WORKSHOP ON QUANTUM EDUCATION FOR QUANTUM WORKFORCE DEVELOPMENT

January 29-31, 2023 | Hyatt Centric Arlington | Arlington, VA

SUNDAY, JANUARY 29, 2023 — Judiciary Hall

6:00-8:00pm	Registration & Reception

MONDAY, JANUARY 30, 2023 — Senate Salon A&B

7:45am	Registration & Breakfast Buffet
8:45am	Welcome **Beverly Sanders, University of Florida & Jim Freericks, Georgetown**
	Session 1 – Chair: Beverly Sanders
9:00am	High School Quantum: Challenges and Successes **Karen Jo Matsler, UT Arlington**
9:30am	What we've learned from training 20,000 students globally in QIS **Kiera Peltz, Qubit by Qubit**
10:00am	Bringing QISE to High School Students and Teachers: Challenges and Examples **Mark S. Hannum, American Association of Physics Teachers**
10:30am	Morning Break
	Session 2 – Chair: Jim Freericks
11:00am	Models for teaching for the quantum workforce **Eric Brewe, Drexel University**
11:30am	Student Reasoning about Linear Algebra in Quantum Mechanics **Megan Wawro, Virginia Tech**
12:00pm	SandboxAQ Approach Toward QIST Education **Marianna Bonanome, SandboxAQ**
12:30pm	Lunch Buffet
	Session 3 – Chair: Erik Deumens
1:30pm	Building a Quantum Engineering Undergraduate Program **Lincoln D. Carr, Colorado School of Mines**
2:00pm	Quantum Engineering Degree Programs for the Future National QIS Workforce **Thomas A. Searles, University of Illinois Chicago**
2:30pm	Developing and expanding an interdisciplinary QIST minor at RIT **Ben Zwickl, Rochester Institute of Technology**
3:00pm	Workforce Development in the National Quantum Initiative **Tom Wong, National Quantum Coordination Office, Office of Science and Technology Policy, Executive Office of the President**
3:30pm	Afternoon Break

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	Session 4 – Chair: Chenglong Li
4:00pm	Counting quanta: A radical new approach to the quantum world **T.R.Robinson, University of Leicester, U.K.**
4:30pm	Quantum: (How) To Lead And To Leap! **Marlou Slot, NIST**
5:00pm	QuSTEAM – Breaking through the Quantum Workforce Bottleneck **Russell R. Ceballos, University of Chicago**
5:30pm	Using research-validated learning tools to improve quantum education **Chandralekha Singh, University of Pittsburgh**

TUESDAY, JANUARY 31, 2023 Senate Salon A&B

8:00am	Registration & Breakfast Buffet
	Session 1 – Chair: Jim Freericks
9:00am	National Quantum Literacy Network: Building Quantum Literacy Awareness and Education for Diversity, Equity, Inclusion, and Accessibility to Close the Hyper-Disparity Gap in Quantum Literacy Workforce Development **Timothy A. Akers, National Quantum Literacy Network**
9:30am	Inspiring Youth to Learn about Quantum Technology through an Experiential Approach **Mo Hasanovic, Indian River State College**
10:00am	Building a Quantum Pipeline: Preparing a Diverse Workforce for the Jobs of the Future **Jessica Rosenberg, George Mason University**
10:30am	Morning Break
	Session 2 – Chair: Hai-Ping Cheng
11:00am	A Bridge to Quantum STEM **Adrian German, Indiana University Bloomington**
11:30am	Preparing undergraduate students to enter the quantum workforce through a team project experience **Heather Lewandowski, University of Colorado**
12:00pm	At the intersection of quantum research and engineering: A practitioner's perspective **Justyna Zwolak, NIST**
12:30pm	Lunch Buffet
	Session 3 – Chair: Beverly Sanders
1:30pm	Progress report on K-12 quantum education and learning framework **Emily Edwards, University of Illinois Urbana-Champaign**
2:00pm	Quantum Mechanics without Calculus: Making quantum more accessible for all **James Freericks, Georgetown University**
2:30pm	Investigating students' fluency with quantum ideas in the context of interaction-free experiments **Leanne Doughty, Georgetown University**
3:00pm	The Physics of Quantum Error Correction **Erik Deumens, University of Florida**

Workshop concludes at 3:30pm. Thank you for attending!