

JAMES A. LEOUS

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Education

- **The Pennsylvania State University** M.S. in Astronomy, 1991
- **Rensselaer Polytechnic Institute** Graduate work in physics
- **The University of Notre Dame** B.S. in Physics, 1984

Professional Experience

- Penn State Information Technology 11/1995 — present
 - Cyberinfrastructure Specialist, Office of Associate CIO for Research 10/2019 — present
 - Evaluate cyberinfrastructure requirements for researchers and connect them with IT providers.
 - Lead the RCCI Emerging Technologies Group to formulate strategies for evolving and novel information technologies.
 - Consult on Penn State Research Network solutions to optimize research data transfers and workflows.
 - Developing an on-boarding guide for new research faculty.
 - Assist research faculty with grant applications, their associated equipment procurement, and data management plans.
 - Business Relationship Manager, Penn State IT 4/2014 — 9/2019
 - Provided a point of focus between Penn State Information Technology and the University research community.
 - Leading a coordinated effort to on-board new research faculty to Penn State
 - Coordinated the inclusion of the ORCID identifier in the Penn State Central Person Registry and Penn State Directory. This involved gathering requirements from Research, the Graduate School, the Graduate Council, Information Technology, and the Penn State Libraries and participating in the process to get the Big Tenn Academic Alliance (BTAA) Institutions into an ORCID consortium.
 - Led outreach efforts to on-board faculty to the Penn State Research Network
 - Group Leader, ITS Emerging Technologies Group 4/2003 — 4/2014
 - Responsible for direction, external communication, and budgeting for the ITS Emerging Technologies Group with a mission to serve all units of ITS in particular and Penn State in general.

- Examined the problem of inter-institutional secure sharing of proposals, results, and data analysis with Web mediated collaborative software.
 - Part of the grant team which implemented a Software Defined Network dedicated to making access to large and real-time data a priority (The Penn State Research Network). I participated in the grant proposal writing, and lead the team which identified use cases, and designed an “on-boarding” process for faculty researchers. The Penn State Research Network is funded in part by the National Science Foundation CC-NIE grant 12-541.
 - Focus on Social Media, Collaborative Software, Storage Solutions, Information Design, Information Security, Cyberinfrastructure, and Research Computing.
 - Mentored employees from the ITS Professional Development Program (PDP).
 - Mentored students from the College of Information Sciences and Technology, College of the Liberal Arts, and South Hills School of Business and Technology.
- Manager, UNIX Systems and Technical Solutions Group 7/1997 — 10/2003
- Managed a group of nine (9) full-time and two (2) part-time programmers, application specialists, and system administrators.
 - Technical Lead and later Project Manager, the Penn State Portal. Guided the technology behind the Penn State Portal eventually leading the project.
 - Liaison between the Center for Academic Computing and the World Campus Technical Team from the beginning of World Campus until 2001.
 - Continued to develop our courses in System Administration, Networking, and Computing for ITS Training Services. Involved most of my team with the delivery of those courses.
 - Developed Dynamic Web Content delivery service which allowed users to create Web applications which accessed databases on the back end.
 - Mentored employees from the ITS Professional Development Program (PDP).
 - Mentored students from the College of Information Sciences and Technology, Smeal College of Business, and South Hills School of Business and Technology.
- Systems Engineer, UNIX Systems Group 11/1995 — 7/1997
- Developed a series of seminars to instruct new system administrators, graduate and undergraduate students in the proper administration of several different Operating Systems. Courses included networking and use of open source software to solve common problems.
 - Developed the Penn State Personal Page server in conjunction with several co-workers.
 - Assisted with licensing and installation of software and operating systems for our Institutional Licensed Software Distribution (ILSD) program.
- Penn State Smeal College of Business 8/1999 — 5/2002
- Adjunct Instructor, Management Science and Information Systems
- Taught or co-taught the senior level System Administration course. Developed the material for the lectures and laboratory sessions. Redesigned the final project. Supervised several students in 1 or 2 credit independent studies.

