

NTMS2012 Program

Time	Sakura	Shogun 1	Shogun 2
Monday, May 7			
09:00	Tutorial 1 (Room: Shogun 1) <i>Nanonetworking: A Molecular Communications Perspective</i> By Dr. Tuna Tugcu		WSN-ADT 1: <i>Energy management</i>
10:30	Coffee Break		
11:00	Tutorial 1 (cont.)		WSN-ADT 2: <i>Protocols</i>
12:30	Lunch		
14:00	Tutorial 2 (Room: Shogun 1) <i>Theory of Malware Diffusion in Wireless Communications Networks</i> , By Dr. Vasileios Karyotis		WSN-ADT 3: <i>Architectures and Emerging Applications</i>
15:30	Coffee Break		
	Tutorial 2 (cont.)		
Tuesday, May 8			
09:00	Opening Session (Shogun 1 + 2)		
09:30	Keynote: <i>Internet of Nanothings (Prof. Ian Akyildiz)</i> (Room: Shogun 1 + 2)		
10:30	Coffee Break		
11:00	MWN1: <i>Advances in Wireless Sensor Networks</i>	MWN2: <i>Next Generation Cellular Networks</i>	SEC1: <i>Security for distributed systems</i>
12:30	Lunch		
14:00	Keynote: <i>Securing Cyber-Physical Critical Infrastructure: Challenges and Opportunities (Professor Sajal K. Das)</i> (Room: Shogun 1 + 2)		
15:00	Coffee Break		
15:30	MWN3: <i>Wireless Security & Advances in Wireless Networking</i>	MWN4: <i>Mobile Ad Hoc Networks</i>	SEC2: <i>Risks and legal issues</i>
Wednesday, May 9			
09:00	NT1: <i>Advances in Content-based Networking</i>	MWN5: <i>Invited Papers Session</i>	SEC3: <i>Trust, assurance and security management Issues</i>
10:30	Coffee Break		
11:00	NT2: <i>Content-based Routing for the Future Internet</i>	MWN6: <i>Cross Layer Design & Optimization</i>	SEC4: <i>Invited Papers Session</i>
12:30	Lunch		
14:00	NT3: <i>Advanced Services for the Future Internet</i>	MWN7: <i>Mobile & Vehicular Networks</i>	SEC5: <i>Cryptographic protocols</i>
15:30	Coffee Break		
16:00	NT4: <i>Application Development for the Future Internet</i>	MWN8: <i>Wireless Sensor & Relay Networks</i>	SEC6: <i>Attacks and malware</i>
19:00	Conference Banquet		
Thursday, May 10			
09:00		MWN9: <i>Wireless Network Design & Deployment</i>	SEC7: <i>Implementation</i>
10:30	Coffee Break		
11:00		MWN10: <i>Cognitive Radio & Vehicular Networking</i>	SEC8: <i>Selected topics in Information Security</i>
12:30	Lunch		

Monday, May 7

09:00 - 12:30

Tutorial: Nanonetworking: A Molecular Communications Perspective, By Dr. Tuna Tugcu

Room: Shogun 1

12:30 - 14:00

Lunch Break

14:00 - 17:30

Tutorial: Theory of Malware Diffusion in Wireless Communications Networks, By Dr. Vasileios Karyotis

Room: Shogun 1

09:00 - 10:30

WSN-ADT 1: Energy management

Room: Shogun 2

Evaluation of Power Efficiency for Digital Serial Interfaces of Microcontrollers

K. Mikhaylov and J. Tervonen

Relay Power Minimization Approach based on General-Rank Beamforming for Multi-Antenna Relaying Schemes

S. M. Rezvani, S. H. Safavi, R. A. Sadeghzadeh, A. Haghbin and R. Davarpanah

Energy-Efficient Clustering Algorithm for Wireless Sensor Networks Using the Virtual Field Force

A. Seyam, F. Awad and E. Taqieddin

Energy Load Balancing for Fixed Clustering in Wireless Sensor Networks

S. Ali and C. Sevgi

10:30 - 11:00

Coffee Break

11:00 - 12:30

WSN-ADT 2: Protocols

Room: Shogun 2

Comparison of messaging protocols for emerging wireless networks

J. Bagale

Towards a Generic Framework for Wireless Sensor Network Multi-Criteria Routing

N. Sahli, N. Jabeur, I. Khan and M. Badra

VoIP over VANETs (VoVAN): A QoS Measurements Analysis of Inter-vehicular Voice Communication in Urban Scenario

