

**Indiana University-Purdue University
Indianapolis**
Department of Mathematical Sciences

STATISTICS SEMINAR

12:15pm—1:15pm, Tuesday, November 05, 2019
LD 265

Speaker: Debolina Chatterjee
Department of Mathematical Sciences, IUPUI

Title: Computing Limiting Average Availability of a Repairable System through Discretization

Abstract:

Formulas for limiting average availability of a repairable system exist only for some special cases: (1) either the lifetime or the repair time is exponential; or (2) there is one spare unit and one repair facility. We consider a more general setting involving several spare units and several repair facilities; and we allow arbitrary life- and repair time distributions. Under periodic monitoring, which essentially discretizes the time variable, we compute the limiting average availability. The discretization approach closely approximates the existing results in the special cases; and increases the limiting average availability as we include additional spare unit or additional repair facility.