

# Bryan Quinn

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## PROFESSIONAL EXPERIENCE:

### UNIVERSITY of MARYLAND

#### Director of Technical Operations

##### Department of Electrical and Computer Engineering (ECE)

**Dates employed:** March 2006 – Present (Held concurrently with IREAP position below)

##### Responsibilities:

- Oversee the operations, maintenance and advancement of all ECE academic facilities, research laboratories and shared use facilities
- Plan, design and manage construction of new facilities and renovation of existing facilities
- Supervise and coordinate all technical personnel
- Advise faculty and students on projects and with selection of equipment in research and teaching laboratories
- Serve as department Safety Compliance Officer
- Provide Engineering support for all research projects
- Develop and implement access and usage policies for all ECE facilities
- Honors
  - Department of Electrical & Computer Engineering Staff Service Award, 2011
  - College of Engineering Outstanding Staff Service Award, 2014

#### Associate Director for Facilities

##### Institute for Research in Electronics and Applied Physics (IREAP)

**Dates employed:** September 2007 – Present (Held concurrently with ECE position above)

##### Responsibilities:

- Oversee the development, maintenance and advancement of all IREAP facilities and laboratories
- Manage major construction projects of research laboratories and shared use facilities (chemical hoods, cleanrooms, etc) as well as building subsystems (electrical, plumbing, HVAC, etc.)
- Assess needs of Institute, develop and implement facilities that positively affect faculty able to conduct research
- Develop detailed budgets for all projects
- Prepare detailed drawings for projects including electrical, plumbing, HVAC and mechanical systems for installation contractors and UMD Facilities Management shops
- Provide design and prototyping assistance to a wide variety of research laboratories
- Supervise and coordinate all technical and machine shop personnel

#### Principal Investigator

##### Maryland Educational & Sustainable Activities (MESA) Lab

**Dates:** September 2010 – Present

##### Responsibilities:

- Design and construct a unique facility to research alternative power generation methods and improve efficiencies
- Develop methods of teaching alternative energy concepts including solar and wind power generation, power storage, power distribution, efficiencies of different power systems and energy conservation
- Develop community outreach programs to showcase department of Electrical & Computer Engineering, alternative energy concepts and sustainability

#### Responsible Engineer in Charge / Project Manager

##### Solar Village Project / Mutual Disaster Relief / Footprint Project (All NGOs),

##### Bucarabones, Lares & Las Carolinas, Puerto Rico

**Dates:** March 2019 – March 2020

##### Responsibilities:

- Design and implementation of an off grid solar power generation system to provide reliable power for abandoned schools to act as Mutual Aid community centers
- Design and install retro-fit electrical distribution system for multiple buildings
- Train and manage community members and volunteers in electrical installation and construction projects
- Develop maintenance and operations manual for PV power system and train community members

**Engineer / Installation Manager / Mentor**

**Engineers Without Borders (EWB),  
Yabucao, Puerto Rico**

**Dates:** Summer 2018

**Responsibilities:**

- Installation of a solar power generation system to provide reliable back-up power for City's Elder Care Facility
- Instruct UMCP students on solar panel racking design and installation

**Responsible Engineer in Charge / Mentor / Instructor**

**Engineers Without Borders (EWB),**

**Suma Ahenkro, Ghana Solar Power Project**

**Dates:** May 2014 – May 2017

**Responsibilities:**

- Design and implementation of a grid zero solar power generation system to provide reliable power for boarding school serving over 450 students
- Instruct UMCP students on solar power system design
- Develop curriculum for on-site instruction in collaboration with the University of Energy and Natural Resources located in Sunyani, Ghana for University students. Instruct local educators in energy conservation
- Assess and grade student participation in implementation trips for University of Maryland Study Abroad Program
- Honors
  - Recipient, Engineers Without Borders Dedicated Advisor Award, 2015

**Engineer / Mentor / Instructor**

**Maryland Sustainability Engineering,**

**Sierra Leone, School Solar Electrification Project**

**Dates:** August 2011 – Present

**Responsibilities:**

- Instruct students on the design and installation of solar power system with battery storage
- Implement system to provide off grid power and lighting for existing Elementary school in Cabala, Sierra Leone
- Design solar power generation and electrical distribution subsystems as part of construction of a new secondary school
- Assess and grade student participation in implementation trips for University of Maryland Study Abroad Program

**Engineer / Mentor / Instructor**

**Engineers Without Borders (EWB),**

**Compone, Peru Potable Water Project**

**Dates:** January 2009 – May 2011

**Responsibilities:**

- Assess contamination level of natural springs used for potable water supply
- Devise method(s) to chlorinate water in distribution systems
- Instruct students on design and implementation of chlorination methods
- Educate community about technology being installed and methods of intestinal disease prevention
- Work to increase overall quality and quantity of potable water for community
- Develop metrics to assess long term effectiveness of the project
- Assess and grade student participation in implementation trips for University of Maryland Study Abroad Program
- Honors
  - Recipient, Engineers Without Borders Dedicated Advisor Award, 2010

**Electrical Systems Engineer-University of Maryland Electron Ring**

**Institute for Research in Electronics and Applied Physics (IREAP)**

**Dates employed:** May 2001 – March 2006

**Responsibilities:**

- Integrate complex electrical and mechanical systems for Department of Energy-funded project with an annual budget over \$1 million
- Design and prototype electrical subsystems and diagnostics for particle accelerator including but not limited to ultrafast electron beam diagnostics, pulsers and control systems
- Design and maintain ultra-high vacuum and alignment systems as part of experimental apparatus
- Manage facilities construction
- Published in over 25 scientific journals

## **EDUCATION:**

### **University of Maryland**

**Degree:** B.S. Electrical Engineering Graduated: May 2001

- IEEE Outstanding Student Award 2001
- ENES 100 Design Competition-Best Design Team Award 1998
- Eta Kappa Nu Electrical Engineering Honor Society
- Golden Key National Honor Society

### **Kent State University**

**Degree:** B.A. Telecommunications Graduated: December 1990

- George Henkel Memorial Award for student leaderships, KSU 1990
- Journalism Scholarship for radio and television, KSU 1989

### **United States Particle Accelerator School at William & Mary**

Course in Ultra-High Vacuum Techniques

## **CERTIFICATIONS:**

### **Certified Master Project Manager**

American Academy on Project Management

### **XYZ Theodolite Alignment System**

Lieca Geosystems