

ISEM – Research Projects

Next Generation Enterprises (NGEs)

The NGE Center, located at the Harrisburg University of Science and Technology (HU), is working on many projects with the United Nations and the British Commonwealth on digital transformation of developing countries. Here is a short list of our current areas of work:

- Strategic Planning for Digital Transformation
- Smart Enterprises, Cities and Communities
- Industry 4.0 and Manufacturing 4.0
- Blue Economies (economies based on the Ocean) in Small Islands and Developing States
- Education, Training and Computer Aided Advisory Services for the Underserved Populations
- Computer Aided Planning, Engineering and Management for NGEs
- Disaster Resilience and Management
- eAgriculture and AgTech
- Smart Global Village – a network of
- Many more (stay tuned)

For additional information about these projects, please contact Professor Umar at aumar@harrisburgu.edu.

Fugitive Emissions Abatement Simulation Testbed (FEAST) Tool (NGE Center) – Collaboration with E3 Center

FEAST is a joint project between the Environment, Energy, and Economy (E3) Center and the Next Generation Enterprises (NGE) center at Harrisburg University of Science and Technology. For additional information about FEAST, please contact Mr John Quigley, Director of E3 Center at jquigley@harrisburgu.edu

SIS (Smart Intelligent Systems) Group

The SIS Research group is investigating complex problems afflicting governments, nations, healthcare systems, universities, and businesses using smart and AI systems, and offer sustainable and contextualizable solutions and models. The group will seek research grants that will support its efforts. Its solutions will be made public through publications and presentations. For more information about the SIS Group, please contact Professor Stanley Nwoji at snwoji@harrisburgu.edu or Professor Siamack Aram at Saram@harrisburgu.edu or visit the SIS site at <https://www.harrisburgu.edu/sis-research-group/>.

HUBI (Harrisburg University Business Intelligence Project)

This Project is developing a Data Warehouse that will use different business intelligence (BI) activities. For additional information, please contact Professor Iheb Abdellatif at IAbdellatif@harrisburgu.edu.

Harrisburg University Presidential Research Grants (PRGs)

ISEM Program has received the following HU Grants:

- Smart Disaster Prediction System for Smart Cities (Leaders: Amjad Umar, Iheb Abdellatif, John Quigley)
- Deer-Vehicle Collisions Prevention using Deep Learning Techniques in Pennsylvania (Leaders: Siamak Aram, Roozbeh Sadeghian, Christine Proctor, John Quigley)
- Integration of Optimization and Machine Learning Techniques to assess the Performance of Nursing Homes against Pandemics (Leaders: Ozlem Cosgun, Amjad Umar)