- Penn State University Earth System Science Center 7/1991 — 10/1995
 - System Administrator

Administered 100+ Sun, Hewlett-Packard, and (4) Silicon Graphics workstations and two Cray supercomputers. Wrote and installed system programs and utilities. Maintained Domain Name Service (DNS) for the College of Earth and Mineral Sciences. Administered a TCP/IP network on Ethernet.
 - Scientific Programmer

Wrote programs to help faculty ingest and visualize their data. Programmed filters for changing data formats and adapting real data to computational models and existing applications.

Profiled existing programs and suggested ways to modify the code to improve them.
 - User Education

Began and managed a weekly class in UNIX commands, utilities, and applications geared toward beginner as well as experienced users.

- Penn State University Department of Astronomy and Astrophysics 8/1986 — 7/1991
 - Radio Continuum Observations of Young Stars

Conducted very sensitive VLA observations of star-forming regions in ρ Ophiuchus and Taurus.
 - Multiwavelength Search for Young Stars

Coordinated archival X-ray observations of isolated molecular regions with optical surveys.
 - Teaching Experience

Taught an introductory course in Astronomy for approximately sixty non-science majors.

Designed and taught an introductory laboratory class for non-science majors.

Assisted with lectures, grading, and observing sessions for Astronomy classes at both the introductory and advanced levels.

Participated in Outreach programs for the Department of Astronomy and Astrophysics on-campus and with the local school district.

Peer Reviewed Publications

- “Finding a Needle in a Haystack: Taxonomies, Tags, and Targets,” Michael Pelikan, James Leous, Richard Pearce, Margaret E. Smith, and Russell Vaught, *Proceedings of the 32nd Annual ACM SIGUCCS Conference on User Services*, Baltimore MD, 2004.
- “A Comparison of CO($J = 1 \rightarrow 0$) and CO($J = 2 \rightarrow 1$) Emission in the Milky Way Molecular Ring,” Chiar, J. E., Kutner, M. L., Verter, F., and Leous, J.A., *The Astrophysical Journal*, Aug 20, 1994.
- “A Rich Cluster of Radio Stars in the ρ Ophiuchi Cloud Cores,” Leous, J. A., Feigelson, E. D., André, Ph., and Montmerle, T., *The Astrophysical Journal*, Oct. 1, 1991.
- “A Rich Cluster of Radio Stars in the ρ Ophiuchi Cloud Cores,” Leous, J. A., Feigelson, E. D., André, Ph., and Montmerle, T., 1989, *Bulletin of the American Astronomical Society*, **21**, 1086.

Invited Presentations

- “Coping Strategies for the Death of Unlimited Storage,” *GlobusWorld 2022*, Bob Flynn, Sarah Baily, James Leous, Christopher Clements, Hellen Zziwa, Chicago, IL, May, 2022.
- “Operating Secure Data Architectures via the Science DMZ Model,” *GlobusWorld 2022*, Jason Zurawski, Michael Benedetto, James Leous, Nathaniel Mendoza, Chicago, IL, May, 2022.
- “Integrating Cloud Storage into Research Workflows,” *Campus Research Computing Consortium*, James Leous, Derek Morr, Jean-Paul Armache, CaRCC Systems-Facing Webinar, March, 2022.
- “Caffeinated Ideas and Ideals: A Highly Decentralized IT Organization’s March toward ‘One IT’ and ‘One ITSM’,” *EDUCAUSE Annual Conference*, Susan Gavazzi, Mark Katsouros, James Leous, Christy Long, Orlando, FL, October, 2014.
- NSF Identity Management Trusted Cyberinfrastructure Meeting, Chicago, IL, August 28–29, 2013.
- CSG Short Workshop on Big Data, *Common Solutions Group Fall Meeting*, Princeton, NJ, September 13, 2012.
- NSF Campus Bridging Technologies Workshop, Chicago, IL, April 7–8, 2010.
- “Gee, I Could Have Had a VO: Cloud-based COmanage,” *CIC CIO TechForum 2009*, Chris Hubing, and James Leous, East Lansing, MI, October 7, 2009.
- “Collaboration 101,” *University of Notre Dame Reunion Seminars*, Notre Dame, IN, June 6, 2009.
- “COmanage: Infrastructure for All Sizes,” *Internet2 Fall Member Meeting*, Heather Flanagan, James Leous, Scotty Logan, New Orleans, LA, October 15, 2008.
- “Closing Panel on Registering, Discovering, and Using Distributed Services in Academia,” *EDUCAUSE/Internet2 Advanced CAMP*, Minneapolis, MN, June 19, 2008.
- “Interinstitutional Cyberinfrastructure: A VO Case Study,” James Leous, *Common Solutions Group*, Ann Arbor, MI, May 14, 2008.
- “Marketing and Communications in Higher Education IT Organizations: Nuances, Challenges, Successes,” Karen M. Hackett and James Leous, *HighEdWebDev 2007*, Rochester, NY, October 14, 2007.
- “Who’s Using my Wiki?”, James Leous, *CIC CIO TechForum 2007*, Indianapolis, IN, October 3, 2007.
- “Preserving the Lore of the Corps: Sustaining a Knowledge Base in the Face of Student Turnover,” Selzer, S., and Leous, J., *ACM SIGUCCS Computer Services Management Symposium*, Savannah, GA, March 27, 2007.
- “Emerging Web Technologies: Building New Connections in Higher Education,” M. Greenfield and J. Leous, *HighEdWebDev 2006*, Rochester, NY, October 22, 2006.
- “A Taxonomic Approach to the Organization of Penn State Web Space,” M. Pelikan, Jin Ma, M. Smith, J. Leous, *Digital Library Federation Fall Forum 2005*, Charlottesville VA, November 7, 2005.
- “Finding a Needle in a Haystack: Taxonomies, Tags, and Targets,” Michael Pelikan, James Leous, Margaret E. Smith, Russell Vaught, and Richard Pearce, *ACM SIGUCCS*, Baltimore MD, October 12, 2004.
- “Federated Identity Management, DCE and Project Liberty,” James Leous, *DCE/DFS Summit*, University Park, PA, August 8, 2002.
- “Implementing PKI or Where’s the I?” James Leous, *DCE/DFS Summit*, University Park, PA, August 8, 2002.

