Faculty Research “Chat”  
Sponsored by the Babson Faculty Research Fund

Thursday, October 16, 2014  
Noon - 1:15 PM  
Needham Room, Olin Hall

“Oscillations and spontaneous flow reversal in a simple fluid network” 
Nathan Karst – Mathematics and Science

Cyclic variation is a common feature of biologic systems. One of the surprising conclusions of dynamical systems theory is that these oscillations can organize spontaneously rather than as a result of periodic forcing. In our work here we investigate the existence of multiple steady state flow rates and oscillatory dynamics in a simple in vivo microvascular network. Unlike most previous studies, we employ the most biologically relevant models of the physical properties of whole blood. Through a combination of analytic and numeric techniques, we demonstrate the existence of multiple steady state flow configurations and catalogue a range of dynamical behaviors, including simple oscillations and multiple coexistent limit cycles at physically realizable parameters.

“African-American Women’s Hair as Dominance Display: The Influence of Afrocentric Hair on African-American and European-American Ratings of Dominance and Professionalism” 
Tina Opie – Management

Across three studies we found support for the assertion that although there may be a general negative reaction to marginalized social identity cues (i.e., Afrocentric hair) in the workplace from both African-Americans and European-Americans, ironically, other members of the minority ingroup (i.e., African-Americans) would rate Afrocentric styles as more dominant and less professional. This finding, that ingroup members of marginalized groups may more harshly evaluate ingroup social identity cues, has important implications for diversity research. Diversity research largely focuses on how powerful decision-makers can be encouraged to create workplaces that are more hospitable and accepting of marginalized group members. However, our research indicates that historical context and negative stereotypes associated with social identity cues may hinder marginalized group members’ willingness to express these cues in the workplace. In other words, workplace diversity may be hindered if marginalized individuals are reluctant to express their social identity cues in the workplace.

We look forward to your participation. Refreshments will be provided by the BFRF. Pick up your lunch in Olin Pandini’s (before noon), sign the Chat list at the checkout, and join your colleagues in the Needham Room. For additional information, contact Susan Chern, x5339.

Next Chat  
Wednesday, October 29  
Joint BFRF-CELT Program: Research Moves into the Classroom