

CURRICULUM VITÆ – PHILIP L. FRANA

CONTACT INFORMATION

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CURRENT APPOINTMENT

James Madison University, Professor, Department of Interdisciplinary Liberal Studies,
Independent Scholars & Honors College (Summer 2013–present)

James Madison University, located in Harrisonburg, Virginia, is a Carnegie R2 Doctoral public university enrolling over 22,000 students. More than 22% of JMU undergraduates are students of color. The university offers 76 bachelor's degrees, 53 master's degrees, and 8 doctoral degree programs.

PAST APPOINTMENTS

James Madison University, Harrisonburg, VA: Associate Dean, Honors College (2016–2020);
Interim Dean, Honors Program (2014–2015); Associate Director, Honors Program (2013–2014).

University of Central Arkansas, Conway, AR: Director of Undergraduate Research, Schedler
Honors College (2005–2013); Assistant & Associate Professor of Science & Technology Studies
(2004–2013).

University of Minnesota, Charles Babbage Institute, Minneapolis, MN: NSF Project Manager &
Senior Research Fellow (2000–2004).

Complementary Experience

Member, Individualized Major Programs Network Steering Committee (2020–present)

Member, NCHC Diversity Committee (2008–2009, 2018–present)

Member, JMU Graduate School Executive Council (2017–present)

Co-Founder, JMU Independent Scholars (2015–present)

Head of Curriculum & Instruction, JMU Honors College and University Studies (2018–2023)

Vice President, President, and Past President, Virginia Collegiate Honors Council (2018–2021)

Chair, NCHC Two-Year to Four-Year Transfer Committee (2015–2021)

Member, NCHC Program Committee (2007, 2009, 2012–2021)

Academic Unit Head JMU Honors College (2018–2020)

Fellow, JMU Entrepreneurship Fellows (2016–2020)

Member, JMU Faculty Research Council (2014–2020)

Member, JMU Associate Deans Team (2014–2020)

Chair, Honors College Self Study and Academic Program Review (2018–2019)

Member, JMU Provost's Faculty Diversity Council (2017–2018)
Executive Secretary-Treasurer, Southern Regional Honors Council (2011–2017)
Member, JMU Innovation, Creativity, and Collaboration (ICC) Task Force (2015–2016)
Chair, JMU Madison Honors College Strategic Planning Task Force (2014–2015)
Participant, IMPACT³ Professional Leadership Development Program (2014–2015)
Four-Year University Representative, Virginia Collegiate Honors Council (2013–2015)
Interim Dean & Academic Unit Head, JMU Honors College (2014–2015)
Member, JMU University Programs Leadership Council (2014–2015)
Assistant Dean, UCA Honors College (2010–2013)
Member, UCA Retention Committee (2007–2012)
Chair, National Collegiate Honors Council Research Committee (2007–2008)
Chair, National Collegiate Honors Council Technology Committee (2004–2006)
Founding Editor, *The Independent Scholar*
Founding Editor, *Iterations: An Interdisciplinary Journal of Software History* (ISSN 1541–843X)

EDUCATION

Ph.D. History of Technology and Science, Iowa State University, Ames, IA (1999)
M.A. History of Technology and Science, Iowa State University, Ames, IA (1995)
Secondary and Comm Coll Teaching Certification, Iowa State University, Ames, IA
B.A. History and Economics, Wartburg College, Waverly, IA (1991)

RESEARCH

Publications

“Assessing Smart Nation Singapore as an International Model for AI Responsibility,”
International Journal of Responsibility, special issue on ‘AI Responsibility,’
forthcoming.

“Creating a Diverse Honors Faculty Through Collaborative Relationships within the Community
and the University,” *Honors in Practice*, forthcoming.

“What Policy Makers Need to Know About Quantum Information Science,” *Atlantic Council
Issue Brief*, forthcoming.

“The Political Economy of Quantum AI,” in *Convergence: Artificial Intelligence and Quantum
Computing—Applications and Use Cases*, vol. 2, edited by Greg Viggiano, forthcoming
from Wiley.

“Quantum AI in Healthcare,” in *Convergence: Artificial Intelligence and Quantum Computing—
Applications and Use Cases*, vol. 2, edited by Greg Viggiano, forthcoming from Wiley.

“The Digital Devil,” in *The Routledge History of the Devil in the Western Tradition*, forthcoming
from Routledge University Press.

