



MARGARET ASHIDA STEM LEADERSHIP AWARD

To honor the memory of Margaret Ashida, the New York State STEM Education Collaborative will honor outstanding individuals with an annual “Margaret Ashida STEM Leadership Award.” Margaret Ashida was an energetic and driven person who was able to create a wave of change through tireless efforts to help develop connections between business, industry, and STEM educational leaders. Her ability to help others network from Pre-K through the university level, through business and industry, not only in New York State, but across the country, helped implement and foster pathways for the development of a national STEM workforce. Her advocacy helped create New York State STEM Hubs. She was able to get New York communities to collaborate in unique ways, fostering the development of STEM career pathways.

Margaret was the Founding Chair for the Empire STEM Learning Network, a state-wide community-led collaborative. She was a board member for the NYS STEM Education Collaborative, a coalition of AMTNYS, NYSSPE, NYSTEEA, and STANYS. The collaborative works to deliver STEM education following the spirit and vision of New York State's MST Frameworks and Learning standards to skillfully and comprehensively address the concerted national cry for STEM Literacy. Margaret is missed, but will be forever remembered for her work ethic, her dedication to excellence, and the friendships she shared with all of those she met.

The Mission of the Empire STEM Learning Network (STEM Hubs): to advance STEM education to prepare all students – regardless of their career goals – for college and career success, to fuel innovation and economic vitality in the Empire State:

“Advance”: to accelerate the growth or progress of a cause

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“STEM education” refers to the interdisciplinary teaching and learning of science, technology, engineering and mathematics, to a level of rigor sufficient to produce critical thinkers and problem solvers across all fields of endeavor who can thrive in the 21st century economy

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The value proposition: innovation and economic vitality

The 2016 MARGARET ASHIDA STEM LEADERSHIP AWARD honorees are:

- **K-12 Education:** Mr. Marvin Cadornigara
- **Pre K-12/Higher Education:** Michelle Kavanaugh, PhD
- **STEM Workforce:** Frank Roma

Committee Chair: Gwendolyn Maturo-Grasso glmaturo@syr.edu www.nysstemeducation.org

Committee: Ellen Falk; Chuck Goodwin; Frank Roma; Joe Vargo; Mark Vaughn; Joe Zawicki

- *Nominated Members were not permitted to score!*

- **2017 Nominations will open in January!**

MARGARET ASHIDA STEM LEADERSHIP AWARD

Pre-K-12 Schools: Mr. Marvin Cadornigara



Mr. Marvin Cadornigara has been doing outstanding work in STEM teaching. He implemented the use of various technologies in his 6th grade Science classes to enhance scientific inquiry and develop new literacies among students. Students use online databases in gathering authentic water quality data (MYSound), collecting mitochondrial DNA data for forensics studies (Bioservers), presenting issues and intervention on endangered species (Arkive), gathering authentic data among global physical events (NOAA), as well as gathering and presenting worldwide climate change data (Climate Change Knowledge Portal); They are creating projects and presentations that are inquiry-based, are supported by research and collaboration, and all address the common core standards; creating models and STEM projects like micro-models and Rube Goldberg experiments; writing laboratory and project reports; analyzing and presenting data using the research capabilities of Google docs, slides, and spreadsheets; incorporating images and videos and identifying locations using Google Earth; creating video clips of environmental investigations; creating stop animation videos and infographics of Science concepts learned in class and in demonstration of scientific processes, such as mitosis, replication, translation and transcription, etc. Mr. Cadornigara employs the flipped learning model in the classroom by creating teaching videos and utilizing interactive websites to challenge students to self-learning at home. He creates original instructional videos available on both his ShowMe and YouTube channels. He invites scientists and resources speakers into the classroom to share their scientific practices to inspire students to pursue STEM careers. He maintains a classroom website called “Mr. Cadornigara’s Project-Based Inquiry Science Class @NEST+m”, where his lesson presentations, project profiles, and outstanding student works are showcased for free digital access.

Since 2012, his students participated in the “Student Spaceflight Experiment Program to the International Space Station”, where they designed experiments to be conducted by astronauts in microgravity aboard the International Space Station during the Mission 3, 4, 5 and 8 programs. Since 2013, his students participated in the yearly ExploraVision competition, with one honorable mention prize in 2014, an honorable mention prize in 2015, and seven honorable mention prizes in 2016. He fielded in 10 team entries to the 2015 Future City Competitions (NYC Finals), where one team from NEST+m won 2nd place, while 3 others won special awards. In 2016, from among ten team entries from NEST+m, one team won 5th place and two others won special awards.

Mr. Cadornigara presented pedagogical successes in integrating information and communication tools into the classroom experiences to other teachers in both local and national conferences. He co-trained a group of teachers in Succaunna NJ in the use of Edmodo as a classroom social media tool in 2015, as well as on separate occasions held in New York City and in Maryland in 2014; shared teaching practices of integrating technology in Science class during the 3rd NYCDOE Schools Technology Summit in 2015 and the 2nd NYCDOE Schools Technology Summit in 2014; served as presenter on Common Core in Science for the CICU in Albany, NY in May 2015; in Boston, MA for the 2014 NSTA conference; during the STANYS Conference in Rochester, NY in November 2015; in numerous conferences with the New York City Writing Project in 2010, 2011, and 2013; during the Science Council of New York City's Annual Conference in 2013, and the NYIT Cyber-Enabled Learning Institute in 2013. In February 2015, he was sent to the Philippines to serve as one of the resource speakers during the country's first National Digital Educator's Summit.

