PennState

Director, Artificial Intelligence Initiative

Leadership Profile

April 2021

WittKieffer

Executive Summary

The Pennsylvania State University (Penn State) seeks a visionary and exceptionally collaborative leader to serve as the inaugural director of its Artificial Intelligence Initiative. Applications, inquiries, and nominations are invited.

Penn State is continuing to develop broadly interdisciplinary capabilities in artificial intelligence (AI), where researchers are tackling exceptionally difficult challenges, ranging from fundamental research to application, and within a research environment known for interdisciplinary excellence. Penn State has created a culture of collaboration that is unrivaled, one that motivates novel team science for innovation and impact.

Penn State's strong multi-disciplinary research base in artificial intelligence spans machine learning and expert systems, computational social science, and policy, covering the gamut of fundamental discoveries to translational applications. Penn State's current application areas include radiation oncology, protein translation, human disorders, ethics, transportation, energy, cyber, national security, and more. The opportunity to develop solutions for societal challenges are unbounded.

The director will catalyze university-wide interdisciplinary research for innovation in the broad area of artificial intelligence. The faculty seek a colleague who will connect investigators from diverse backgrounds and unite them in pursuing novel research directions, which will simultaneously advance the field of AI research while increasing recognition of Penn State as a leading university in AI. The new director will help define and create a national identity for interdisciplinary AI research excellence at Penn State and strengthen its reputation. The selected candidate will have the opportunity to engage with donors, sponsors, and outreach activities to grow AI at Penn State more broadly.

The AI director will report to the director of the Institute for Computational and Data Sciences (ICDS) with a secondary reporting relationship to the director of the Social Sciences Research Institute (SSRI), recognizing that AI impacts people, and therefore, that the human dimension of AI should be central to AI research and innovations. Additional oversight will be provided by the Senior Vice President for Research to whom the ICDS and SSRI directors report. This structure will provide the director with administrative and staff support from within the Institutes, and allow the Initiative to have visibility at the highest levels within the University. It also provides a unique opportunity to create programs and research directions at the boundaries of disciplines, capturing diverse perspectives and ensuring the benefits of AI reach across all aspects of society. Penn State consistently ranks among the nation's top 25 public research universities, with fiscal year 2020 research expenditures exceeding $1 billion.

Penn State is a public, land grant, research-intensive university with campuses and facilities throughout Pennsylvania. Founded in 1855, the University has a threefold mission of teaching, research, and public service. Its instructional mission includes undergraduate, graduate, professional, and continuing education offered through resident instruction and online delivery. Annual enrollment at its 24 campuses totals more than 100,000 graduate and undergraduate students, making it one of the largest universities in the United States.

The future director will possess broad intellectual capacities, strong scholarly credentials, leadership expertise and experience, and exceptional communication and interpersonal skills to actualize a

compelling vision and plan for the future of AI research at Penn State. The successful candidate will have a Ph.D. in data science, information technology, computer science, engineering, mathematics, or closely related fields. Candidates from other fields and or professional backgrounds (e.g. government, industry) with relevant academic credentials and substantial experience and technical expertise in AI will also be considered. U.S. citizenship is required.

To submit a nomination or express personal interest in this position, please see the Procedure for Candidacy section at the end of this document.

Opportunities and Expectations for Leadership

The inaugural director of Penn State's Artificial Intelligence Initiative will be expected to:

- **Advance a strategic vision and provide university-wide leadership to catalyze research**

  The inaugural director will develop and advance a bold vision for AI research at Penn State that will propel Penn State into the nation's top echelon of AI programs. AI activity at Penn State takes place across a range of Penn State's Colleges, Campuses, Institutes, and Centers. In collaboration with partners across the University, the director will create and articulate a compelling and unifying vision and strategic direction for the University's AI research, which will enable Penn State to realize fully its excellence in the field. The director will lead the efforts to realize this vision and catalyze new areas of AI research. Initial startup resources to support the new director's vision will be provided by the College of Engineering, College of Information Science and Technology, or other applicable colleges, and by the Office of the Senior Vice President for Research.

