

NEW EDUCATION NORMAL WEBINAR SERIES

A CTE-STEM 2021 PRE-CONFERENCE WEBINAR

COMPUTATIONAL THINKING EDUCATION MEETS ARTIFICIAL INTELLIGENCE



20 FEBRUARY 2021, SATURDAY
10:30 - 11:45 AM (GMT +8) | ZOOM ONLINE

ABSTRACT

Over the past decade innovations such as social networks, online news and Internet commerce have made information technology omnipresent in daily life for much of the world's population. This has driven the call for K-12 school education to include computational thinking (CT) as an essential topic in preparing students for a world increasingly shaped by information technology. Yet even as educators are assimilating the calls to include computing in K-12, the environment for educational computing is being upended by the global explosion of interest in artificial intelligence. While AI builds on CT foundations, its influence on CT education is transformative. Abstraction and modularity remain key, but algorithmic concepts like sequencing and conditionals become less critical in light of increased emphasis on statistical methods. More fundamentally, progress in AI demands that CT education pay attention to the societal impact of computing. AI practitioners in industry and academia are starting to come to grips with their responsibility for the consequences of their work. Many technology companies have adopted policies around "responsible AI" and university courses in AI increasingly include units on ethical design. That same concern is moving into CT education, and K-12 education is beginning to draw on ideas from ethics and sociology alongside traditional technical disciplines.

SPEAKER BIOGRAPHY



Prof Hal Abelson

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Electrical Engineering and
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Harold (Hal) Abelson is Class of 1922 Professor of Electrical Engineering and Computer Science at MIT and a Fellow of the IEEE. He holds an A.B. degree from Princeton University and a Ph.D. degree in mathematics from MIT. Abelson was recipient in 1992 of the Bose Award (MIT's School of Engineering teaching award), winner of the 1995 Taylor L. Booth Education Award given by IEEE Computer Society and of the 2012 ACM Special Interest Group on Computer Science Education Award for Outstanding Contribution to Computer Science Education, and winner of the 2011 ACM Karl Karlstrom Outstanding Educator Award.

Abelson has played key roles in fostering MIT institutional educational technology initiatives including MIT OpenCourseWare and DSpace. He is a leader in the worldwide movement towards openness and democratisation of culture and intellectual resources. He is a founding director of Creative Commons, Public Knowledge and the Free Software Foundation and a former director of the Centre for Democracy and Technology—organisations that are devoted to strengthening the global intellectual commons.

MODERATOR

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