

Speaker: Debraj Chakrabarti  
University of Wisconsin - Madison

**Title:** Approximation of maps with values in a complex or almost complex manifold.

**Abstract:** Let  $\Omega$  be a relatively compact domain in the complex plane and let  $M$  be a complex manifold. We consider the approximation of holomorphic maps from  $\Omega$  to  $M$  which extend as  $\mathcal{C}^k$  maps to the closure  $\bar{\Omega}$  by maps holomorphic on  $\bar{\Omega}$  in the  $\mathcal{C}^k$  sense for  $k \geq 0$ . For  $k = 0$ , such approximation is possible if  $\Omega$  is bounded by Jordan curves. For  $k \geq 1$  we require that  $\Omega$  has a  $\mathcal{C}^1$  boundary. We also consider the situation when  $M$  is an almost complex manifold, and give partial results.