Introducing the ACM Transactions on Computing Education

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The ACM Transactions on Computing Education (TOCE) represents a name change and a broadening of scope for the ACM Journal on Educational Resources on Computing (JERIC). The topics covered by this new journal will range across diverse aspects of computing education: traditional computer science, computer engineering, software engineering, information technology, and informatics; emerging aspects of computing; and applications of computing to other disciplines, such as computational biology. The common characteristics shared by these articles are a scholarly approach to teaching and learning, a broad appeal to educational practitioners, and a clear connection to student learning.

This marks the inaugural issue of ACM's new *Transactions on Computing Education* (TOCE). Endorsed by the SIGCSE and SIGITE boards, the ACM Education Council, and the ACM Publication Board, this journal represents a name change and a broadening of scope for the ACM *Journal on Educational*

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Resources on Computing (JERIC). In this editorial, we address two questions: why a name change? And what kinds of articles will be published in TOCE?

Why a name change?

JERIC was initiated in 2001 with a focus on educational resources. As Lillian Cassel and Edward Fox state in their inaugural editorial in Spring 2001, "Resources include scholarly articles with wide applicability and potential impact as well as multimedia and visualization works, laboratory materials, and other digital objects of practical use supporting learning in the computing field." One of the key ideas was to use the new media that computing affords in order to expand the notion of scholarly material in teaching beyond the published manuscript.

There have been a number of manuscripts appearing during JERIC's eight years of operation that embody these ideals. These have included Deepak Kumar's editing of two special issues (v4, #2, 3) centered around the use of robotics in computing education; William Yurcik's special issue (v1, #4) on general computer architecture simulators; Holliday's article on "Animation of Computer Networking Concepts" (v3, #2); Koldehofe et al.'s article "LYDIAN: An extensible educational animation environment for distributed algorithms" (v6, #2); and Coelho and Murphy's "ClassCompass: A software design mentoring system."

Yet as important as these tools articles have been (and will continue to be), they represent neither the breadth of topic areas and settings in which computing is taught and learned, nor the range of manuscript that describe educational experience and pedagogical experimentation that is happening in computing education across the globe. In our 30 months as editors-in-chief of JERIC, we have had numerous conversations with our editorial board members, with authors, and with computing educators on the scope of JERIC. One of the consistent themes in these conversations is that a large number of our potential authors do not consider JERIC as a publication venue, believing it to be narrowly focused on computer-based teaching tools. With the name change to TOCE, we appeal to the broad range of computing educators to submit their manuscripts to this new transactions.

What kinds of articles will be published in TOCE?

The topics covered by this new journal will range across diverse aspects of computing education: traditional computer science, computer engineering, software engineering, information technology, and informatics; emerging aspects of computing; and applications of computing to other disciplines, such as computational biology. The common characteristics shared by these articles are a scholarly approach to teaching and learning, a broad appeal to educational practitioners, and a clear connection to student learning.

In addition, we are seeking a broad range of manuscript genres as well, exemplified by the range of genres appearing in this issue. These include a program evaluation by Barker that evaluates and provides recommendations for research experiences for undergraduates; a survey article by Richards

on the design of project-based courses; a research study by Myller et al. on algorithm visualization; and three practice articles (by Caspersen and Kölling, Ocker et al., and Ritzhaupt) that describe, provide the design rationale for, and evaluate particular pedagogical innovations.

TOCE will also publish journal-length articles extended from articles appearing in disciplinary-education conferences (such as the SIGCSE National Symposium) and from education tracks of computing conferences. Special issues will also focus on particular topics, such as computing education in a liberal arts setting.

Our vision for this new *Transactions on Computing Education* is for it to be the premier venue for scholarship in computing education across the entire range of disciplines and sub-disciplines represented by the ACM, and in all of the countries and settings in which computing is being taught and learned. A transactions that provides a forum for the highest quality scholarship in computing education symbolizes and operationalizes the importance that the ACM accords to computing education.