“The Penn State Student Portal — It’s the Content, Stupid!” James Leous, *CIC CIO TechForum 2001*, University Park, PA, October 17, 2001.

“Building a System Administration Lab or Can I Have That?” , James Leous, *UserBlue/SHARE Conference*, Long Beach, CA, February 27, 2001.

Selected Local Presentations

- “Research Data Storage and Transfers,” Douglas Dodson and Jim Leous *Remote Research Webinar Series*, November 20, 2020.
- “Research Data Storage and Transfers,” Greg Madden and Jim Leous *Remote Research Webinar Series*, May 20, 2020.
- “The Penn State Research Network,” Ken Miller and Jim Leous, *ITS Share the Knowledge Conference*, April 29, 2016.
- “ORCID and the Penn State Researcher,” Michelle Hutnik and Jim Leous, *University Research Council presentation*, April 23, 2015.
- “The Value of ORCID to Graduate Education,” *The Graduate Council*, November 12, 2014.
- “The Value of ORCID to Graduate Education,” *Advisory Council on Graduate Education*, November 4, 2014.
- “Everyone Talks About the Weather... Redesigning the Penn State Web Presence,” *The 2012 Penn State Web Conference Workshop*, June 11, 2012.
- “Are We There Yet? – A Mobile/Social Approach to On-line Communication” *Penn State Communicators Meeting*, November 1, 2011.
- “Support for Research & National Identity: A Snapshot,” Jim Leous and Ann West, *Penn State IAM Update*, April 12, 2011.
- Penn State Cyberinfrastructure Days, organizer and moderator, February 1, 2011.
- “Connecting Across Penn State: Using New Technologies to Build Faculty Communities,” A. Linse, W. Mountz, and J. Leous, *2010 TLT Symposium*, March 27, 2010.
- “Cyberinfrastructure and the Read/Write Web,” James Leous and Jeffrey Nucciarone, *2008 Penn State Web Conference*, University Park, PA, June 9, 2008.
- “Marketing and Communications in Higher Education IT Organizations: Nuances, Challenges, Successes,” Karen M. Hackett and James Leous, *2008 Penn State Web Conference*, University Park, PA, June 9, 2008.
- “Panel on Innovations in Teaching and Learning;” James Leous, moderator; *2008 Penn State Teaching and Learning with Technology Symposium*, University Park, PA; March 29, 2008.
- “(Web 2.0 and the Higher Ed Enterprise) 2.0,” C. Camplese and J. Leous, *2007 Penn State Web Conference*, University Park, PA, June 11, 2007.
- “What’s in a Name?,” J. Leous and M. Pelikan, Departmental ID Committee, University Park, PA, March 9, 2007.
- “Web 2.0 and the Higher Ed Enterprise: The Path Less Taken,” Cole Camplese and Jim Leous, *2006 Penn State Web Conference*, University Park, PA, June 13, 2006.
- “Using the Penn State Search Engine (and latest updates, 2006),” Jeff D’Angelo, Jeremy Hill, and Jim Leous, *2006 Penn State Web Conference*, University Park, PA, June 13, 2006.
- “Emerging Web Technologies: Building New Connections in Higher Education,” Mark Greenfield and Jim Leous, *2006 Penn State Web Conference*, University Park, PA, June 12, 2006.
- “Improving the End User Experience with Social Software,” James Leous, *Penn State User Services Conference 2006*, University Park, April 5, 2006.
- “Why Wikis Work,” James Leous, Student Affairs Development Day, University Park, January 27, 2006.
- “Whom Do You Trust?,” Kevin Morooney and James Leous, ITS Forums, University Park, October 18, 2005.
- “Why Wikis are Wacky/Why Wikis Work Well,” James Leous, ITS Forums, University Park, September 30, 2005.
- “Mobile Device Convergence,” Michael Pelikan and James Leous, Library Tech Talk, University Park, September 28, 2005.

