

Panel Discussion

Application of EDA Technologies to Non-EDA Areas**Organizer:**

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Panelists:

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Abstract:

EDA (Electronic Design Automation) technologies have been developed for over 40 years. Lots of research and development efforts have been put into EDA technology development. As a result, a number of sophisticated algorithms have come out and been proven to work in practical situations. Now with the state-of-the-art EDA tools, high level design descriptions, such as the ones in C programming language, can automatically be converted into silicon. Also, as programmable hardware, such as FPGA (Field Programmable Gate Arrays), is commonly used, EDA technologies can be directly applied to make them more efficient.

Also, as hardware design flows include various stages, such as high-level synthesis, logic synthesis, layout synthesis, test synthesis, pre- and post-silicon verification, and others, EDA techniques are dealing with varieties of problems in computer science and electrical engineering. Some of them can be applied to totally different areas from the traditional pure hardware design problems.

In this panel discussion, various aspects of non-EDA applications of EDA technologies are discussed, and new possible directions are explored. Applications to be discussed include not only custom and highly efficient FPGA based hardware for specific computations, but also synthesis and verification of biomedical optical systems as well as efficient data structures and their associated algorithms for general discrete problems in computer science.