

Preparing Teachers to Teach Computer Science: Models, Practices and Policies
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Request for Contributions

In recent years, there has been interest in increasing access to computer science in primary and secondary education across the globe. Preparing teachers to teach computer science or integrate computer science ideas in their classrooms, however, remains a challenge. With the increasing need to prepare computer science teachers (CSTA, 2013), stakeholders are beginning to identify models and competencies needed to prepare the teachers. Yet, there is a need for systematic understanding of computer science teaching and learning (Century et al., 2016), including promising approaches that prepare pre-service and in-service teachers to integrate computer science content into K-12 curricula or teach stand-alone computer science curricula.

In this edited volume, we seek to identify promising pathways, models, pedagogical strategies, and policies that help pre-service and in-service teachers infuse computing ideas in their curricula as well as teach stand-alone computing courses. These strategies may be spearheaded by universities, school districts, foundations, or the industry. In particular, we invite contributions including, but not limited to the following issues.

- Conceptual papers that articulate the specific knowledge and skills needed by pre-service and in-service teachers to infuse computational thinking into K-12 curricula.
- Professional development approaches that help in-service teachers deliver existing computer science curricula or infuse computer science content into other K-12 curricula.
- Discipline-specific approaches for incorporating computer science content into methods courses for pre-service teachers.
- Design of stand-alone courses that help pre-service or in-service teachers acquire knowledge of computer science content and pedagogical practices for delivering that content to K-12 students.
- Methods courses for teaching computer science principles.
- Design of innovative programs, such as certificates or graduate degrees that help teachers (pre-service/in-service) earn licensure or certification in computing, drawing on computer science principles.
- State or national policies that support the teaching of computer science in K-12 schools, such as computer science endorsements or certifications.

To contribute a proposal to this collaborative book project, please send a working title and list of authors along with a one paragraph draft summary of your proposed chapter to Dr. Chrystalla Mouza (cmouza@udel.edu) by January 4, 2019. We anticipate the following production process and timeline:

- January 4, 2019 – Chapter proposals due to co-editors (1 paragraph summary)
- January 30, 2019 – Formal invitations sent to authors
- April 1, 2019 – Draft chapters (approx. 5,000 words) due to co-editors
- May 15, 2019 – Chapters returned with editorial commentary
- June 30, 2019 – Final chapters due for inclusion
- July 30, 2019 – Complete package submitted to IAP for proofing