific papers, abstracts, encyclopedia articles, books, book chapters, grant proposals, and educational materials. He was responsible for writing and editing daily mission press releases for NASA/Jet Propulsion Laboratory's Galileo Mission to Jupiter and writing a variety of education and outreach materials for NASA, Arizona State University, and Grand Canyon University.

Klem has also been successful in communicating through the visual arts, having press-release images and artwork published on the front page of USA Today, the New York Times, Der Spiegel, and in newspapers around the world. He has provided image products for NASA, the Jet Propulsion Laboratory, the European Space Agency, and numerous professional journals and popular magazines. He has produced work at the request of Sky & Telescope, National Geographic for their Millennium Edition, and by special request for the United States Congress. Other scientific artwork Jim has produced has received attention worldwide, being published by Encyclopedia Britannica, major newspapers, television shows (e.g., the "CBS Evening News," "Farscape," and "Southpark"), internet sites, and was reported on by the BBC. Scientific images Jim created and research to which he contributed are found in many textbooks used in high schools, colleges, and universities globally.

With respect to leadership and management, Klem organized and spoke at educator conferences at NASA Ames and the Jet Propulsion Laboratory on a variety of topics, including volcanoes in the solar system, water in the solar system, and life in the solar system. He received a commendation for his leadership of the Solid-State Imaging team in the project science group for NASA's Galileo Europa Mission. Subsequently, Klem was offered a management position at JPL's Multi-mission Image Processing Laboratory. He served for a time as the Director of Educational Services at the Arizona Science Center and was Associate Professor and Chair of the Department of Science and Mathematics at Grand Canyon University. Currently, Klem is the director of ASU Science is Fun outreach program, and manager of the

SMS demonstration facility. He is a member of The College of Liberal Arts and Sciences Dean's Council to provide input to Dean Kenney, serve as an ambassador to The College, and engage in high-value networking, such as meeting with potential donors and community stakeholders. Klem has also worked with the ASU College Dean's Office and Development Office to help develop the Futures Center and provide input on College initiatives that create opportunities to connect the College, students and business professionals. He has served on several College committees focusing on student success and faculty development. He is active in local communities, supporting education in local schools.

Academic Experience (recent)

- 2007 - present School of Molecular Sciences, Arizona State University
Science writer. Instruction and instructional support of undergraduate chemistry. Development and instruction of first-year success course for majors, including training and mentoring. Development and instruction of peer-mentoring course. Management of instructional demonstration facility. Directing Science is Fun outreach program.
- 1996 - 2007 Dept. of Science and Mathematics, Grand Canyon University
As department chair, responsible for oversight and development of faculty, staff and curriculum. Development of traditional and online courses. Budget management, evaluations, HLC committees, etc. As Associate Professor, instruction and instructional support of science and math courses.

Grants Administrator, *Canyon Institute for Advanced Studies*
Projects Coordinator, *Canyon Institute for Advanced Studies*
Chair, *Greater Phoenix Science and Religion Society*
 Chair meetings & oversee acquisition of high-quality speakers for lecture series
- 1996 - 2002 Dept. of Geology, Arizona State University
As Senior Research Scientist, responsible for coordination of icy-satellite research and development of mission capabilities. Creation of press/image products for ASU, NASA/JPL and special requests for US Congress, State Legislature, National Geographic, Sky & Telescope, USA Today, etc.

Solid State Imaging Team Affiliate, *NASA's Galileo Mission*
 Lead development and implementation of mission planning, based on goals and objectives developed with camera team.

Galileo Education/Outreach Coordinator
 Plan, develop and produce education & outreach materials (print, electronic, live) for/with NASA Galileo Project Office.

