NSF RESET 2021 Conference
Re-Enter STEM Through Emerging Technology

Thu, March 4 – Sat, March 6, 2021
VIRTUAL

Welcome message from chairs:

Welcome to the 2021 NSF RESET Conference.

The computing and tech industry is projected to grow much faster than other industries over the next 10 years. Some niches within the field are expected to grow job opportunities more quickly than others. Emerging Technology (EmTech) fields like cybersecurity, data science, mobile development, machine learning, and cloud computing will have thousands of jobs in the next decade which will require a large pool of technical people. The field of EmTech can use the largest untapped talent pool of women and returning women to fill the gap in EmTech job sector. Therefore, to understand the barriers and challenges faced by returning women to (re-)enter computing and tech fields, we present to you the 3-day virtual conference, NSF RESET, an NSF INCLUDES Conference.

This conference is a gathering of national experts, scholars, with previous NSF INCLUDES evaluators and PIs, and industry leaders to advance the current state of knowledge and understanding about what will support returning women to (re-)enter the education and professional pipeline especially after a career break. Through this conference, we intend to provide a platform to discuss and suggest recommendations about the individual, programmatic, institutional, evaluation-based, and evidence-based strategies that can enable returning women to (re-)enter the EmTech educational and professional pipeline in greater numbers. We also welcome collaboration opportunities among various stakeholders that can increase knowledge and understanding of re-entry programs and strategic initiatives that are available at local, regional and national level.

We have an all-star lineup of speakers who have worked relentlessly to broaden participation in computing and tech and facilitated a level playing field for women. We have Dr. Karen Marrongelle, Assistant Director (EHR) and Dr. Margaret Martonosi, Assistant Director (CISE) of the National Science Foundation who will be giving opening remarks on Mar 4 and Mar 6 respectively. We have an amazing keynote speaker Josh Davies, CEO of The Center for Work Ethic Development who will talk about strategies for developing essential work ethic skills in next generation women joining tech and computing fields.

We would like to thank all our speakers who have managed time to speak at the conference which will tremendously benefit the attendees and will help us to answer many open questions relevant to the conference theme.

We thank the advisory board members in guiding us develop an amazing conference agenda. We cannot thank enough all the steering committee members who have agreed to chair and moderate

various sessions during the conference, despite of their busy schedule. We would also thank our student volunteers who enliven the conference while making sure all goes smoothly.

We thank our home institutions (Syracuse University and Miami Dade College) for their generous support. We are tremendously grateful for the engagement and support of all the attendees, speakers, workshop facilitators, committee members and volunteers. We thank you, and we hope that NSF RESET will help bring you new ideas, connections, and friends to help us all support (re-)entry of women in emerging technology educational and professional pipeline.

Enjoy the conference!

**Dr. Farzana Rahman
Syracuse University**

**Dr. Elodie Billionniere
Miami Dade College**

Steering Committee:

Dr. Quincy Brown, ABI, CA
Dr. Mikyung Han, University of Texas at Austin, TX
Dr. LaVerne Gray, Syracuse University, NY
Dr. Tanzima Islam, Texas State University, TX
Dr. Idongesit Mkpong-Ruffin, Florida A&M University, FL
Dr. Ida Ngambeki, Purdue University, IN
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Dr. Hyunjin Seo, University of Kansas, KS
Tiana Solis, Florida International University, FL
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Dr. Shekhar Bhansali	Florida International University
Dr. Yesim Darici	Florida International University
Jerry Miller	Florida International University
Dr. Andrea Guzman	Florida Atlantic University
Dr. Quincy Brown	Anita Borg Institute

Student Volunteers:

Kayla Nieto
Season Chowdhury
Isabel Melo
Hannah Erickson
Tasfia Sultana
Mehak Jetly
Vindhya Ravi Prakash
Jaya Tyagi
Can Luo

2021 NSF RESET Conference: Re-Enter STEM through Emerging Technology

Event Schedule

Thu, Mar 04, 2021

12:30pm

Conference Welcome
🕐 12:30pm - 12:55pm, Mar 4

`General`

Meet the PIs of the NSF RESET Grant (NSF #1953431 & NSF #1932662).
They will introduce the conference theme and goal.

