



Dr. Jeremy Renshaw

ABOUT ME

I am a highly innovative, creative, and motivated leader who enjoys developing people and technologies to solve the challenges our world faces. I have 18 years of industry experience, working at all levels of my organization as well as external energy and technology companies.

EDUCATION:

PhD, Materials Science and Engineering,

Iowa State University, Ames, IA.
Research: Thermal Nondestructive Evaluation (NDE)

Master's, Systems Engineering,

Iowa State University, Ames, IA

B.S., Mechanical Engineering,

Iowa State University, Ames, IA

SKILLS:

- People Management
- AI/ML
- Quantum
- Innovation
- Robotics
- Sensors
- Collaboration
- Multi-lingual
- Public Speaking
- Program Management

WORK EXPERIENCE:

Electric Power Research Institute (EPRI), 2012-present

Senior Technical Executive – AI, Quantum, and Innovation (2022-present)

- Manage AI/ML and quantum efforts across the company.
- Manage innovation activities for EPRI's largest business unit.
- Engage with executives and thought leaders to build collaborations and accelerate innovation adoption & deployment at utilities.

Sr. Manager – Artificial Intelligence (2020-2022)

- Manage company-wide AI efforts including managing AI/ML projects, training, and collaboration across the energy industry.
- Engage with executives and thought leaders via collaboration, conferences, etc. to engage industry, academia, and government.
- Reported to EPRI's Executive Leadership Team and Board of Directors.

Manager – Used Fuel and High-Level Waste Program (2016-2020)

- Led a team of experts & project managers that saved the global nuclear industry billions of dollars by developing technology to address key energy industry issues
- Collaborated with key global organizations to address technical and strategic challenges and first-of-a-kind (FOAK) technologies

Sr. Technical Leader / Project Manager – NDE (2012-2016)

- Organized and led complex, multi-year projects, budgets, personnel, and work to develop inspection solutions to key industry challenges
- Develop FOAK technologies (robotics, advanced sensors, AR, etc.)

AREVA, Inc. (now Framatome) 2009-2012

Global R&D Project Manager / Engineer IV

- Led global R&D projects, personnel, budgets, and directed the scope of work to develop FOAK inspection techniques
- Developed advanced inspection techniques from concept to demonstration and worked with global sales for field deployment

Danfoss, 2005-2009

Engineer – Test Lab, Materials Lab, and New Product Development

(2006-2009), Intern (2005-2006)

- Worked on new product development team, performing failure analysis, data analysis/analytics, and nondestructive evaluation
- Worked with vibration, acoustics, FEA, sensors & signal processing, and modal analysis to identify and resolve issues

Honors/Awards:

- U.S. DOE Secretary of Energy Achievement Award
- 2 EPRI Chauncey Starr Awards (highest award below lifetime achievement)
- 9 EPRI Performance Recognition Awards
- 3 EPRI Technology Transfer Awards
- NEI Outstanding Performance Award
- Public Utilities Fortnightly Under 40
- AREVA Presidential CORE Award
- AREVA Safety Leadership Award
- Lifetime Member of Tau Beta Pi Honor Society

Relevant/Professional Skills:

- Technical Writing – wrote >30 scientific journal articles/conf. papers and >100 company publications.
- Experience with AI/ML, 3D printing, augmented reality, and other emerging technologies.
- Experience designing, building, and testing robotics for specific applications & harsh environments.
- Fluent in English and Portuguese. Basic skills in Spanish, American Sign Language, and French.
- People Management, Project Management, Developing Collaborations, and Public Speaking

Leadership/Volunteer Experience:

- AI and Quantum Executive Committee member (2023-present)
- AI and Quantum Leadership Team Lead (2023-present)
- Quantum Interest Group Lead (2023-present)
- Stanford University Bits & Watts Advisory Committee Member (2021-Present)
- Global Partnership on AI (GPAI) Committee member
- Event Lead/Organizer for
 - 2022 [AI and Electric Power Summit](#) (Rome, Italy)
 - 2021 [AI and Electric Power Summit](#) (Virtual)
 - 2021 [AI and Electric Power Reverse Pitch Event](#) (Virtual)
 - 2021 [Convening AI and Electric Power: A Virtual Roundtable](#)
 - 2021 This is AI: An Introductory Training Course and Expert Panel on AI for Electric Power Experts
- Organizing Committee – PATRAM 2019 (International Conference)
- VEX Robotics Coach (2018-present) – teams qualified for State, National, and World competitions. One team placed 6th at World Competition in 2019 and teams won NC state competitions from 2020-2023.
- Journal Reviewer, multiple journals (2010-present) – technical review of scientific journal articles
- Organizing Committee – Intl. Workshop on the Use of Robotic Technologies at Nuclear Facilities (2016)
- Stake Indexing Director (2012-2018) - led a group of >600 volunteers (grew from 300)
- Elder's Quorum President (2006-8; 2018-22). Led a group of >100 people/families & multiple budgets.
- Volunteer – Engineers without Borders

