

**Tutorial on  
Trust Networks: Interpersonal, Social and Sensor  
at  
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Trust relationships occur naturally in many diverse contexts such as ecommerce, social interactions, (semantic) social networks, ad hoc mobile networks, distributed systems, decision-support systems, (semantic) sensor web, etc. As the connections and interactions between humans and/or machines (collectively called agents) evolve, and as the agents providing content and services become increasingly removed from the agents that consume them, and as miscreants attempt to corrupt, subvert or attack existing infrastructure, the issue of robust trust inference (e.g., gleaning, aggregation, propagation) and update (collectively called trust management) become critical. Interpersonal trust plays a crucial role in everyday decision making. Unfortunately, there is neither a universal notion of trust that is applicable to all domains nor a clear explication of its semantics in many situations. In this tutorial, we motivate the trust problem, summarize the trust research at a high-level, and discuss challenges confronting us.