EDUCATION

- Ph.D., Department of Geology, "Callistan Surface Modification via Sublimation Erosion coupled with Impact Gardening," abd, Arizona State University
M.N.S., Department of Microbiology, "Microbiological/Geological Age Determination," Arizona State University
B.A., Religious Studies, Southwestern College
A.A.S., Computer Science, State University of New York, Alfred

HONORS and AWARDS

SUN Award, 2022, 2018
Dean's Council, College of Liberal Arts and Sciences, Arizona State University
ASU Mentorship Award, Preparing Future Faculty Program
ASU West Executives in Residence
Associate Fellow in Cosmology & Religion, Canyon Institute of Advanced Studies
Board of Directors, Project Universe; Mindheart Foundation
Letter of Commendation, R. Greeley, Arizona State University
Superior Performance Award, NASA Galileo Mission

Invited lectures

Cornell University
California Institute of Technology
NASA/Jet Propulsion Laboratory
Vernadsky Institute, Russian Academy of Sciences
Canyon Institute for Advanced Studies
Glendale Community College

Grants & Contracts

2016 Norton Publishing Company
2013 – 2014 Kendall Hunt Publishing
2010 – 2009 McGraw-Hill Publishing
2006 Univentures
2005 – 2003 World Hope Foundation/Kellogg Foundation
2004 Galef Institute
2002 & 2001 NASA/Jet Propulsion Laboratory
2000 Student Challenge Awards Program
1998 LPI Scientist-Teacher Cooperation Grant
1996 NASA Space Grant

Popular Recognition

Magazines (e.g., National Geographic, Sky & Telescope, Scientific American, et al.,)
National and International news media (e.g., NY Times, Wall Street Journal, London Free Press, BBC, ABC News, CNN, et al.)
Requested contributions for National Geographic, Sky & Telescope, NASA/JPL, NASA HQ, U.S. Congress, National Academy of Sciences/National Research Council
Scientific results and images in many science textbooks and professional publications.
Over 100 journal publications, abstracts, and conference presentations

Best pics of jovian moon show odd spires

<http://www.cnn.com/2001/TECH/space/08/23/callisto.pictures/index.html>

Wow, look at that! – The New Solar System

http://news.bbc.co.uk/2/shared/spl/hi/pop_ups/04/sci_nat_enl_1079703723/html/1.stm

<http://news.bbc.co.uk/2/hi/science/nature/1015622.stm>

New Animation Shows How Mars Evolved, Where Water Hides

http://www.space.com/scienceastronomy/solarsystem/mars_tharsis_011009-1.html

Galileo Revisits Jovian Moons

<http://www.scientificamerican.com/article/galileo-revisits-jovian-m/>

Jagged and Bleak - Close-Ups of Jupiter's Moon, Callisto, Reveal Craters and Icy Peaks

<http://abcnews.go.com/Technology/story?id=98308&page=1>

<http://abcnews.go.com/sections/scitech/DailyNews/callisto010823.html>

Additional Achievements

Senior Research Specialist, *Arizona State University*

- Member of research team responsible for discovery of evidence for the existence of an ocean on Jupiter's moon, Europa.
- Member of research team responsible for discovery of large-scale subsurface aquifers on Mars.
- Developed improved understanding of surface processes and compositions on Jupiter's moon, Callisto.
- NASA/Galileo Imaging Team Orbit Lead: Recommendation and implementation of targeting, sequence development, and playback strategies for NASA's Galileo Mission to Jupiter.
- Represent Galileo Solid State Imaging (SSI) Team at NASA/JPL Project Science Group meetings.
- Development of NASA/Galileo press releases and products.
- Development of Educator Slide Sets (Published by NASA/JPL).
- Member, Europa Focus Group (development of future exploration strategies for NASA).
- EPO Officer: Europa Orbiter proposal, Venus Balloon proposal, Mars Scout proposal.
- Organizer and Coordinator, NASA Galileo Project Educator Workshops.
- CA Institute of Technology: Europa Day (live broadcast via television and Internet).

Grants Administrator, Project Coordinator, *Canyon Institute for Advanced Studies*

Chair, *Greater Phoenix Science & Religion Society*, Canyon Institute for Advanced Studies

Lecture Series speakers included:

George F.R. Ellis: Emeritus Distinguished Professor of Complex Systems in the Department of Mathematics and Applied Mathematics at the University of Cape Town in South Africa. Co-author of *The Large Scale Structure of Space-Time* with University of Cambridge physicist Stephen Hawking, published in 1973, and is considered one of the world's leading theorists in cosmology.

Holmes Rolston III: University Distinguished Professor of Philosophy at Colorado State University. He is best known for his contributions to environmental ethics and science and religion.

