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**Daniel T Onofrei\*** (onofrei@math.uh.edu), **Giles Auchmuty** and **Yuliya Gorb**. *On a novel idea for the local characterization for solutions of multiscale elliptic problems.*

In this talk we will introduce a new approach for the understanding of various multiscale phenomena modeled by elliptic PDE's. We will show a strategy for the closed form local characterization of solutions for general deterministic but non-periodic multiscale elliptic problems and will discuss about potential applications of our results. (Received September 21, 2011)