S. El brak

Performance Evaluation of CoAP using RPL and LPL in TinyOS

T. Pötsch, K. Kuladinithi, M. Becker, P. Trenkamp and C. Goerg

14:00 - 15:30

WSN-ADT 3: Architectures and Emerging Applications

Room: Shogun 2

Mobile Robot Aided Self-Deploying Wireless Sensor Networks for Radiation Leak Detection

G. Tuna, K. Gulez, V. C. Gungor and T. V. Mumcu

Solid Waste Management Architecture using Wireless Sensor Network technology

S. Longhi, D. Marzioni, E. Alidori, G. Di Buò, M. Prist, M. Grisostomi and M. Pirro

Experiments on the RSSI as a range estimator for indoor localization

N. A. Dieng, C. Chaudet, M. Charbit, L. Toutain and T. Ben Meriem

Distributed Shared Memory as an Approach for Integrating WSNs and Cloud Computing

P. Langendoerfer, K. Piotrowski, M. Diaz and B. Rubio

15:30 - 16:00

Coffee Break



Tuesday, May 8

09:00 - 09:30

Opening Session

Rooms: Shogun 1, Shogun 2

09:30 - 10:30

Keynote: Internet of Nanothings (Prof. Ian Akyildiz)

Rooms: Shogun 1, Shogun 2

10:30 - 11:00

Coffee Break

11:00 - 12:30

MWN1: Advances in Wireless Sensor Networks

Room: Sakura

Global versus local re-association approach to extend the lifetime of large-scale IEEE 802.15.4/ZigBee Wireless Sensor Networks

Z. Trabelsi Ayoub, S. Ouni and F. Kamoun

Address Allocation Scheme to Improve Lifetime of IPv6 Cluster-based WSNs

L. Ben Saad and B. Tourancheau

A Novel Indirect Trust based Link State Routing Scheme using a Robust Route Trust Method for Wireless Sensor Networks

A. Raha, M. Naskar, A. Chakraborty, O. Alfandi and D. Hogrefe

Efficient Cluster-based Fault-tolerant Schemes for Wireless Sensor Networks

M. Lehsaini, H. Guyennet and M. Feham

MWN2: Next Generation Cellular Networks

Room: Shogun 1

Introduction of Multiflow for HSDPA

V. Hytönen, O. Puchko, T. Höhne and T. Chapman

Phase adjustment in HS-SFN for HSDPA

O. Puchko, M. Zolotukhin, V. Hytönen, T. Höhne and T. Chapman

An Energy Efficient Multi-Core Modem Architecture for LTE Mobile Terminals

A. Showk, S. Traboulsi and A. Bilgic

A Semi-Analytical Macroscopic MAC Layer Model for LTE Uplink

S. Louvros, A. Iossifides, K. Aggelis, A. Baltagiannis and G. Economou

SEC1: Security for distributed systems

Room: Shogun 2

Integral Federated Identity Management for Cloud Computing

M. Stihler, A. Santin, J. Da Silva Fraga and A. L. Marcon Jr.

Finding Secure Compositions of Software Services: Towards A Pattern Based Approach

L. Pino and G. Spanoudakis

A Distributed Approach for Secure M2M Communications

Y. Ben Saied, A. Olivereau and M. Laurent

Improving the Resistance to Side-channel Attacks on Cloud Storage Services

O. Heen, C. Neumann, L. Montalvo and S. Defrance

12:30 - 14:00

Lunch Break

14:00 - 15:00

Keynote: Securing Cyber-Physical Critical Infrastructure: Challenges and Opportunities (Professor Sajal K. Das)

Rooms: Shogun 1, Shogun 2

15:00 - 15:30

Coffee Break

15:30 - 17:00

MWN3: Wireless Security & Advances in Wireless Networking

Room: Sakura

Energy Cost of Mitigating Physical Attacks in Wireless Sensor Networks

D. Incebacak, K. Bicakci and B. Tavli

Security aspects of policy controlled cognitive radio

L. Gavrilovska, V. Atanasovski, V. Rakovic and G. Baldini

Prospects for WLAN in the Evolved Packet Core Environment

S. Frei, W. Fuhrmann, A. Rinkel and B. Ghita

Performance of OFDM with Blind Interference Suppression Schemes

S. Sriyananda, J. Joutsensalo and T. Hämäläinen

15:30 - 17:25

MWN4: Mobile Ad Hoc Networks

Room: Shogun 1

A Study of Mobility in Ad Hoc Networks and its Effects on a Hop Count Based Distance Estimation

