CALL FOR PAPERS
ACM Transactions on Computing Education

Special Issue on Re-Entering Computing through Emerging Technology

Guest Editors: Farzana Rahman & Elodie Billionniere

Submission Deadline March 15, 2020

We are pleased to announce a Special Issue on Re-Entering Computing through Emerging Technology that will be published by the ACM Transactions on Computing Education (TOCE) in 2021. ACM TOCE covers diverse aspects of computing education by publishing papers with a scholarly approach to teaching and learning, a broad appeal to educational practitioners, and a clear connection to student learning. This special issue focuses on the intersection of emerging technology and computing education. It will include a collection of papers presenting empirical and theory-based research that aim to expand the current knowledge base on women’s experiences, their strategies as they navigate computing career pathways, and their challenges in working in computing fields. Preference in the special issue will be given to empirical research addressing how returning and veteran women (re-)enter computing education and the professional pipeline through emerging technology programs.

Aim and Scope

Recruitment, retention, and graduation of women in the computing discipline are critical needs in our nation. Research suggests that women drop out of academic programs and leave the workforce in order to care for their immediate or extended families, financial setbacks, personal obligations and calls to active duty programs. Hence, returning women remain one of the largest untapped talent pools in the nation to fulfill the growing demand of computing jobs. Returning women very rarely choose to pursue computing education or cannot get into the computing profession for various reasons, which include 1) the field of computing is constantly evolving; 2) academic computing degree programs require specific backgrounds; 3) technical skills development can be challenging; 4) there are not enough transitional programs which can leverage the existing background of returning women to develop new knowledge, and 5) the computing industry and academic programs do not have re-entry pathways to prepare returning women for the real world.

We call for practitioners and scholars from a variety of disciplines to submit manuscripts that present innovative solutions for returning women to (re-)enter computing academic degree programs and/or professions after a career break or switching from a different career. This special issue solicits high-quality papers presenting original research results that evaluate any educational intervention and new pathways that have positively impacted women’s re-entry into computing education and careers, and that appeal to a broad audience interested in computing education. These disciplines include (among others) educational cloud computing, mobile application, machine learning, data science, cybersecurity, virtual reality/augmented reality, internet of things, and robotics. We expect papers to report on an empirically validated results, and to use applicable theory to frame the research and interpret the results. Potential topics situate specifically in the context of computing education include, but are not limited to,

- Approaches to new career pathways in emerging technology
- Current knowledge base issues about the experience of (re-)entry into computing fields
- Strategies to navigate computing career pathways and to (re-)enter the computing workforce
- Unique challenges entailed in (re-)entering computing fields after a career break
- Unique challenges entailed in (re-)entering computing academic programs when switching from another discipline
- Unique challenges entailed in (re-)entering computing professions when switching from another career
- Innovative approaches for ground truthing
- Role of bootcamps or informal learning settings in enabling (re-)entering in computing academic programs and professions
- Internship and apprenticeships
- Curricula Initiatives
- Practical learning experience reports
- Accelerated Trainings
- Industry partnerships
- Policy redesigns to enable easier (re-)entry into computing fields
Important Dates

Extended abstracts (up to 1000 words)  March 15, 2020
Decisions on abstracts  April 15, 2020
Full papers due  July 15, 2020
Notification of acceptance  October 15, 2020

Please, see http://toce.acm.org/authors.cfm for additional information about the submission process for the full papers. You can find the Submission Site by selecting "Authors" from the drop-down list. In Step 1, you can select the Type of submission. Make sure you select "Special Issue on RESET".

Authors of selected accepted papers will be invited to present their findings at the NSF RESET Conference, to be held during 7-8 March 2021 in Miami, FL. There will be no cost to register for the conference. Please find more information in the NSF RESET Conference website [https://nsf-conference.github.io/reset/].

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