John C. Polkinghorne: Professor of Mathematical Physics at the University of Cambridge from 1968 to 1979, when he resigned his chair to study for the priesthood, becoming an ordained Anglican priest in 1982. He served as the president of Queens' College, Cambridge from 1988 until 1996. For 25 years, he worked on theories about elementary particles, played a role in the discovery of the quark, and researched the analytic and high-energy properties of Feynman integrals and the foundations of S-Matrix theory.

Peter W. Flint: Professor of Religious Studies and Co-Director of the Dead Sea Scrolls Institute at Trinity Western University in British Columbia. He currently holds the Canada Research Chair in Dead Sea Scrolls studies.

PUBLICATIONS

- 2024, *ASU researchers develop nanodevice for targeted cancer, disease treatment*, James E. Klemaszewski, ASU News
- 2023, *ASU Students to benefit from Barbara and Scott Dow \$1 million laboratory equipment donation to School of Molecular Sciences*, James E. Klemaszewski, ASU News.
- 2023, *School of Molecular Sciences researcher awarded \$1.2M to study coral bleaching mechanisms*, James E. Klemaszewski, ASU News
- 2023, *ASU Online student accepted into PhD program to pursue computational molecular dynamics*, James E. Klemaszewski, ASU News
- 2023, *Success in Graduate School Involves Strategic Career Preparation*, James E. Klemaszewski, SMS LinkedIn.
- 2023, *Eminent ASU scientist Alex Navrotsky to be honored at conferences throughout the year*, James E. Klemaszewski, ASU News
- 2023, *School of Molecular Sciences hosts NSF Research Experiences for Undergraduates program*, James E. Klemaszewski, ASU News
- 2023, *Success in Graduate School Involves Strategic Career Preparation*, James E. Klemaszewski, SMS LinkedIn.
- 2023, *Glaunsinger Innovation Award recipient develops today's most thermally stable 3D printing polymer*, James E. Klemaszewski, ASU News
- 2023, *ASU student receives NSF Graduate Research Fellowship for DNA origami research*, James E. Klemaszewski, ASU News
- 2023, *ASU SMS alumnus, now Yale professor, offers keys to success*, James E. Klemaszewski, SMS LinkedIn
- 2023, *Researcher wins \$2.6M NIH grant for machine-learning tools aimed at molecular interactions*, James E. Klemaszewski, ASU News
- 2023, *PhD grad hopes to further research on terrestrial air quality, atmospheric expertise at NASA*, James E. Klemaszewski, ASU News
- 2023, *World-renowned researcher Peter Buseck retires after 60 years at ASU*, James E. Klemaszewski, ASU News
- 2023, *ASU graduate lives lessons of leadership, community on path to medical school*, James E. Klemaszewski, ASU News
- 2023, *ASU School of Molecular Sciences researchers provide expertise to Arizona's semiconductor industry*, James E. Klemaszewski, ASU News
- 2023, *From 2 women in department to 35% of faculty: School of Molecular Sciences celebrates growth, impact*, James E. Klemaszewski, ASU News
- 2023, *ASU's first chemistry PhD receives Milton K. Curry education award*, James E. Klemaszewski, ASU News
- 2023, *In memoriam: Emeritus Regents Professor Carleton Moore*, James E. Klemaszewski, ASU News
- 2022, *Graduate overcomes barriers for community*, James E. Klemaszewski, ASU News
- 2022, *Important life lessons learned at ASU*, James E. Klemaszewski, ASU News
- 2022, *Graduating chemistry PhD overcomes doubts to encourage others*, James E. Klemaszewski, ASU News
- 2022, *Award-winning graduate student to launch career after graduation*, James E. Klemaszewski, ASU News
- 2022, *The edge of habitability: Tracking water in the world's driest desert*, James E. Klemaszewski, ASU News
- 2022, *Summer academy provides hands-on STEM experiences for children of migrant farmworkers*, James E. Klemaszewski, ASU News
- 2022, *ASU researchers to address local air-quality concerns*, James E. Klemaszewski, ASU News

2022, *School of Molecular Sciences (Arizona State University)*, James E. Klemaszewski, Wikipedia, Wikimedia Foundation, [School of Molecular Sciences \(Arizona State University\) - Wikipedia](#)

2022, *8 students from across the country contribute to sustainability research at ASU*, James E. Klemaszewski, ASU News