Selected Invited/Keynote Presentations: (* denotes keynote)

- *AI@DOE Conference (2022) - AI for Smart Grids and Infrastructure Resilience
- *INL AI Symposium (2022) – Data, What is it Good For?
- Eurelectric's Beyond Digital II (2021) – 5 Grand Challenges for the AI and Electric Power Industries
- NRC RIC (2021) – Analytics, Machine Learning, and Artificial Intelligence for Nuclear Power
- Climate Change AI (2021) – CCAI Industry Roundtable
- Earth Summit LA (2021) – AI for the Electric Power Industry

- *INMM (2020) – State of Technology Report for Thermal Modeling, Inspection, Mitigation, Repair, and Aging Management
- MIT CANES (2019) – Inspection and Robotic Delivery System Development for High-Dose Applications
- International Atomic Energy Agency (IAEA) Intl. Conference on the Management of Spent Fuel from Nuclear Power Reactors – Dry Storage Inspection, Mitigation, and Repair
- *Taiwan Power Corporation Used Fuel Management Seminar (2019) – 4 presentations
- *Korea Hydro & Nuclear Power Used Fuel Management Seminar (2019) – 3 presentations
- Institute of Nuclear Materials Management (2018) – Monitoring and Aging Management of Spent Fuel
- NEI Used Fuel Working Group (2018) – High Burnup Demonstration and Thermal Modeling
- *Taiwan Power Corporation Used Fuel Management Seminar (2018) – 3 presentations
- *Korea Hydro & Nuclear Power Used Fuel Management Seminar (2018) – 5 presentations
- IHLRWMC (2017) – Robotic Inspection and Delivery System for Dry Cask Storage Systems
- EPRI Nuclear Power Council (2016) – Novel Applications for Innovative Technologies
- EPRI Board of Directors Meeting (2015) – NDE Modeling, Simulation, and Robotic Development

Selected Journal Publications: [link for full list of publications](#)

- E.L. Wong, J. Renshaw, and J.F. Roy, “Artificial Intelligence and Innovative Technologies for the Modern Learner,” *CONTE*, 2021.
- T. Papamarkou et al., “Automated detection of corrosion in used nuclear fuel dry storage canisters using residual neural networks,” *Nuc. Eng. & Tech.*, 2020.
- J. Renshaw, J.C. Chen, S.D. Holland, and R.B. Thompson, “The sources of heat generation in vibrothermography,” *NDT&E International*, Vol. 44, Issue 8, pp. 736-739, 2011.
- S.D. Holland, and J. Renshaw, “Physics-based image enhancement for infrared thermography,” *NDT&E International*, Vol. 43, Issue 5, 2010.
- J. Renshaw, S.D. Holland, and D.J. Barnard, “Viscous material-filled synthetic defects for vibrothermography,” *NDT&E International*, Vol 42, Issue 8, 2009.
- S.D. Holland, J. Renshaw, and R. Roberts, “Measurement of dynamic full-field internal stresses through surface laser Doppler vibrometry,” *Applied Physics Letters*, Vol. 91, Issue 13, 2007.

Selected EPRI Publications:

- 3002022804 – Five Artificial Intelligence Grand Challenges for the Electric Power Industry
- 3002016034 – Dry Storage System Inspection: Visual, Thermal, and Radiation Dose Measurements
- 3002005255 – Program on Technology Innovation: Muon Imaging for Nondestructive Evaluation
- 3002005256 – Microwave and mm-wave Evaluation of Rubber Expansion Joints and Metallic Materials
- 3002008234 – Dry Canister Storage System Inspection and Robotic Delivery System Development
- 3002005491 – FLEX Hose Aging, Inspection, and Characterization Study
- 3002005461 – UT Through Coatings
- 3002009427 – Low-Cost, High-Resolution Fiber-Optic Sensors for Power Industry Applications
- 3002007790 – Three-Dimensional Imaging and Analysis of Material Defects Using Flash Thermography
- 3002000330 – Noncontact Laser Scanner for Fuel Rod Defect and Wear Measurements

References: Available upon request