- **Build interdisciplinary collaborations across the University**

  Penn State is well-known for its collaborative environment. A recent study points to Penn State as a model for collaboration that works. This spirit is palpable across the University, and the director will embody and model a commitment to collaboration at all levels. The new director will identify and catalyze new interdisciplinary opportunities across the University to advance Penn State's excellence and impact in AI research. The new director will bring together faculty from various disciplines, centers, labs, and institutes to work together on novel research; the director may co-lead, or serve as a collaborator on proposals involving innovative, interdisciplinary, and impactful team science.

  Penn State is home to a vital ecosystem of university-wide interdisciplinary Institutes. The University has invested considerable resources to support the Institutes and incentivize participation of departments, campuses, and colleges in the Institutes through generous funding of core facilities and joint faculty appointments, which are welcome and common. This commitment to interdisciplinary research will enable the University to readily advance a novel AI research portfolio.

  The director will also work in close coordination with the deans and key partners within the various colleges with significant interest in AI activity, including the Colleges of Earth and Mineral Studies, Engineering, Information Science and Technology, and Eberly College of Science.

- **Chair the AI advisory committee**

  The director will chair a newly developed university-wide AI advisory committee. The purpose of the committee is to collaborate in the development of a university-wide vision for AI, advise and strategize around specific initiatives for promoting interdisciplinary and translational AI at Penn State, and maintain strong lines of communication among the many centers and institutes around the University that are involved in AI research and its applications. Membership includes representatives from the Penn State colleges, campuses, centers and institutes focused on AI.

  As chair, the director will convene the committee regularly, identify and prioritize the agenda to focus the committee's work on the most important objectives, organize resources to support the committee's engagement, facilitate constructive dialogue, and ensure follow-through to achieve the committee's goals and realize its vision. The director will lead the committee in a collaborative, inclusive, and transparent way.

- **Identify and pursue new funding opportunities**

  In partnership with campus leaders, the director will work actively to pursue and secure a robust base of funding for Penn State's AI research in alignment with the vision and strategic objectives of the AI Initiative. The director will articulate a compelling and visionary case for support and develop a range of funding priorities that would significantly advance Penn State's leadership in AI. Likewise, the director will engage actively and personally with donors – individual, corporate, and foundation – as well as federal and other sponsors. The director will maintain an active calendar of outreach activities to grow the visibility and prominence of AI at Penn State more broadly. This work is essential to the long-term success of the AI Initiative and will be a high priority for the director.

- **Represent Penn State at AI forums and maintain relationships with key sponsors**

  The director will represent Penn State actively and visibly at AI forums nationally and internationally, including those sponsored by private entities, not-for profit organizations, federal, and other funding agencies and other universities. The director will take a strategic approach to identifying the most important and relevant forums and ensure that Penn State is represented appropriately on planning committees, as speakers and panelists, and as sponsors. The director will ensure that Penn State is exceptionally well-networked in the most important external venues. The director will maintain strong, collaborative relationships with the key sponsors of these activities.

- **Increase AI research directions in collaboration with Penn State's Colleges, Campuses, Institutes, and Centers**

  The inaugural director will lead university-wide interdisciplinary research for innovation in the broad area of artificial intelligence. The director will connect researchers with diverse backgrounds and unite them in pursuing novel ideas, which will simultaneously advance the field of AI research while increasing recognition of Penn State as a leading university in AI.

  The director will operationalize their vision and apply their leadership to develop and advance new AI initiatives and promote ongoing research, including translation of research into science-based

programs, prototype systems, policies, or practices. Working with research commercialization leaders, the successful candidate will engage industry partners, technology transfer, and commercialization.

Professional Qualifications and Personal Qualities

Penn State seeks an inaugural director who possesses broad intellectual insights, exceptional scholarly credentials, and the leadership capacity to actualize a compelling vision and plan for the future of AI research at Penn State.

Successful candidates should have many, if not all, of the following qualifications and qualities:

