Mathematics in Computer Science Curricula

Jeannette M. Wing

School of Computer Science, Carnegie Mellon University
Pittsburgh, PA 15213, USA
wing@cs.cmu.edu
http://www.cs.cmu.edu/~wing/

Abstract. Mathematics provides the theoretical foundation to computer science. So, it is not surprising that mathematics finds its way into computer science curricula, at both the undergraduate and graduate levels. They come in many guises:

- Mathematics courses, e.g., Logic, Number Theory;
- "Mathematics for Computer Scientists" courses, e.g., Probability and Statistics for Computer Science, Introduction to Feedback Control Systems (for Roboticists);
- Computational X where is a field of mathematics or science, e.g., Computational Geometry, Scientific Computing;
- Theoretical computer science courses, e.g., Algorithms, Semantics.

As the field of computer science evolves, I have seen an increase in the numbers of courses in the second and third categories. In my talk I will comment on how the maturation of computer science as a discipline has affected the role of mathematics in undergraduate and graduate computer science curricula, and on the implications these changes have had on our faculty and students. My views will be based on my experience with the academic programs offered by Carnegie Mellon's School of Computer Science.

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