- “When the Web Talks Back”, James Leous, Mark Earnest, Corey Riddle, and Michael Bérubé, *2005 Penn State Web Conference*, University Park, PA, June 14, 2005.
- “Taxonomies and Searching”, M. Pelikan, J. Leous, M. Smith, R. Pearce, and R. Vaught, *2005 Web Conference*, University Park, PA, June 13, 2005.
- “LDAP and Directories,” James Leous, AIS Open Forum (POPCORN), University Park, April 21, 2005.
- “Taxonomy of Metadata Tags,” Jim Leous, Richard Pearce, Michael Pelikan, Russell S. Vaught, *2004 Penn State Web Conference*, University Park, PA, June 15, 2004.
- “The Web in Motion,” Jim Leous, John Kalbach, James A. Vuccolo, Stanley Aungst, *2004 Penn State Web Conference*, University Park, PA, June 15, 2004.
- “Content Management Systems Tutorial,” Eric Ferrin, Michael Halm, Jim Leous, Rob Porter, and Dustin Richardson, *2004 Penn State Web Conference*, University Park, PA, June 14, 2004.
- “Getting Content into the Penn State Portal,” Jim Leous and Jim Vuccolo, *2002 Penn State Web Conference*, University Park, PA, May 15, 2002.
- “Building a Portal Framework: The Penn State Student Portal Project,” Jim Vuccolo and Jim Leous, *2001 Penn State Web Conference*, University Park, PA, June 26, 2001.
- “Getting Your Content in the Penn State Student Portal,” Jim Vuccolo and Jim Leous *2001 Penn State Web Conference*, University Park, PA, June 26, 2001.
- “Understanding the Environment and Handling the Load,” Jim Leous and John Kalbach. *1999 Penn State Web Conference*, University Park, PA, May 12, 1999.
- “Closing Panel Discussion: Resources for Webmasters,” Jim Leous, Mimi Ridenour, and Gerry Santoro, *1998 Penn State Web Conference*, University Park, PA, May 11, 1998.

