ACMS Applied Math Seminar

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Thursday, September 15, 2022
154 Hurley Hall
11:00 AM – 12:00 PM

Inverse Lithography Technology Using Level Set Methods

As Moore's law has continually marched forward, shrinking chip designs in an exponential manner, there has been a corresponding progression on the chip manufacturing side. This progression has led to increasingly strong and complex diffraction effects during imaging which must be overcome to print chip designs accurately. In this talk, we will discuss some of the computational techniques developed to keep pace. We will describe the computational lithography forward and inverse problem frameworks, including a main tool used in the solving of the inverse problem: the level set method, which was originally designed as a front tracking technique commonly applied in image processing and physics problems. We will also discuss some newer areas of research including machine learning and GPU usage.

The Department of Applied and Computational Mathematics and Statistics

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