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Continuous Improvement in Technology
Conference at Illinois State University

Dr. Emily M. Jones, KNR

- Current Research Projects and Initiatives:
  - District 87 Wellness Collaborative
  - Diversifying the Teacher Pipeline (Recruitment and Retention)
- Provost Fellow, Online and Extended Learning Initiatives 2023-2024
  - Assisted Academic Affairs with strategic and vision-casting for online and extended learning
  - Listening campaigns to gather capacity and infrastructure (existing and needs) - efforts would impact the entire system
  - Currently piloting microcredential and digital badging as mechanisms to diversify adult learner opportunities
- How can tech better serve this work?
  - Inter-disciplinary, -professional, -sector collaboration is key - secure cloud-based collaboration, document sharing and generation, data analysis and dissemination tools
  - Repository of people, knowledge, programs, capacity, needs, etc. to build upon strengths and reduce duplicity
  - General Observation: Software library and knowledge base is not widely known or accessed by faculty researchers.
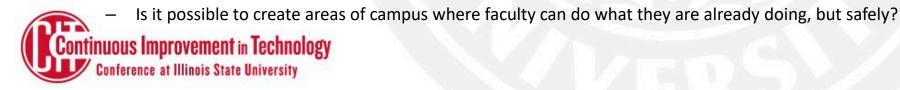
Dr. Sumesh J. Philip, School of IT

- •Research Interests – Intersection of Cybersecurity, IoT/wireless systems, Machine Learning and Artificial Intelligence
- •Access Control in IoT systems
- –IoT ecosystems are diverse and complex; lacks standards and controls
- –Recent research showed weak access controls, and easily compromised devices (networks)
- •IoT Traffic characterization and anomaly detection
- –Traffic patterns are specific to classes of devices; allows ML algorithms to identify device class
- –How to detect anomalies? How to detect specific device within each class?
- •Jailbreaking Large Language Models
- •IT support and resources
- –COTS hardware, Raspberry Pis, open-source software and packages
- –Thank you to all involved!
- –Streamline request-response, point of contact for projects, promote inter-disciplinary research/open problems and repository of past/ongoing projects

Dr. Roy D. Magnuson, WKCFA

- Co-Chair, XR @ ISU in RCAB
- Current XR Projects:
  - State Farm Teen Safe Driver Simulation ($400k+ contract)
  - VENT (Opioid Overdose Simulation) for Apple Vision Pro (ISU/OSF/SIU/IIN)
    - So many "Apple things" to learn/deal with moving forward
- Provost Fellow, Disruptive Technologies 2023-2024
  - Assisted Academic Affairs with response to AI
  - Lots of talks, workshops, ending in forming Committee for the Responsible Use of AI
  - Slow, but good, progress!
- What I have seen/learned from all of this:
  - Communication is key!
  - Is it possible to create areas of campus where faculty can do what they are already doing, but safely?

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RCAB - $2M+ Grant Support

Research Computing Advisory Board

- Red Tape
  - Legal Contracts
  - Software/Hardware purchases
  - CIRBN

- Connect researchers across disciplines and with local champions

- Other campuses & organizations (NERC/MOC Alliance, Internet2, North Western, Boston University, etc.)

- Workforce Development*

- Heavy Foundational Tech hardware/software (funded)
  - eSports*
  - HPC
  - AR/VR
  - DIGGS, Discovery Lab, "Area 51"
  - The "Hyper-Connected Farm" Concept
  - AI + Linux Deep Learners
  - Jupyter Notebooks
  - Lenovo/Microsoft "AI Computers"

- Augmenting startup funds (with OVPR support)
  - Centrally funded equipment
  - Help researchers find Internal funds
  - Funding from grants (IDC, etc.)