Committee Service

- Research Cyberinfrastructure Advisory Council (RCCI) Executive Committee 2015 — present
- Reimagining IT (RIT) Subject Matter Expert Job Profiles 1/2019 — present
- Reimagining IT (RIT) Pre-planning Committee 10/2018 — 12/2018
- Research Cyberinfrastructure Advisory Council (RCCI) 2015 — present
- RCCI Emerging Technologies Working Group, Co-chair 2019 — 2021
- RCCI Communication and Onboarding, Co-chair 2016 — 2019
- Office 365 Technical Advisory Committee 2018 — 2020
- ITLC New Technology, Opportunities, and Services Committee, chair 2014 — 2106
- BTAA ORCID Working Group 2014 — present
- Penn State Finance and Business Transformation Group 2014 — 2017
- IdS Advisory Group 2013 — 2017
- ITSCollab Steering Committee 2012 — 2017
- Research IT Strategic Planning Group 2012 — 2013
- CIC Data Storage Working Group 2010 — 2015
- IT Assessment Working Group 2010 — 2011
- Penn State IT Leadership Council (ITLC) 2010 — 2018
- ITLC Research Working Group 2011 — present
- Penn State CI Days Organizing Committee 1/2010 — 4/2011
- ITS-ITANA (IT Architects in Academia), Co-chair 9/2007 – 12/2014
- ITS Architectural Review Board (ARB), Co-chair 6/2010 – 12/2014
- Taxonomy of Tags Metadata Committee, Chair 7/2005 — 12/2010
- Taxonomy of Tags Metadata Committee 4/2003 — 12/2010
- Penn State Portal Team 7/2000 — 2006
- Penn State Portal Team, Project Manager 10/2001 — 12/2003
- Departmental Identity 4/2006 — 7/2007
- Committee to Eliminate the Use of the Social Security Number 6/2003 — 3/2005
- World Campus Technology Team 6/1996 — 7/2001
- Network Security Technical Advisory Committee 1993 — 12/2008

- Penn State Computer Emergency Response Team (CERT) 1993 — 12/2005
- Internet 2 Higher Ed PKI Technical Advisory Committee 7/2001 — 7/2003

University Courses Taught

- MIS 445: System Administration (Instructor of Record)
- MIS 496: Independent Studies (Instructor of Record)
- Astronomy 1: The Astronomical Universe (Instructor of Record)
- Astronomy 10: Elementary Astronomy (Instructor of Record)
- Astronomy 11: Elementary Astronomy Lab (Instructor of Record)
- Aerospace 597B/590: An Introduction to Computational Science Tools (Guest Lectures)
- Communications 484: Emerging Telecommunications Technologies (Guest Lectures)

ITS Seminars Developed and Taught

- The Penn State Research Network
- DCE and DFS
- Eating our own Dogfood, ITS New Employee Orientation
- ET, Shibboleth, and Napster, ITS New Employee Orientation
- The Linux Operating System
- Mobile Devices, ITS New Employee Orientation
- Network Distributed Filesystems
- Networking Your UNIX System at Penn State
- Running Your Own Domain Name Server
- Securing a UNIX System
- SGI System Administration
- Social Software
- The Solaris Development Environment
- Solaris Performance Tuning
- Solaris System Administration
- System Backup and Disaster Recovery
- Understanding and Configuring sendmail

- UNIX Development Tools
- UNIX System Security
- Using the Penn State Search Engine, with J. D'Angelo
- Using the Penn State Portal, with J. Vucolo
- Using UNIX Utilities or Why I Love UNIX

Information Technology Experience

- Managed enterprise scale service for e-mail, networked filesystems, identity management systems, and Web applications.
- UNIX System administrator on Sun, SGI, HP, Cray, IBM, Ridge, and Charles River Data Systems machines.
- Extensive experience in information services and servers, including collaborative software.
- Extensive experience in visualization and display of scientific data.
- Operating Systems: SunOS, Solaris, UNICOS, HP-UX, IRIX, AIX, Linux, Mac OS X, and Windows.
- Computer Languages: Proficiency in C, FORTRAN, PostScript, perl, Bash, R, python, and csh.
- Prosci Change Management Practitioner (1/2019)
- Business Relationship Management Professional (BRMP) Certificate: 02357419-01-VL9E

Personal Background

- State College Area School District, Board of School Directors 2009 — 2021.
- Youth Hockey Coach 1992 — 2014.
- USA Hockey Level IV Coach.
- Adviser, Penn State College Democrats 2005 — present.
- Adviser, Penn State Linux Users' Group (LUG) 2001 — 2011.
- State College High School Patrick Y. Wang Technology Innovation Grant Committee.
- Community Volunteer, WPSU-FM.
- Advancement Chair, Scouting BSA (néé The Boy Scouts) Troop 367 2022 — present.
- Precinct Election Board, Centre County, Pennsylvania.
- Nittany Hockey League Board of Directors 1991 — 2000.
- Chair, Penn State UNIX-admin 1992 — 1997.