- “How Honors Advising is Different,” introductory chapter in *Advising for Today’s Honors Students* (Lincoln, NE: National Collegiate Honors Council, 2023), 3–30.
- “Honors Mindsets and Motivations,” in *Advising for Today’s Honors Students* (Lincoln, NE: National Collegiate Honors Council, 2023), 55–71.
- “Harnessing the Potential of AI,” *Madison: The Magazine of James Madison University* 46, no. 3 (Fall 2023): 32–39.
- “What Policy Makers Need to Know About Artificial Intelligence,” *Atlantic Council Issue Brief* (June 29, 2023).
- “Demographics, Inc., Computerized Direct Mail, and the Rise of the Digital Attention Economy,” *IEEE Annals of the History of Computing* 45, no. 2 (April-June 2023): 15–28.
- “Quantum Planet Hacking: Quantum AI and Climate Change,” in *Convergence: Artificial Intelligence and Quantum Computing – Social, Economic, and Political Impacts*, vol. 1, edited by Greg Viggiano (Hoboken, NJ: Wiley, 2023), 93–109.
- “What is Quantum Computing?” In *Convergence: Artificial Intelligence and Quantum Computing – Social, Economic, and Political Impacts*, vol. 1, edited by Greg Viggiano (Hoboken, NJ: Wiley, 2023), 221–238.
- “What is Artificial Intelligence?” introductory chapter in *Convergence: Artificial Intelligence and Quantum Computing – Social, Economic, and Political Impacts*, vol. 1, edited by Greg Viggiano (Hoboken, NJ: Wiley, 2023), 239–246.
- “Using Algorithmic Imaginaries and Uncanny Pedagogy to Facilitate Interdisciplinary Research and Digital Scholarship,” *Honors in Practice* 18 (2022): 81–95.
- Encyclopedia of AI: Past, Present, and Future of Artificial Intelligence, Robotics, and Automation* (Santa Barbara, CA: ABC-CLIO, 2021).
- “Telematics and the Early History of International Digital Information Flows,” *IEEE Annals of the History of Computing* 40, no. 2 (April-June 2018): 32–47.
- “Best Practices in Two-Year to Four-Year Honors Transfers,” *Honors in Practice* 13 (2017): 9–20.
- “An Interview with Stephen A. Cook,” *Communications of the ACM* 55, no. 1 (January 2012): 41–46.
- “An Interview with Edsger W. Dijkstra,” *Communications of the ACM* 53, no. 8 (August 2010): 41–47.
- “Implementing Wikis in Honors Courses,” *Journal of the National Collegiate Honors Council* 10, no. 2 (Fall/Winter 2009): 53–56.
- “Medicine and the Family in the 1930s,” in *Great Depression: Peoples and Perspectives*, edited by Hamilton Cravens (Santa Barbara, CA: ABC-CLIO, 2009), 65–84.

“Charles V. Chapin (1856–1941),” “Joshua Lederberg (1925–),” “Mark I,” “Norbert Weiner (1894–1964),” and “SAGE (Semi–Automatic Ground Environment),” in *Research and Discovery: Landmarks and Pioneers in American Science*, ed. Russell Lawson (Armonk, NY: M. E. Sharpe, 2008).

“Honors 2025: The Future of the Honors College,” in *Honors in Practice* 4 (2008): 29–33.

“Automobiles,” “Automotive Technology,” “Canal Boats,” “Locks,” “Minneapolis–St. Paul International Airport,” “Orville Wright,” and “Wilbur Wright,” in *The American Midwest: An Interpretive Encyclopedia* (Bloomington: Indiana University Press, 2006).

“Encryption and Code Breaking” and “Computer-Aided Control Technology,” in *Encyclopedia of 20th-Century Technology*, ed. Colin A. Hempstead (New York: Routledge, 2005).

“Battling Smallpox: State and Local Boards of Health,” *Iowa Heritage Illustrated* 86 (Summer 2005): 61–66.

“A Risk Perceived is a Risk Indeed: Assessing Risk in Biomedical Research and Health Policy,” in *The Social Sciences Go to Washington: The Politics of Knowledge in the Postmodern Age* (New Brunswick, NJ: Rutgers University Press, 2004), 78–109.

“Marion Dorset and Hog Cholera Research in the Biochemic Laboratory of the USDA Bureau of Animal Industry,” *Veterinary History* 12 (Fall 2004): 228–245.

“Before the Web There Was Gopher,” *IEEE Annals of the History of Computing* 26, no. 1 (January–March 2004): 20–41.

“Researching the History of Software: Mining Internet Resources in the ‘Old World,’ ‘New World,’ and the ‘Wild West,’” *Iterations: An Interdisciplinary Journal of Software History* 1 (September 2002): 1–35.