2022, *Carleton B. Moore*, James E. Klemaszewski, Wikipedia, Wikimedia Foundation, [Carleton B. Moore - Wikipedia](#)

2022, *ASU Online students' startup organization grows to become one of the largest university clubs*, James E. Klemaszewski, ASU News

2022, *Glaunsinger Innovation Award recognizes School of Molecular Science graduate students for entrepreneurship*, James E. Klemaszewski, ASU News

2022, *Peter R. Buseck*, James E. Klemaszewski, Wikipedia, Wikimedia Foundation, [Peter R. Buseck - Wikipedia](#)

2022, *ASU professor, students advance ecologically responsible chemistry*, James E. Klemaszewski, ASU News

2022, *ASU researchers patent a new industrial-scale chemical method using geomimicry*, James E. Klemaszewski, ASU News

2022, *School of Molecular Sciences celebrates 45 'Moore' years*, James E. Klemaszewski, ASU News

2022, *George R. Pettit*, James E. Klemaszewski, Wikipedia, Wikimedia Foundation, [George R. Pettit - Wikipedia](#)

2022, *Ray Carpenter retires after four-decade distinguished career at ASU*, James E. Klemaszewski, ASU News

2022, *ASU grad student wins Innovation Award for sustainable semiconductor coating process*, James E. Klemaszewski, ASU News

2022, *Next-generation laboratory course developed for online chemistry students*, James E. Klemaszewski, ASU News

2022, *Lecturer and ASU alum Gary Cabirac to retire in June*, James E. Klemaszewski, ASU News

2022, *US Navy hospital corpsman completes ASU Online degree en route to medical school*, James E. Klemaszewski, ASU News

2022, *ASU School of Molecular sciences professor receives teaching award*, James E. Klemaszewski, ASU News

2022, *ASU student awarded inaugural carbon capture scholarship*, James E. Klemaszewski, ASU News

2022, *ASU undergrad Lauren Harstad awarded Goldwater Scholarship*, James E. Klemaszewski, ASU News

2022, *DNA repair research has application in disease and cancer treatments*, James E. Klemaszewski, ASU News

2022, *School of Molecular Sciences celebrates the life and sciences of C. Austen Angell*, James E. Klemaszewski, ASU News

2022, *Learn, earn and return: School of Molecular Sciences supports military students*, James E. Klemaszewski, ASU News

2021, *ASU Center for Meteorite Studies named in honor of acclaimed researcher Peter Buseck*, James E. Klemaszewski, ASU News

2021, *In memoriam: Emeritus Professor Sandra Pizzarello*, James E. Klemaszewski, ASU News

2021, *ASU Regents Professor receives prestigious award for excellence in aerosol research, technology*, James E. Klemaszewski, ASU News

2021, *Celebrating ASU history: Carleton Moore, meteorites and moon rocks*, James E. Klemaszewski, ASU News

2021, *In memoriam: Regents Professor George 'Bob' Pettit*, James E. Klemaszewski, ASU News

2021, *Professor's work on polymers recognized through NSF grand and American Chemical Society Award*, James E. Klemaszewski, ASU News

2021, *ASU alum receives prestigious NIH early-career award*, James E. Klemaszewski, ASU News

2021, *ASU researchers develop artificial enzyme to harness light for renewable energy systems*, James E. Klemaszewski, ASU News

2021, *Researchers at ASU's School of Molecular Sciences, Biodesign Institute, Mayo Clinic unravel DNA repair mechanism*, James E. Klemaszewski, ASU News

2021, *ASU student first author on dynamic water-protein interactions research article*, James E. Klemaszewski, ASU News

2021, *ASU researchers collaborate to develop innovative manufacturing for modern industries*, James E. Klemaszewski, ASU News

2021, *School of Molecular Sciences announces Tijana Rajh as new director*, James E. Klemaszewski, ASU News

2021, *Hope for more effective antibiotics comes from ASU research of protein structure, folding and dynamics*, James E. Klemaszewski, ASU News

2021, *Earth's oldest photosynthetic organisms provide insight into clean energy solutions*, James E. Klemaszewski, ASU News

2021, *2 recent promotions in ASU's School of Molecular Sciences poised to have positive impact on growing number of students*, James E. Klemaszewski, ASU News