All student and faculty scholars: Please attend this session since there will be important reminders.

📢 **Program Co-Chairs**

Dr. Farzana Rahman Associate Teaching Professor, Syracuse University

Elodie Billionniere Associate Professor, Miami Dade College

1:00pm

Reaching the Missing Millions: A Visible Path for Women in STEM
🕐 1:00pm - 1:10pm, Mar 4

`General` `NSF`

Dr. Marrongelle will discuss NSF's goals, roles, and plans to reach the missing/invisible millions in STEM. To ensure that the STEM workforce reflects the diversity of our nation will require doing business differently and modeling successful approaches.

📢 **Speaker**

Dr. Karen Marrongelle Assistant Director, EHR, National Science Foundation

1:15pm

Session 1: Current State of Computing/Tech
🕐 1:15pm - 2:00pm, Mar 4

`ACM TOCE` `Panel` `Parallel`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

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2 Subsessions

- **(PANEL) Equitable Tech: Diversifying the Future of Tech Workforce**
  ⏱ 1:15pm - 2:00pm, Mar 4

- **(ACM TOCE) Exploration of Intersectionality and Computer Science Demographics: Understanding the Historical Context of Shifts in Participation**
  ⏱ 1:15pm - 2:00pm, Mar 4

2:00pm

Break
⏱ 2:00pm - 2:15pm, Mar 4

`General`

You can use this time as a break just to recharge and join next sessions.

2:15pm

Session 2: Curriculum Initiatives
⏱ 2:15pm - 3:00pm, Mar 4

`ACM TOCE` `Panel` `Parallel`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

3 Subsessions

- **(PANEL) Graduate Programs as Path to Re-entry in Emerging Tech Domain**
  ⏱ 2:15pm - 3:00pm, Mar 4

- **(ACM TOCE) Crossing the Bridge to STEM: Retaining Women Students in an Online CS Conversion Program**
  ⏱ 2:15pm - 3:00pm, Mar 4

- **(PANEL) EmTech Education and Skills**
  ⏱ 2:15pm - 3:00pm, Mar 4

3:00pm

Break
⏱ 3:00pm - 3:15pm, Mar 4

`General`

You can use this time as a break just to recharge and join next sessions.

3:15pm

Session 3: Upskilling & Reskilling in EmTech
⏱ 3:15pm - 4:00pm, Mar 4

`Industry` `Panel` `Parallel` `talk`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

3 Subsessions

- **(PANEL) Training the Trainers: Faculty Professional Development for Newer Programs in EmTech**
  ⏱ 3:15pm - 4:00pm, Mar 4

- **(PANEL) Returning Mother's Transition to EmTech Workforce: Challenges and Strategies**

🕐 3:15pm - 4:00pm, Mar 4

- **(TALK) Accenture's Women In Cloud**
  🕐 3:15pm - 4:00pm, Mar 4

4:00pm

Break
🕐 4:00pm - 4:15pm, Mar 4

`General`

You can use this time as a break just to recharge and join next sessions.

4:15pm

Session 4: Non-Traditional Paths to EmTech
🕐 4:15pm - 5:00pm, Mar 4

`ACM TOCE` `Panel` `Parallel`

Please complete your online session survey after each session. Your feedback is very important.

