



IEEE

*Advancing Technology
for Humanity*

IEEE Integrated STEM Education Conference

Virtual Online Event | Saturday, March 26, 2022



Best Paper Award – Full Papers Category

First Place Certificate

An Interdisciplinary Approach to High School Curriculum Development: Swarming Powered by Neuroscience

Elise Buckley (Johns Hopkins University Applied Physics Laboratory, USA); Joseph D. Monaco (Johns Hopkins University School of Medicine, USA); Kechen Zhang (Johns Hopkins University, USA); Kevin Schultz (JHU/APL, USA); Robert W. Chalmers and Armin Hadzic (Johns Hopkins University Applied Physics Laboratory, USA); Grace M. Hwang (Johns Hopkins Applied Physics Laboratory & National Science Foundation, USA); M. Dwight Carr (Johns Hopkins University Applied Physics Laboratory, USA)

Roger Ding

US Navy
Section Chair
Princeton/Central Jersey

Ashutosh Dutta

JHU/APL
General Co-Chair
IEEE ISEC 2022

Nagi Naganathan

Microsoft
General Co-Chair
IEEE ISEC 2022

Eman Hammad

Univ. of Texas A&M
TPC Co-Chair
IEEE ISEC 2022

Mithun Mukherjee

NUIST
TPC Co-Chair
IEEE ISEC 2022

Wei-hsing Wang

PRISMS
K-12 Posters Chair
IEEE ISEC 2022



IEEE

*Advancing Technology
for Humanity*

IEEE Integrated STEM Education Conference

Virtual Online Event | Saturday, March 26, 2022



Best Paper Award – Full Papers Category

Second Place Certificate

**Adapting a STEM Robotics Program to the Covid-19 Pandemic - a
Validation of the Proposal Presented at ISEC in 2021**

**Neville E. Jacobs (IEEE Baltimore Section, USA);
Eric V Sudano (Eric V. Sudano System Solutions LLC, USA)**

Roger Ding

**US Navy
Section Chair
Princeton/Central Jersey**

Ashutosh Dutta

**JHU/APL
General Co-Chair
IEEE ISEC 2022**

Nagi Naganathan

**Microsoft
General Co-Chair
IEEE ISEC 2022**

Eman Hammad

**Univ. of Texas A&M
TPC Co-Chair
IEEE ISEC 2022**

Mithun Mukherjee

**NUIST
TPC Co-Chair
IEEE ISEC 2022**

Wei-hsing Wang

**PRISMS
K-12 Posters Chair
IEEE ISEC 2022**



IEEE

*Advancing Technology
for Humanity*

IEEE Integrated STEM Education Conference

Virtual Online Event | Saturday, March 26, 2022



Best Paper Award – Full Papers Category

Second Place Certificate

**Developing Surveillance Applications with Raspberry Pi, Django, and
Cloud Services**

Ravi Rao (Fairleigh Dickinson University)

Roger Ding

US Navy
Section Chair
Princeton/Central Jersey

Ashutosh Dutta

JHU/APL
General Co-Chair
IEEE ISEC 2022

Nagi Naganathan

Microsoft
General Co-Chair
IEEE ISEC 2022

Eman Hammad

Univ. of Texas A&M
TPC Co-Chair
IEEE ISEC 2022

Mithun Mukherjee

NUIST
TPC Co-Chair
IEEE ISEC 2022

Wei-hsing Wang

PRISMS
K-12 Posters Chair
IEEE ISEC 2022



IEEE

*Advancing Technology
for Humanity*

IEEE Integrated STEM Education Conference

Virtual Online Event | Saturday, March 26, 2022



Best Paper Award – Full Papers Category **Third Place Certificate**

Integrating Animation and Game-making in Teaching JavaScript

Shuting Xu, Shuhua Lai and Lissa Pollacia (Georgia Gwinnett College, USA)

Roger Ding

US Navy
Section Chair
Princeton/Central Jersey

Ashutosh Dutta

JHU/APL
General Co-Chair
IEEE ISEC 2022

Nagi Naganathan

Microsoft
General Co-Chair
IEEE ISEC 2022

Eman Hammad

Univ. of Texas A&M
TPC Co-Chair
IEEE ISEC 2022

Mithun Mukherjee

NUIST
TPC Co-Chair
IEEE ISEC 2022

Wei-hsing Wang

PRISMS
K-12 Posters Chair
IEEE ISEC 2022



IEEE

*Advancing Technology
for Humanity*

IEEE Integrated STEM Education Conference

Virtual Online Event | Saturday, March 26, 2022



Best Paper Award – Work in Progress First Place Certificate

**Towards the Effective Selection of Guest Speakers within an Introductory
Electrical and Computer Engineering Course**

Henry Griffith (University of Texas at San Antonio, USA);

Jonathan Flores and Ashley Larweck (The University of Texas at San Antonio, USA)

Roger Ding

US Navy
Section Chair
Princeton/Central Jersey

Ashutosh Dutta

JHU/APL
General Co-Chair
IEEE ISEC 2022

Nagi Naganathan

Microsoft
General Co-Chair
IEEE ISEC 2022

Eman Hammad

Univ. of Texas A&M
TPC Co-Chair
IEEE ISEC 2022

Mithun Mukherjee

NUIST
TPC Co-Chair
IEEE ISEC 2022

Wei-hsing Wang

PRISMS
K-12 Posters Chair
IEEE ISEC 2022



IEEE

*Advancing Technology
for Humanity*

IEEE Integrated STEM Education Conference

Virtual Online Event | Saturday, March 26, 2022



Best Paper Award – Work in Progress Second Place Certificate

**Physical Meaning of Digital Signal Processing: What Students May Think
and What They Really Should Know**

Konstantin A. Grebenyuk (Saratov State University, Russia)

Roger Ding

US Navy
Section Chair
Princeton/Central Jersey

Ashutosh Dutta

JHU/APL
General Co-Chair
IEEE ISEC 2022

Nagi Naganathan

Microsoft
General Co-Chair
IEEE ISEC 2022

Eman Hammad

Univ. of Texas A&M
TPC Co-Chair
IEEE ISEC 2022

Mithun Mukherjee

NUIST
TPC Co-Chair
IEEE ISEC 2022

Wei-hsing Wang

PRISMS
K-12 Posters Chair
IEEE ISEC 2022



IEEE

*Advancing Technology
for Humanity*

IEEE Integrated STEM Education Conference

Virtual Online Event | Saturday, March 26, 2022



Best Paper Award – Work in Progress Third Place Certificate

Engineering Project Activities Designed to Promote STEM Engagement

Zachary Dickinson, Tyler Seelnacht and Ramakrishnan Sundaram
(Gannon University, USA)

Roger Ding

US Navy
Section Chair
Princeton/Central Jersey

Ashutosh Dutta

JHU/APL
General Co-Chair
IEEE ISEC 2022

Nagi Naganathan

Microsoft
General Co-Chair
IEEE ISEC 2022

Eman Hammad

Univ. of Texas A&M
TPC Co-Chair
IEEE ISEC 2022

Mithun Mukherjee

NUIST
TPC Co-Chair
IEEE ISEC 2022

Wei-hsing Wang

PRISMS
K-12 Posters Chair
IEEE ISEC 2022