2021, *ASU online program helps Navy veteran pursue lifelong dream*, James E. Klemaszewski, ASU News

2021, *Inclusion, diversity focus of School of Molecular Sciences JEDI Grant Award*, James E. Klemaszewski, ASU News

2021, *Faculty promotion announced in the School of Molecular Sciences*, James E. Klemaszewski, ASU News

2021, *ASU professor Tim Steimle retires after fulfilling career of nearly four decades*, James E. Klemaszewski, ASU News

2021, *Clinical Assistant Professor Ara Austin receives outstanding educator award*, James E. Klemaszewski, ASU News

2021, *Graduating chemistry student's health resulted in passion for science, remarkable accomplishments*, James E. Klemaszewski, ASU News

2021, *Beating detectors at their own game: How to catch a fast molecule in action*, James E. Klemaszewski, ASU News

2021, *Graduating biochemistry senior credits researchers with his drive for success*, James E. Klemaszewski, ASU News

2021, *In memoriam: Associate Research Professional Paul Liddell*, James E. Klemaszewski, ASU News

2021, *ASU researcher Gary Moore exemplifies scientific leadership through energy research*, James E. Klemaszewski, ASU News

2021, *Double-masking the right way*, James E. Klemaszewski, ASU News

2021, *ASU graduating senior inspired to become a doctor through son's illness*, James E. Klemaszewski, ASU News

2021, *U.S. Air Force officer achieves dental school goal with ASU School of Molecular Sciences*, James E. Klemaszewski, ASU News

2021, *School of Molecular Sciences faculty bring attention to diversity, equity, inclusion in academia*, James E. Klemaszewski, ASU News

2021, *ASU researcher unraveling protein structure to understand and fight disease*, James E. Klemaszewski, ASU News

2021, *In memoriam: Emeritus Professor Dennis Lohr*, James E. Klemaszewski, ASU News

2021, *Report on Nighttime Visibility at Westward Look Wyndham Grand Resort and Spa, Tucson, AZ*, James E. Klemaszewski, for the Slavicek Law Firm.

2020, *ASU School of Molecular Sciences graduate shares inspirations*, James E. Klemaszewski, ASU News

