

PoDSy 2003: Principles of Dependable Systems

Co-Chairs:

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Dependable systems are supposed to satisfy an ensemble of distinct properties, namely safety, security and availability, to name a few. These properties are in parts complementary and also diverse enough to have spawned complete topic areas of their own. Consequently, work on achieving and validating the different properties has partly been performed in different communities and with varied nuances. Maybe most prominently this is true for the two areas of fault-tolerant systems on the one hand and secure systems (especially cryptography) on the other. For example, researchers in fault-tolerance often make statements about systems by treating cryptographic primitives as black boxes. This is done to simplify analysis and (sometimes) avoid number and probability theory. However, by abstracting away the basic properties of the cryptographic primitives, this severely constrains the ability to conduct rigorous security proofs. Various examples of the past show that by over-abstraction, important attributes got neglected, contributing to attack vulnerabilities in the resultant protocols. But despite these examples, many researchers have confirmed that there are strong similarities between the ways of modeling and handling uncertainty in both areas.

This workshop brings together researchers and practitioners from both the fault-tolerance and security communities to discuss foundational topics (and related applied experiences) on the similarities and differences between both areas. The workshop is structured around a set of invited talks by well-known specialists which have experiences in both areas. It is complemented by a panel which explores the question, what fault-tolerance people can learn from security people and vice versa.

Invited speakers:

Paulo Verissimo, University of Lisboa;
Ran Canetti, IBM Research;
Catherine Meadows, Naval Research Laboratory;
John Knight, University of Virginia

Panel:

"What can fault-tolerance people learn from security people and vice versa?",
Neeraj Suri, TU Darmstadt,
Leslie Lamport, Microsoft Research,
Jonathan Millen, SRI International,
Yves Deswarte, LAAS,
Roy Maxion, Carnegie Mellon University