- **Academic credentials**: a Ph.D. in data science, information technology, computer science, engineering, mathematics, or closely related fields is preferred. Candidates from other fields and professional backgrounds (e.g. government, industry) with relevant academic credentials and with substantial experience and technical expertise in AI will also be considered. Competitive candidates will have exceptional research credibility and will be well-connected in the research community at the national level.
- **Vision**: evidence of a bold vision for AI research; experience in developing and executing a compelling strategic vision and plan in an academic setting or a similar context; the ability to articulate the vision for AI research at Penn State in a compelling way to internal and external constituents;
- **Leadership**: a successful record of administrative leadership gained within an academic, corporate, or governmental context; the ability to lead through influence and by example;
- **Diversity, equity, and inclusion**: a proven record of advancing diversity, equity, and inclusion within an organization;
- **Interdisciplinary focus**: a commitment to interdisciplinary work and wide-ranging intellectual interests;
- **Collaboration**: experience with and appreciation of the challenges and opportunities of interdisciplinary and inter-professional collaboration; the ability to inspire key constituencies to embrace and collaborate to achieve the University's priorities;
- **Resource development**: an enthusiasm for fundraising and resource development and the ability to forge new opportunities for sponsored research, industry partnerships, and philanthropic support;
- **Team building**: the ability to build, lead, and motivate cross-functional teams including faculty, researchers, and administrative staff;
- **Eye for the novel**: the ability to envision, create, and capitalize on novel opportunities for the University; the ability to discern future trends and capitalize on them for the benefit of Penn State;

- **Interpersonal and communication skills**: exceptional relationship building and interpersonal skills; vibrant communication skills; the ability to engage faculty, staff, and students and to work effectively across the campuses and with external groups; and

- **Personal qualities**: entrepreneurial spirit, emotional intelligence, courage, humor, and unquestionable ethics and integrity.

- U.S. citizenship is required.

Appointment

The director position is a full-time, 12-month administrative appointment accompanied by a full-time, tenured appointment as full professor with University benefits. The director reports to the director of the Institute for Computational and Data Science. It is anticipated that the new director will be appointed by July 30, 2021 with a proposed start date of September 2021 or earlier.

About The Pennsylvania State University

Information about Penn State can be found at psu.edu**.**

- Mission and values
- Facts and rankings
- Strategic plan
- Research

Artificial Intelligence at Penn State

The director will collaborate across the University to catalyze and further develop interdisciplinary research for innovation in AI. Key partnerships will take place with the following Colleges, Institutes, and Centers, among others:

- College of Earth and Mineral Sciences
- College of Engineering
    - Data Science Artificial Intelligence
    - Center for Machine Learning and Applications
- College of Information Sciences and Technology
    - Artificial Intelligence and Big Data
      Artificial Intelligence Research Laboratory
- College of Medicine
- College of Science
- Institute for Computational and Data Sciences
- Social Science Research Institute
- Center for Socially Responsible Artificial Intelligence

Other programs of interest:

- Applied Research Laboratory
- Big Data Lab
- The Intelligent Information Systems Research Laboratory
- Nittany AI Alliance
- Smart Systems Research Group

Leadership

Lora Weiss, Ph.D.
Senior Vice President for Research

Lora G. Weiss, Ph.D., was appointed senior vice president for research at The Pennsylvania State University in September 2019. In her role, she is the principal academic and administrative officer for Penn State's Office of Research. Penn State consistently ranks among the nation's top 25 public research universities, with fiscal year 2020 annual research expenditures exceeding $1 billion.

Weiss oversees the research work of eleven academic colleges, seven university-wide interdisciplinary research institutes, a university affiliated research laboratory for the Department of Defense, and offices for sponsored programs, research protections, industry partnerships, technology transfer, innovation, and commercialization.

Prior to serving as senior vice president for research, Weiss spent 13 years at Georgia Tech, where most recently, she was the interim director of the Georgia Tech Research Institute (GTRI). Weiss helped grow GTRI's research portfolio by more than 25% during her final year, exceeding $640 million in sponsored awards during fiscal year 2019 — a new record for GTRI. Prior to Georgia Tech, Weiss spent 16 years working at Penn State's Applied Research Laboratory.

Weiss is an accomplished scientist and educator with more than 30 years of experience in higher education. With a background in robotics and unmanned systems, Weiss has centered her research on advancing the capabilities of unmanned air, ground, sea surface, and undersea vehicles. Weiss served on the Board of Directors for the Association of Unmanned Vehicle Systems International (AUVSI), which is the world's largest unmanned systems organization. She was on the technical advisory board of the National Robotics Technology Consortium. She was an Executive Board Member for NDIA's Undersea Warfare Division; she supported several National Academies' studies; and she supported the Center for New American Security's Future Foundry Task Force. She has been author of a continuous stream of highly regarded journal publications, including her 1994 seminal paper on the cover of the internationally renowned *IEEE Signal Processing* magazine and again in 2011 for her cover story in *IEEE Spectrum*.