- 2020, *School of Molecular Sciences graduate receives Moeur Award*, James E. Klemaszewski, ASU News
- 2020, *School of Molecular Sciences researcher lead rapid COVID-19 test development*, James E. Klemaszewski, ASU News
- 2020, *Distinguished ASU cancer researcher George R. Pettit retires after 55 years of service*, James E. Klemaszewski, ASU News
- 2020, *ASU professor receives Department of Energy Career Award*, James E. Klemaszewski, ASU News
- 2020, *ASU researcher tests face mask efficiency before and after sterilization*, James E. Klemaszewski, ASU News
- 2020, *ASU students benefit from teaching initiative grant*, James E. Klemaszewski, ASU News
- 2020, *Paramedic credits ASU Online for success*, James E. Klemaszewski, ASU News
- 2020, *Graduating ASU seniors publish children's science book*, James E. Klemaszewski, ASU News
- 2020, *Pioneering ASU Regents Professor reflects on legacy after 57 years at University*, James E. Klemaszewski, ASU News
- 2020, *Collaboration and innovation key to delivering molecular science labs online to students*, James E. Klemaszewski, ASU News
- 2020, *Chemical and Biochemical Factors in the Production of High Carbon Dioxide/Low Oxygen Conditions in a Flooded Underground Storage Environment*, James E. Klemaszewski, for the Slavicek Law Firm.
- 2019, *Report on Pedestrian Visibility Distances at 42nd Street and McDonald Drive, Paradise Valley, AZ*, James E. Klemaszewski, for the Slavicek Law Firm.
- 2017, *Outside Science*, James E. Klemaszewski, Arizona State University
- 2017, *Shark Tank: Real-World Skills that Matter*, Arizona State University
- 2016, *Report on Physics of Wind Blowing Box*, James E. Klemaszewski, for the Slavicek Law Firm
- 2016, *Launching the Project of You*, James E. Klemaszewski, Arizona State University.
- 2015, *Career Exploration and Assessment*, James E. Klemaszewski, Arizona State University.
- 2014, *Academic Success: How to Succeed in College*, James E. Klemaszewski, Kendall Hunt Publishing, 212 pp.
- 2014, *The New Commandment*, James E. Klemaszewski, Kendall Hunt Publishing, 190 pp.
- 2007, Callisto, in *Jupiter, the Planet, Satellites and Magnetosphere*, F. Bagenal et al, eds., Cambridge University Press, 748 pp.
- 2005, *The Christian Mind in the World Today: A Worldview Critique*, J.M Boville and J.E. Klemaszewski, Scholargy Press, 103 pp.
- 2004, *Sharing the Skies: Native American and Western Cosmology*, N. Maryboy, D. Begay and J.E. Klemaszewski, Boulder: *World Hope Foundation*, 96 pages.
- 2002, *Correlations of CO₂ and Geology on Callisto*, *J. Geophys. Res. Planets* (in revision), C.A. Hibbitts, J.E. Klemaszewski, T.B. McCord, R. Greeley.
- 2001, *Ancient drainage basin of the Tharsis region, Mars: Potential source for outflow channel systems and putative oceans or paleolakes*, *J. Geophys. Res.* **106**, 32,943-32,955, J.M. Dohm, J.C. Ferris, V.R. Baker, R.C. Anderson, T.M. Hare, R.G. Strom, N.G. Barlow, K.L. Tanaka, J.E. Klemaszewski, D.H. Scott.
- 2001, *Impact features on Europa: results of the Galileo Europa Mission (GEM)*, *Icarus*, **151**, 93-111, Moore, J.M., E. Asphaug, M.J.S. Belton, B. Bierhaus, H.H. Breneman, S.M. Brooks, C.R. Chapman, F.C. Chuang, G.C. Collins, B. Giese, R. Greeley, J.W. Head III, S. Kadel, K.P. Klaasen, J.E. Klemaszewski, K.P. Magee, J. Moreau, D. Morrison, G. Neukum, R.T. Pappalardo, C.B. Phyllips, P.M. Schenk, D.A. Senske, R.J. Sullivan, E.P. Turtle, and K.K. Williams.
- 2001, *Geology of Lofn Crater, Callisto*, *J. Geophys. Res. Planets*, **106**, 3261-3273, R. Greeley, S. Heiner and J.E. Klemaszewski.
- 2000, *Galileo Views of the Geology of Callisto*, *Planetary and Space Science* **48**, 829-853, R. Greeley, J.E. Klemaszewski, R. Wagner and the Galileo Imaging Team.

