

TETAM Lab 4

M. Ufuk Çağlayan Araştırma Grubu (Bilgisayar ve Ağ Güvenlik)

1. Work on Formal Modeling of Computer Security, Privacy and Trust

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

Ongoing PhD Research Work

- 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
- 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.
(TAM Project Full Support during PhD study)
- 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)
(TAM Project Support during PhD study before)

Former PhD Research Work

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

2. Smartcard Research and Development Testbed

Testbed under development