In 2014, Weiss was named Regents' Researcher, which is the highest recognition bestowed by the University System of Georgia to research faculty members. In 2012, Weiss received the AUVSI Foundation Award for Academic Champion. In 2012, she also received Georgia's Women in Technology Woman of the Year Award for Medium-Sized Businesses, and in 2013, she received a Letter of Commendation from the Chief of Naval Operations Strategic Studies Group. Weiss also holds a patent for an unmanned underwater vehicle.

Weiss received her Ph.D. in acoustics from Penn State, her masters in mathematics from UCLA, and her bachelors in mathematics from Boston University.

Jenni Evans, Ph.D.
Director, Penn State Institute for Computational and Data Sciences (ICDS)

Mathematics, meteorology — and even music. Jenni Evans, professor of meteorology and atmospheric science, has forged a career by creatively merging research fields, forging interdisciplinary partnerships and leading those partnerships in tackling complex science and society's biggest challenges.

Evans was born in Melbourne, Australia, earning both her undergraduate and doctoral degrees in applied mathematics at Monash University.

Originally a math student, Evans attended a weekend field trip to learn how calculus could be employed in understanding the atmosphere. The experience opened her eyes to a career where she could use her passion for math in a practical and challenging way.

During her doctoral studies at Monash University, Evans spent much of her time at the Bureau of Meteorology Research Centre in Melbourne, Australia, and at the Naval Postgraduate School in Monterey, California. After receiving her doctorate in 1990, Evans joined the Commonwealth Scientific and Industrial Research Organisation (CSIRO) as a research scientist; in 1992 she came to Penn State as an assistant professor.

While at Penn State, Evans has taken on many university-wide leadership roles. Evans served as acting director of both the Penn State Institutes for Energy and the Environment, and the Earth and Environmental Systems Institute. In 2017, she was appointed second director of Penn State's Institute for Computational and Data Sciences (ICDS).

Susan McHale, Ph.D.
Director, Social Science Research Institute

Susan McHale, Distinguished Professor of Human Development and Professor of Demography, is a developmental psychologist with interests in bio-psycho-social processes in human behavior, health and development across the lifespan. Her collaborative research focuses on youth development from childhood through young adulthood. She also studies diversity in the socio-cultural contexts of family dynamics, including how cultural values and practices have implications for family life and family members' well-being in Latinx and Black American families.

McHale received her PhD in Developmental Psychology from the University of North Carolina-Chapel Hill and BA in Psychology from Bucknell University.

State College, PA

State College is a town of 42,224 and is consistently rated as one of the best places to live in Pennsylvania. Also known as Happy Valley, State College hosts friendly, walkable neighborhoods, a safe, vibrant downtown, and the main campus of the world-famous Pennsylvania State University. Occupying 4.56 square miles, with a world-class University in the middle, State College is a pedestrian's paradise, boasting the highest percentage of people who walk and bike to work among Pennsylvania cities. Living in State College offers residents an urban feel and many young professionals live in the town.

State College has a dynamic restaurant scene, a lively nightlife, a local farmer's market, an eclectic mix of retail chains and independent shops, and an abundance of exciting events and festivals. Downtown State College is also home to a vibrant cultural arts district featuring galleries and theaters. In 2017, State College was named the second best city in America for tech startups without the downsides of Silicon Valley by Business Week and the public schools are highly rated.

For more information about State College, see:

- https://www.statecollege.com/
- https://happyvalley.com/about-us/state-college/

Procedure for Candidacy

WittKieffer is assisting The Pennsylvania State University in this search.

All applications, nominations, and inquiries are invited. Applications should include, as separate documents, a CV or resume and a letter of interest addressing the themes in this profile.

For fullest consideration, candidate materials should be received by May 28, 2021 and submitted using WittKieffer's **candidate portal**.

Please direct nominations and inquiries to the WittKieffer consultants supporting this search:

Suzanne Teer and Jessica Herrington
PennStateAIDirector@wittkieffer.com

CAMPUS SECURITY CRIME STATISTICS: For more about safety at Penn State, and to review the Annual Security Report, which contains information about crime statistics and other safety and security matters, please go to http://www.police.psu.edu/clery/, which will also provide you with detail on how to request a hard copy of the Annual Security Report.

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status.

Employment with the University will require successful completion of background check(s) in accordance with University policies.