“A Well-Intentioned Query and the Halloween Problem,” *IEEE Annals of the History of Computing* 24, no. 2 (April–June 2002): 86–88.

“Testing Physicians’ Limits: Medical Informatics and Diagnostic Decision-Making,” *CBI Newsletter* 22 (Summer 2000): 4–7.

“Coordinating the Experts and the Masses: The Professions of Health and the Creation of American Community Health, 1915–1940,” Ph.D. diss. Iowa State University, 1999.

“Smallpox: Local Epidemics and the Iowa State Board of Health, 1880–1900,” *Annals of Iowa* 54, no. 2 (Spring 1995): 87–118.

Grants and Contract Projects

JMU Travel Grant to Library of Virginia for research in the Virginia Prohibition Commission Records, \$2,500 awarded (2022)

Website for the Southern Regional Honors Council, \$2,000 awarded annually (2007–2018)

CBI–NSF Computer Security History, \$1,000 awarded under NSF Grant #1116862 (2014)

UCA Challenge Week on Government Corruption, \$4,250 awarded (2010)

Arkansas Student Undergraduate Research Fellowship to study “Gender Styles in Online Academic Communities” \$3,942 awarded for student Amanda Dougherty and mentor Philip Frana (2005)

“Unlocking the Past of IT Privacy and Security,” NEH Reference Materials Grant (\$336,000; primary author; received 5 excellent/must funds, 2004)

“Building a Future for Software History,” NSF Grant #9979981 (\$488,000; awarded 1999)

This project received special commendation for contributions to new research and scholarly communication by the National Science Foundation and the American Institutes for Research in its report to the U.S. Congress.

Institutional Reports

JMU Honors College Annual Reports (Harrisonburg, VA: James Madison University, 2014–2020).

Meeting Students Where They Are: Retaining JMU Students at Risk of “Stopping Out” (Harrisonburg, VA: James Madison University, 2020).

JMU Honors College Academic Program Review: Self-Study Report (Harrisonburg, VA: James Madison University, 2019).

JMU Honors College Strategic Planning Task Force Report (Harrisonburg, VA: James Madison University, 2015).

UCA Honors: A Self Study (Conway, AR: University of Central Arkansas, 2006).

UCA Honors: Strategic Thinking Initiative (Conway, AR: University of Central Arkansas, 2005).

NSF Final Report: Building a Future for Software History (Minneapolis, MN: Charles Babbage Institute, University of Minnesota, 2004).

NSF Interim Report: Building a Future for Software History, Knowledge and Distributed Intelligence Directorate, submitted to Bruce E. Seely, Director, Science, Technology, and Society Directorate, November 5, 2001.

NSF Progress Report: Building a Future for Software History, Knowledge and Distributed Intelligence Directorate, submitted to Bruce E. Seely, Director, Science, Technology, and Society Directorate, November 2, 2000.

Recent Academic Presentations

“A Model for Levels of Autonomy in Technical Communication,” Artificial Intelligence and the Teaching of Technical Communication Conference, Utah Valley University, Orem, UT, March 20, 2024.

- “New Horizons in Teaching Artificial Intelligence to Students from All Majors,” 13th Symposium on Communicating Complex Information (SCCI), Old Dominion University, Norfolk, VA, March 4, 2024.
- “Teaching AI and Ethics in the Interdisciplinary Humanities Classroom,” Society for Ethics Across the Curriculum Conference, Harrisonburg, VA, October 3, 2023.
- “Smart Cities, One World: Singapore’s Response to AI Responsibility,” Terry D. Beitzel Symposium, Gandhi Center, Harrisonburg, VA, September 28, 2023.
- “A First Census of Individualized Postsecondary Programs in the United States,” 14th National Individualized Major Program Conference, 2023.
- “Intellectual Autobiography,” 13th National Individualized Major Program Conference, 2022.
- “Uncanny Simulacra: Pedagogy and Student Artwork as Tools for Interrogating Post-Human Worlds,” Northeast Modern Language Association Convention, 2021.
- “Building a Civic Engagement Foundational Learning Experience: Evolving Partnership of the JMU Honors College and James Madison’s Montpelier,” Engagement for Public Good Conference, 2020.
- “Cultivating Community,” Annual Meeting of the National Collegiate Honors Council, 2020.
- “Agency and Self-Critique: What Some Minority Students Want from Self-Designed Majors, and How They Can Change Individualized Major Programs from Within,” 12th National Individualized Major Program Conference, 2020.
- “Mindsets and Motivation in Honors Advising,” Annual Meeting of the National Collegiate Honors Council, 2019.
- “Helping Individualized Major Students Develop Facility with Complex Concepts,” 11th National Individualized Major Program Conference, 2019.
- “Confessional Narratives on New Honors Colleges,” Annual Meeting of the National Collegiate Honors Council, 2018.
- “Gender Diversity in Honors Recruitment and Retention,” Annual Meeting of the Southern Regional Honors Council, 2018.
- “How Assessment Suggested a Change of Focus for James Madison University’s Independent Scholars Program,” 10th National Individualized Major Program Conference, 2018.
- “Best Honors Administrative Practices in Two-Year to Four-Year Honors Transfers,” Annual Meeting of the National Collegiate Honors Council, 2017.
- “A Second Chance at a First Shot: Collapse, Rebound, and Recovery in Honors College Building,” Annual Meeting of the National Collegiate Honors Council, 2017.
- “Best Practices in Two-Year to Four-Year Honors Transfers,” Annual Meeting of the National Collegiate Honors Council, 2016.