He served as the NEST+m Science department chair for 2009-2010, and Science chair for Middle School for 2013-2014 and 2014-2015; served as K-12 Science Competition, Student Research, and Science Seminar coordinators of NEST+m in 2013-2014 and 2014-2015; facilitated the science seminar series with 20 scientists and STEM practitioners who spoke with NEST+m students on diverse scientific, technological and engineering topics in 2014 and 2015; spearheaded the conduct of the City-Wide Middle School Science Fair for NYC Schools sponsored by NEST+m in 2012, 2013, and 2014 and participated in by various middle school students in the city.

He was recognized as one of the 2014 inaugural Excellence in School Technology Awardees by the NYCDOE in July 2014 and was conferred the Blackboard Awards for Excellence in Education by the Family Magazine and Manhattan Media in June 2015. In fall 2015, Mr. Cadornigara was one of the selected applicant to participate in the NYIT/Stanford SMILE (Stanford Mobile Inquiry-based Learning Environment) research project to use technology to enhance students' critical thinking and scientific inquiry. His creative use of class materials and teaching methods; the development of innovative curricula, materials or class activities; the integration of extracurricular programs; and the involvement of professional organizations to help promote interest and learning in STEM curriculums demonstrate his advocacy and excellence in STEM teaching!

Margaret would have loved seeing this teacher in action: he truly sends out waves of STEM energy in multiple directions in every class!

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Pre-K-12 Schools/Higher Education: Michelle Kavanaugh, PhD



Regarding Michelle's lasting and meaningful contributions to STEM career paths for her WNY community she has excelled greatly. Since 2013, when the WNY HUB was organized she has served as President and has assembled a magnificent organization of education, community and business and industry leaders. She has created a viable effective and very active STEM HUB that should serve as a model for all STEM HUBS. Michelle facilitates different themed STEM connected programs on a monthly basis. This month of May WNY STEM Hub held The WNY STEM /STEAM exposition. Michelle's Organizational infrastructure is impressive, expansive effective and Obviously sustaining.

Beyond the call of duty.... Michelle has also been directly involved with the NYS STEM Education Collaborative with numerous endeavors (NYS Summer STEM Institute Planning Committee, Rubric Committee, Interfacing with Superintendents of Schools, helping to bring in other HUBS into the Collaborative's operation and membership. Michelle has completed many creative and innovative endeavors with STEM education throughout her HUB and region. Her organizational structure is truly impressive on every level. She has pulled together an outstanding steering committee and solid sources of funding that are key for sustainability.

After 11 years as a Superintendent of Schools, and a total of 37 years of service in education, Michelle is retired but continues to support educational leaders and organizations in achieving performance excellence results. She provides consultant services to school districts in the Finger Lakes and Western New York Michelle served on the National Board of Examiners for the Baldrige Award and continues to apply quality practices in her work.

In March of this year she was awarded **Women Touching the World Award:**

Unlimited Possibilities: Overcoming Poverty Ministries, Inc. The award, reflecting National Women's History Month, is bestowed annually to women in Buffalo who strengthen other females in the area of career development, self-esteem, community involvement, culture appreciation and value oriented principles. aligned with the Focus of the UPOP Ministries. The awards program funds a college scholarship program for promising young women. Michelle Kavanaugh worked closely with Margaret Ashida and she emulates many of the leadership qualities that Margaret possessed.

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STEM Workforce: Frank Roma

Frank Roma is an outstanding supporter of STEM education. He is an engineer by trade, and has been a pillar of the New York State STEM Education Collaborative. Frank is dedicated to STEM education; he has worked tirelessly to ensure that the collaborative provides only the highest quality professional development and adheres to the highest standards organizationally.

Frank is a person who sets his mind to a task moves forward to tackle tasks with both enthusiasm and sensitivity to the individuals with whom he is working. I have worked with the task of soliciting, receiving and vetting the conference proposals for the past few years. Frank is always there, ready to help. He is among the first (if not the first) person to vet proposals, noting how many areas (science, technology, the arts, engineering, literacy, and mathematics) each presentation addresses.

Frank has a keen eye for recognizing truly integrated projects (those that cross the boundary of a single subject and wholeheartedly embrace multiple disciplines. From the first conference calls to address “next year’s” program, to careful planning and implementation, to assisting in the communication with presenters and participants, to providing insights into conference evaluation, Frank is always there – quietly voicing his thoughts and impressions, gently guiding the collaborative toward what often develops as our strongest option.

Frank is a jewel in the crown of STEM education, and the NYS STEM Education collaborative. He is an invaluable asset. He deserves our recognition for the heavy lifting he has done to support our goals. Frank epitomizes the kind of STEM Workforce partner Margaret sought after so dearly! Frank is highly deserving of the Margaret Ashida STEM Leadership award for industrial partners.