1116-74-623 **Noah A. Weiss*** (weissno@uwstout.edu). *Periodic Array of Partially Insulated Interface Cracks Subjected To Uniform Far Field Heat Flow.*

The analysis of cracks is important for the study of material stability. In this talk, two related thermoelastic problems are considered for a bimaterial. The bimaterial consists of two materials with different elastic and thermal properties, and the constituent materials are bonded together along a straight interface. The bonding is imperfect–cracks are assumed to be periodically spaced along the interface.

The theory of steady-state thermoelasticity is used, which leads to a biharmonic boundary value problem. The boundary conditions are shown to depend on the relation between the thermal properties of the constituent materials. The results from this research are compared with other research that considered isolated interface cracks subjected to far-field heat flow. (Received September 09, 2015)