Recent Invited Lectures

- “What is Artificial Intelligence and How Can It Be Used?” Virginia Mennonite Retirement Community, Harrisonburg, VA, June 13, 2024.
- “Deep Tech for Good,” Virginia Federation of National Active and Retired Federal Employees, Harrisonburg, VA, April 9, 2024.
- “Promoting Peace, Education, Economy, and the Environment with Artificial Intelligence,” Rotary International, Harrisonburg, VA, March 11, 2024.
- “AI and Complex Information Systems,” Fundamentals of Information Systems, James Madison University, Harrisonburg, VA, February 12, 2024.
- “Cultivating Trustworthy Open Collections of Human Knowledge,” University of Central Arkansas, Conway, AR, October 17, 2023.
- “Artificial Intelligence as an Interdisciplinary Human Endeavor,” Bridgewater College UTC Symposium, Bridgewater, VA, October 9, 2023.
- “AI/ML: A Year in Review,” Atlantic Council, Washington, DC, March 28, 2023.
- “The Future of Honors Education,” Ball State University, Muncie, IN, February 20, 2023.
- “Honors Creativity,” Developing in Honors Opening Session, Annual Meeting of the National Collegiate Honors Council, New Orleans, LA, November 6–10, 2019.
- “AI and Cognitive Computing: How Close Are We to Building the HAL 9000 Computer from *2001: A Space Odyssey*?” Arthur C. Clarke Foundation and K+L Gates Law Firm, Washington, DC, February 22, 2018.

SERVICE AND MENTORSHIP

Conferences and Workshops

National

- (Co-organizer) National Individualized Major Program Conference, March 14–16, 2024.
- (Co-organizer) National Individualized Major Program Conference, March 15–17, 2023.
- (Co-organizer) Individualized Major Program Conference. Annual Meeting. March 23–25, 2022.
- (Organizer) Six Ways to Teach Creativity in Honors. DIH opening sponsored by Phi Kappa Phi. Annual Meeting of the National Collegiate Honors Council, 2019.
- (Organizer) Honors to Honors: Partnerships between Community Colleges and Four-Year Programs. Annual Meeting of the National Collegiate Honors Council, Chicago, IL, November 12, 2015.

Students in Honors Workshop on Thesis/Capstone Preparation and Planning. Annual Meeting of the National Collegiate Honors Council, Chicago, IL, November 12, 2015.

Students in Honors Workshop on Thesis/Capstone Preparation and Planning. Annual Meeting of the National Collegiate Honors Council, Denver, CO, November 6, 2014.

Keeping the Honors Curriculum Grounded While Serving It Up from the Cloud. Sponsored by the Commonwealth Honors Council, Annual Meeting of the National Collegiate Honors Council, Boston, MA, November 15, 2012.

(Organizer) Four-Year College Curriculum Development. Annual Meeting of the National Collegiate Honors Council, Phoenix, AZ, October 23, 2011.

(Organizer) Approaching Technology from an Honors Perspective. Annual Meeting of the National Collegiate Honors Council, Kansas City, MO, October 24, 2010.

(Organizer) Technology in Honors Education. Annual Meeting of the National Collegiate Honors Council, Washington, DC, November 1, 2009.

(Organizer) Technology in Honors Education. Summer National Workshop at the University of Central Arkansas, co-sponsored with the National Collegiate Honors Council, July 11–14, 2007.

Regional, Specialty, and Local

(Organizer) Virginias Collegiate Honors Council. Spring Meeting, Harrisonburg, VA, April 5–6, 2019.

(Organizer) Virginias Collegiate Honors Council. Fall Meeting, Harrisonburg, VA, Sept. 18–19, 2015.

