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The Washington-Baltimore Section of the
Society for Industrial and Applied Mathematics
is pleased to present an expository lecture

A Tale of Two Scales: From Discrete Schemes to Partial Differential Equations in Epitaxial Growth

by

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8:30 pm, Wednesday, November 16, 2011

Johns Hopkins University, Homewood Campus
Clipper Room, Shriver Hall

Abstract: Epitaxial growth is a rapidly evolving area of research in which ideas of mathematics, physics and materials science fuse in order to advance knowledge of material surfaces and their properties. This talk will address recent progress, and open challenges, in establishing analytically a connection between two scales relevant to the morphological evolution of crystal surfaces. At the nanoscale, line defects (steps) of atomic size are evident; their motion is described by large systems of discrete schemes. At the macroscale, surfaces are plausibly described by nonlinear parabolic-type Partial Differential Equations (PDEs). The talk will focus on the challenging issue of making PDE-based predictions consistent with step motion.

Join us for dinner with the speaker beforehand!

Dinner will begin at 6:30 p.m. at Gertrude's Restaurant in the Baltimore Museum of Art, which is next to the Johns Hopkins campus. Four entrees are available for your selection: Gertie's Crab Cake, Salmon alla Bella, Five-Spice Chicken, and Butternut Squash Ravioli. The set price of \$36.00 is inclusive of salad, entree choice, all soft beverages (sodas, coffee, tea, etc.), a choice of dessert, tax and gratuity. To attend the dinner, please send your entree choice along with a check for the appropriate amount (made out to SIAM Washington-Baltimore Section) early enough to be received by Tuesday, November 8, to our Treasurer, Jeff Sieracki, PO Box 1011, College Park, MD, 20741. PLEASE include your full name, email address and phone number with your check so that we can send you a confirmation of your reservation and may contact you in the event of any unexpected changes. If you cannot get your check to him by that date and you still want to come to dinner, please email him by Tuesday, November 8, at jsiam@sr2group.com. Gertrude's can accommodate at most fifteen diners on this occasion, so be sure to reserve in advance.

For visitor parking locations, you may refer to http://www.parking.jhu.edu/general_maps.html.
This announcement can be found at <http://www.siam.org/sections/wash-balt>