2 Subsessions

- **(TALK) Switching to Tech: Why and How**
  🕐 4:15pm - 5:00pm, Mar 4

- **(ACM TOCE) Arising of Informal Women's Learn-to-Code Communities: Activity Systems as Incubators**
  🕐 4:15pm - 5:00pm, Mar 4

Fri, Mar 05, 2021

1:00pm

Opening Remarks
🕐 1:00pm - 1:10pm, Mar 5

`General`

📢 **Program Co-Chairs**

Dr. Farzana Rahman Associate Teaching Professor, Syracuse University

Elodie Billionniere Associate Professor, Miami Dade College

1:15pm

Session 1: New Initiatives for Tech Diversity
🕐 1:15pm - 2:00pm, Mar 5

`Non-Profit` `Panel` `Parallel`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

2 Subsessions

- **(PANEL) How Universities are Creating New Pathways to Diversify Tech**
  🕐 1:15pm - 2:00pm, Mar 5

- **(PANEL) Non-Profit Organizations Role in Diversifying the Future Tech Workforce**
  🕐 1:15pm - 2:00pm, Mar 5

2:00pm

Break
🕐 2:00pm - 2:15pm, Mar 5

`General`

You can use this time as a break just to recharge and join next sessions.

2:15pm

Session 2: Diverse Routes to EmTech
🕐 2:15pm - 3:00pm, Mar 5

`ACM TOCE` `Industry` `Parallel` `talk`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

3 Subsessions

- **(ACM TOCE) Informal Technology Education for Women Transitioning from Incarceration**
  🕐 2:15pm - 3:00pm, Mar 5

- **(ACM TOCE) Gender Differences in Hackathons as a Non-Traditional Educational Experience**
  🕐 2:15pm - 3:00pm, Mar 5

- **(TALK) Re-imagining Corporate Management Utilizing the Cloud and AI**
  🕐 2:15pm - 3:00pm, Mar 5

3:00pm

Break
🕐 3:00pm - 3:15pm, Mar 5

`General`

You can use this time as a break just to recharge and join next sessions.

3:15pm

Session 3: Tech Re-entry Lessons Learned
🕐 3:15pm - 4:00pm, Mar 5

`ACM TOCE` `Industry` `Panel` `Parallel`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

3 Subsessions

- **(ACM TOCE) Coding Boot Camps: Enabling Women to Enter Computing Professions**
  🕐 3:15pm - 4:00pm, Mar 5

- **(ACM TOCE) After-Hours Learning: Workshops for Professional Women to Learn Web**

Development
🕐 3:15pm - 4:00pm, Mar 5

- **(TALK) Career Breaks in STEM/EmTech: What Do They Mean for Returning to Work?**
  🕐 3:15pm - 4:00pm, Mar 5

4:00pm

Break
🕐 4:00pm - 4:15pm, Mar 5

`General`

You can use this time as a break just to recharge and join next sessions.

4:15pm

Session 4: Women Tech Initiatives
🕐 4:15pm - 5:00pm, Mar 5

`Industry` `Panel` `Parallel` `workshop/lab`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

3 Subsessions

- **(PANEL) AAAS IF/THEN® Ambassadors: Navigating the STEM/Technology workforce**
  🕐 4:15pm - 5:00pm, Mar 5

- **(WORKSHOP) Google #IamRemarkable**
  🕐 4:15pm - 5:00pm, Mar 5

- **(PANEL) Relaunching Careers in Scientific Research and Engineering - How It's Done**
  🕐 4:15pm - 5:00pm, Mar 5

Sat, Mar 06, 2021

10:00am

Brief Remarks on Broadening Participation in CISE
🕐 10:00am - 10:10am, Mar 6

`General` `NSF`

Advances in science are most effective when we are pulling broadly from the Nation's full talent pool. A key aspect of this is recognizing that career pathways are not linear "pipelines" but rather are rich and varied pathways. On behalf of NSF's Computer and Information Science and Engineering (CISE) directorate, Martonosi will offer some example programs and success stories regarding broadening participation in our field and welcoming the "reentry" into research careers from other occupations and other topical disciplines.