- 2000, Geologic mapping of Europa, *J. Geophys. Res. Planets* **105**, 22559-22,578, R. Greeley, P.H. Figueredo, D.A. Williams, F.C. Chuang, J.E. Klemaszewski, S.D. Kadel, L.M. Prockter, R.T. Pappalardo, J.W. Head III, G. C. Collins, N.A. Spaun, R.J. Sullivan, J.M. Moore, D.A. Senske, B.R. Tufts, T.V. Johnson, M.J.S. Belton and K.L. Tanaka.
- 2000, The search for current geologic activity on Europa, *J. Geophys. Res. Planets* **105**, 22559-22,578, C.B. Phillips, A.S. McEwen, G.V. Hoppa, S.A. Fagents, R. Greeley, J.E. Klemaszewski, R.T. Pappalardo, K.P. Klaasen, and H.H. Breneman.
- 2000, Callisto, G. Schubert and J.E. Klemaszewski, in *Encyclopedia of Astronomy and Astrophysics*, P. Murdin et al, eds., Institute of Physics Publishing (Nature Publishing Group), 2500 pp in 4 vol.
- 2000, Ganymede, G. Schubert and J.E. Klemaszewski, in *Encyclopedia of Astronomy and Astrophysics*, P. Murdin et al, eds., Institute of Physics Publishing (Nature Publishing Group), 2500 pp in 4 volumes.
- 1999, Mass movement and landform degradation on the icy Galilean satellites: Results of the Galileo nominal mission, *Icarus* **140**, 294-312, J.M. Moore, E. Asphaug, D. Morrison, J.R. Spencer, C.R. Chapman, B. Bierhaus, R.J. Sullivan, F.C. Chuang, J.E. Klemaszewski, R. Greeley, K.C. Bender, P.E. Geissler, P. Helfenstein & C.B. Pilcher.
- 1999, Does Europa have a subsurface ocean? Evaluation of the geological evidence, *J. Geophys. Res. Planets* **104**, 24015-24055, R.T. Pappalardo, M.J.S. Belton, H.H. Breneman, M.H. Carr, C.R. Chapman, G.C. Collins, T. Denk, S. Fagents, P.E. Geissler, B. Giese, R. Greeley, R. Greenberg, J.W. Head, P. Helfenstein, G. Hoppa, S.D. Kadel, K.P. Klaasen, J.E. Klemaszewski, J. Magee, A.S. McEwen, J.M. Moore, W.B. Moore, G. Neukum, C.B. Phillips, L.M. Prockter, G. Schubert, D.A. Senske, R.J. Sullivan, B.R. Tufts, E.P. Turtle, R. Wagner & K.K. Williams.
- 1999, Calibration and Performance of the Galileo Solid State Imaging System in Jupiter Orbit, *Optical Engineering*, **38**, 1178-1199, K. Klaasen, H. Breneman, W. Cunningham, A. Ingersoll, J. Kaufman, J. Klemaszewski, K. Magee, H. Mortensen, A. McEwen, R. Pappalardo, D. Senske, R. Sullivan.
- 1998, Europa: Initial Galileo geological observations, *Icarus*, **135**, 4-24, R. Greeley, R. Sullivan, J. Klemaszewski, K. Homan, J.W. Head III, R.T. Pappalardo, J. Veverka, B. Clark, T.V. Johnson, K. Klaasen, M. Belton, J. Moore, E. Asphaug, M.H. Carr, G. Neukum, T. Denk, C.R. Chapman, C.B. Pilcher, P.E. Geissler, R. Greenberg, and R. Tufts.
- 1998, Galileo Observations of Europa's Opposition Effect, 1998, *Icarus*, **135**, 41-63, P. Helfenstein, N. Currier, B. Clark, J. Veverka, M. Bell, R. Sullivan, J. Klemaszewski, R. Greeley, R. T. Pappalardo, J. W. Head III, T. Jones, K. Klaasen, K. Magee, P. Geissler, R. Greenberg, A. McEwen, C. Phillips, T. Colvin, M. Davies, T. Denk, G. Neukum, and M.J.S. Belton.
- 1998, Large impact features on Europa: Results of the Galileo nominal mission, 1998, *Icarus*, **135**, 127-145, J.M. Moore, E. Asphaug, R.J. Sullivan, J.E. Klemaszewski, K.C. Bender, R. Greeley, P.E. Geissler, A.S. McEwen, E.P. Turtle, C.B. Phillips, B.R. Tufts, J.W. Head III, R.T. Pappalardo, K.B. Jones, C.R. Chapman, M.J.S. Belton, R.L. Kirk, and D. Morrison.
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Abstracts and Conference Presentations:

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Courses Taught (select)

Academic Success (CHM191 First-year experience course for chemistry majors)
Algebra (Intermediate MAT102 and College MAT112)
Astronomy (AST101, AST111, AST112, labs AST113 and AST114; Special Topics AST496)
Biology (BIO100, BIO181 & lab BIO182 & labs)
Calculus (MAT212)
Career Exploration and Assessment (BCH/CHM494)
Chemistry (CHM101, CHM113, CHM116, and labs and recitations)
Disasters and the Environment (GLG110 and lab GLG111)
Ecology (BIO320 and lab)
Geography (GEO111)
Geology (GLG101 and lab GLG103)
Health and Wellness (BIO237)
Histology (BIO433 and lab)
Immunology (BIO345)
Math for Elementary Education (MAT102)
Microbiology (BIO205 and lab)
Organic Chemistry (CHM233, CHM234 and labs; for majors CHM337 and lab)
Peer Mentoring (CHM394)
Photography (PHT205)
Physical Science (PHY121 and lab)
Physics (College PHY111, PHY112 and labs; University PHY115, PHY116 and labs)
Pre-Calculus (MAT245)
Science and Belief (UNV304)
Scientific Communication (SCI301, SCI302)
Volcanoes of Arizona (SCI236)
World Geography (GEO121)
Worldviews (UNV305)
Zoology, Invertebrate (BIO350)
Zoology, Vertebrate (BIO481)