(Organizer) JMU 499 A–B–C Workshops. 2014–2015.

Technology and History. Northern Great Plains History Conference, Fargo, ND, 2003.

Products of the CBI–NSF Software History Project. Society for the History of Technology Annual Meeting, Computers, Information, and Society SIG, Atlanta, GA, 2003.

(Organizer) The CBI–NSF Software History Project and Its Contribution to Software History. Strategic Planning Meeting on Software and Services History, Palo Alto, CA, 2003.

An Introduction to *Iterations*. Society for the History of Technology Annual Meeting, Computers, Information, and Society SIG, Toronto, Canada, 2002.

Building a Future for Software History. National Science Foundation–Knowledge and Distributed Intelligence Directorate Workshop, New Orleans, LA, 2002.

(Co–Chair) ADAPSO Reunion. Contracts Reference Directory. Washington, DC, 2002.

Web-Based Initiatives of the CBI Software History Project. Society for the History of Technology Annual Meeting, Computers, Information, and Society SIG, San Jose, CA, 2001.

Other Recent Service

Manuscript reviewer for *Agricultural History*, *Annals of Iowa*, *IEEE Annals of the History of Computing*, *Isis*, *Iterations*, *Journal of the National Collegiate Honors Council*, *Policy Studies Journal*, and the National Science Foundation-Science and Technology Studies (NSF-STS) Program.

Honors Search Committees: Director of Honors Advising (member); Director of Student Engagement (chair); Director of Honors College (member); Associate Dean for Diversity, Inclusion and External Engagement (member); Director of Fellowships & Scholarships (member); Honors Assistant Professor (member).

Member, JMU Task Force on Artificial Intelligence (2023–present)
Member, Independent Scholars Self Study and Academic Program Review (2023–present)
Faculty Advisor, Independent Scholars and General Studies programs (2020–present)
Advisor, Independent Scholars student group (2023–present)
Member, JMU Research & Scholarship (R&S) First Year Research Experience (2023–present)
Participant, jmUDESIGN Workshop (2022)
Presenter, First Year & Transfer Summer Springboard for Independent Scholars (2021–present)
Coordinator, IdLS Curriculum & Instruction Committee (2021–present)
Advisor, RegisterJMU student group (2021–present)
Member, JMU New Transfer Advisor Training (2021)
Faculty Expert, JMU Honors Workshop Mock Interviews (2021)
Speaker, JMU Honors Workshop on Independent Scholars Major (2021)
Presenter, JMU Transfer Orientation Fair (2020–present)
Co-chair, Atlantic Regional Honors Council Monthly Planning Meetings (2020–2021)
Chair, Virginias Collegiate Honors Council, Executive Committee (2020–2021)
Chair, Virginias Collegiate Honors Council, Conference Planning Committee (2020–2021)
Member, JMU Research & Scholarships Fellowships Nominating Committee (2020)
Chair, JMU Ad Hoc Advisory Committee on General Studies (2020)

TEACHING

Courses Taught

Interdisciplinary Scholarship
Honors First and Second Year Seminars
Introduction to Western Civilization I & II
Introduction to World Civilizations
Survey of United States History I
Survey of United States History II
Introduction to the History of Technology
and Engineering I
Introduction to the History of Technology
and Engineering II
Art, Technology & Ideas
The Artificial Other: Minds, Machines &
Meaning
The Attention Economy
Service & Civic Engagement
Demystifying Creativity

Cultural Heritage of the Modern World
Darwin's Science & the Darwinian Heritage
Documentary Filmmaking
Science, Pseudoscience & Logical Fallacies
Hacking into the Life Sciences & Medicine
The Past, Present, and Future of eHealth
History of the Life Sciences & Medicine
The Law and the Lawless
Information Technology Law & Lawlessness
Trusting Technology in the Information Age
Empowering Learners & Leaders in the
21st Century
Online, Virtual, and Strange Communities
The Virtual Other
Oral History and the Study of Memory
Capstone Research

Oxford Tutorial
Senior Thesis
Senior Seminar in Global & Future Studies

Graduate Seminar in the History of
Technology, Engineering & Medicine I & II

CURRENT PROFESSIONAL SOCIETY MEMBERSHIPS

American Association of Colleges and Universities
Associates of the Charles Babbage Institute
Association for Computing Machinery
Computing Research Association
Council on Undergraduate Research
Individualized Major Program Network
National Center for Faculty Development & Diversity
National Collegiate Honors Council
Society for Ethics Across the Curriculum
Southern Regional Honors Council
Virginias Collegiate Honors Council