📢 **Speaker**

Dr. Margaret Martonosi Assistant Director, CISE, National Science Foundation

10:15am

Announcements

🕐 10:15am - 10:25am, Mar 6

General

📢 **Program Co-Chairs**

Dr. Farzana Rahman Associate Teaching Professor, Syracuse University

Elodie Billionniere Associate Professor, Miami Dade College

10:30am

Work Ethic: The Building Blocks of the 21st Century Workforce
🕐 10:30am - 12:00pm, Mar 6

General Industry Keynote

The COVID pandemic has forever changed the workplace as we know it. Millions of jobs are being lost as others have been radically transformed. While important technical skills are eroding, what the biggest concern employers have are the diminishing soft skills of the emerging workforce. Nearly 9 out of 10 hiring managers in the U.S. report that the lack of these soft skills are THE most important factor in their hiring, and yet less than 20% of today's employees demonstrate these crucial work ethic behaviors on a consistent basis. Even more alarming is that most, if not all, of an employee's on-the-job training is focused on their technical skills. But there is a viable solution to the growing work ethic gap that can improve the employment outcomes for the job seekers we serve.

In this workshop Josh Davies, the CEO of The Center for Work Ethic Development, will provide 5 key strategies for developing these essential work ethic skills. These proven strategies are already being used by leading organizations to improve performance, retention, and job satisfaction. Discover how you can build work ethic, and set yourself and your students up for success in this post-COVID world.

At the end of the presentation, selected attendees will receive a free license voucher to complete the online work ethic certification (and digital certification badge). Notifications will be sent directly to the winners by email within one week after the conference.

📢 **Chair**

Dr. Ida Ngambeki Assistant Professor, Purdue University

📢 **Speaker**

Josh Davies CEO, The Center for Work Ethic Development

12:00pm

Lunch Break
🕐 12:00pm - 1:00pm, Mar 6

1:00pm

Session 1: Emerging Tech A
🕐 1:00pm - 2:30pm, Mar 6

`AI and ML` `Cloud Computing` `Cyber Security` `Data Science` `Industry` `Parallel` `workshop/lab`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

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5 Subsessions

- **(WORKSHOP) Before You Put Hands to Keyboard – Mastering the Tech Interview**
  🕐 1:00pm - 2:30pm, Mar 6

- **(WORKSHOP) Introduction to CI/CD with Google Cloud Build**
  🕐 1:00pm - 2:30pm, Mar 6

- **(WORKSHOP) Introduction to Data Science and Visualization in Healthcare**
  🕐 1:00pm - 2:30pm, Mar 6

- **(WORKSHOP) Cybersercurity**
  🕐 1:00pm - 2:30pm, Mar 6

- **(WORKSHOP) AWS Academy: AWS Lex, build your own ChatBot**
  🕐 1:00pm - 2:30pm, Mar 6

2:30pm

Break
🕐 2:30pm - 2:45pm, Mar 6

`General`

You can use this time as a break just to recharge and join next sessions.

2:45pm

Session 2: Emerging Tech B
🕐 2:45pm - 4:15pm, Mar 6

`AI and ML` `Cloud Computing` `Cyber Security` `Data Science` `Industry` `Parallel` `talk` `workshop/lab`

Reminder: Please complete your online session survey after each session. Your feedback is very important.

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5 Subsessions

- **(WORKSHOP) Winning Virtual Interview Tips**
  🕐 2:45pm - 4:15pm, Mar 6

- **(WORKSHOP) Introduction to Data Science and Visualization in Healthcare**
  🕐 2:45pm - 4:15pm, Mar 6

- **(WORKSHOP) Cybersecurity**
  🕐 2:45pm - 4:15pm, Mar 6

- **(TALK) Z-Inspection®: A Process to Assess Trustworthy AI**
  🕐 2:45pm - 4:15pm, Mar 6

- **(TALK) Secure and Privacy-preserving Data-driven Systems**
  🕐 2:45pm - 4:15pm, Mar 6

4:15pm

Break
🕐 4:15pm - 4:30pm, Mar 6

`General`

You can use this time as a break just to recharge and join next sessions.

4:30pm

Closing Remarks
🕐 4:30pm - 5:00pm, Mar 6

`General`

Meet the PIs of the NSF RESET Grant (NSF #1953431 & NSF #1932662).
The PIs will give closing remarks summarizing the conference.

All student and faculty scholars: Please attend the closing remarks since there will be important announcements for you all.

📢 **Program Co-Chairs**

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