Formal Modeling of Computer Security, Privacy and Trust

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Overall Motivation

- Formal modeling and analysis is very, very important, given the current complexity of hardware/software systems and importance of Internet services in our daily life.
- Trust modeling is a new research area that has emerged recently.
- Formal security policy modeling in multi-domain networks with mobility and location dependency is also an important research area.
- Formal modeling and analysis of security aspects hopefully easier than modeling and analysis of general software systems.
Recently Completed PhD Research Work - 1

- A Formal Specification and Verification Framework for Security Policies in Multi-Domain Mobile Networks
  PhD Research of Devrim Ünal, October 2011, currently in TÜBITAK, Gebze

- Core-Crust Modeling Approach for Formal Representation of Trust in Relation to Computer Security
  PhD Research of Şerif Bahtiyar, December 2011, currently in Provus, İstanbul
  (TAM Project Full Support during PhD study)
Recently Completed PhD Research Work - 2

- A Formal Trust Model Based on Recommendations
  PhD Research of Mahir Kutay (Dokuz Eylül Üniversitesi, Elektrik-Elektronik Mühendisliği, Advisor: Zafer Dicle), January 2013, currently in Yaşar Üniversitesi, İzmir
Ongoing PhD Research Work - 1

- **Model Driven Security Framework for Software Design and Verification**
  PhD Research of Engin Deveci, currently in Ericsson, İstanbul

- **Formal Specification and Verification of RFID Security and Privacy**
  PhD Research of Mete Akgün, currently in TUBITAK, Gebze, Turkey
Ongoing PhD Research Work - 2

• **Formal Modeling and Analysis of Credit Card Fraud**
  PhD Research of Yiğit Kültür, currently in Banksoft, İstanbul

• **Group Key Agreement Protocols for Dynamic Groups**
  PhD Research of Orhan Ermiş, currently “gönüllü” Research Assistant, Computer Engineering, Boğaziçi U.
Ongoing
PhD Research Work - 3

• **Formal Modeling and Analysis of Secure Routing in Ad Hoc Networks**
  PhD Research of Burak Gürdağ, currently in Argela, İstanbul

• **Software Design and Software Product Verification From Security Point of View (earlier)**
  **Modeling of MOOC Effectiveness (now)**
  PhD Research of Albert Özkohen, Instructor, MIS

• **Cyber-Physical Systems and Energy Based Side Channel Attacks**
  PhD Research of Murat Cihan (currently God knows where)
For Further Communications

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