S. Merkel, S. Mostaghim, H. Schmeck and M. Weidner

ABLA: Angle-Based Location Advertisement for Location-Based Ad-Hoc Routing Protocols

H. Higaki

A Multipath Layered Cluster based Routing for ad hoc networks

I. Jemili, N. Chaabouni, A. Belghith and M. Mohamed

On the performance of MANETs under different mobility patterns and routing protocols and its improvement based on fixed relay nodes

M. Abdelmoumen, I. Arfaoui, M. Frikha and T. Chahed

An Emulated Testbed for Wireless Systems & MANET Research based on ns-3

M. Skjegstad, F. Johnsen and J. Nordmoen

15:00 - 15:30

Coffee Break

15:30 - 17:00

SEC2: Risks and legal issues

Room: Shogun 2

A Model for Privacy and Security Risk Analysis

E. Painsil

Dynamic Incentives for Risk Management

T. Alpcan

Risk Management for IT Security: When Theory Meets Practice

A. K. Chorppath and T. Alpcan

Technical Enforcement of European Privacy Legislation: An Access Control Approach

K. Bekara, M. Laurent and N. Than Ha

Wednesday, May 9

09:00 - 10:30

MWN5: Invited Papers Session

Room: Shogun 1

SUIT: A Cross Layer Image Transport Protocol with Fuzzy Logic Based Congestion Control for Wireless Multimedia Sensor Networks

Cagatay Sonmez, Sinan Isik, Mehmet Yunus Donmez, Ozlem Durmaz Incel, Cem Ersoy

CSMA-based Bandwidth Estimation for Cognitive Radio Sensor Networks

Ghalib A. Shah, Ozgur B. Akan

Throughput Limits in Spectrum Sensing Cognitive Radio Networks using Point Processes

Anthony Busson, Bijan Jabbari, Alireza Babaei and Véronique Vèque

Demystifying Link Congestion in 4G-LTE Backhaul Using OpenFlow

Daniel Philip VENMANI, Yvon GOURHANT, Djamel Zeghlache

NT1: Advances in Content-based Networking

Room: Sakura

Mobility-aware Topology Manager for Publish-Subscribe Networks

B. Gajic, J. Palenzuela, J. Riihijärvi and P. Mähönen

Mist: A Reliable and Delay-Tolerant Publish/Subscribe Solution for Dynamic Networks

M. Skjægstad, F. Johnsen, T. Bloebaum and T. Maseng

DBAS: A Deployable Bandwidth Aggregation System

K. Habak, M. Youssef and K. Harras

GlobeTraff: a traffic workload generator for the performance evaluation of future Internet architectures

K. Katsaros, G. Xylomenos and G. Polyzos

SEC3: Trust, assurance and security management Issues

Room: Shogun 2

Multi-Party Trust Computation in Decentralized Environments

T. Dimitriou

Self-certified based trust establishment scheme in ad hoc networks

K. Hamouid and K. Adi

Model-Driven Testing of Security Protocols with SecureMDD

K. Katkalov, N. Moebius, K. Stenzel, M. Borek and W. Reif

TASAM - Towards the smart devices App-Stores Applications security Management related best practices

Z. Kazmi, F. Toni, J. Aguila Vila and M. Maawad Marcos

10:30 - 11:00

Coffee Break

11:00 - 12:30

MWN6: Cross Layer Design & Optimization

Room: Shogun 1

Cross Layer MAC and PHY Architecture for Collision Correction of DSRC Safety Messages

W. Cassidy, N. Jaber and K. Tepe

RECOMAC: A Cross-layer Cooperative Network Protocol for Wireless Ad hoc Networks

S. Gokturk, O. Gurbuz and E. Erkip

Cluster-Directed Acyclic Graph Formation for IEEE 80215.4 in Multihop Topologies

B. Pavkovic, W. J. Hwang and F. Theoleyre

Distributed Medium Access Scheduling for Wireless LANs

D. Kwak, H. Ko and C. H. Kim

NT2: Content-based Routing for the Future Internet

Room: Sakura

Adaptive Probabilistic Flooding for Multipath Routing

C. Betoule, T. Bonald, R. Clavier, D. Rossi, G. Rossini and G. Thouenon

Multi Path Considerations for Anonymized Routing: Challenges and Opportunities

H. Karaoglu, M. B. Akgun, M. Gunes and M. Yuksel

Routing in Content-Centric Networks: From Names to Concepts

G. Lioudakis, A. C. G. Anadiotis, A. Mousas, C. Patrikakis, D. Kaklamani and I. Venieris

Reliable and Scalable Distributed Hash Tables Harnessing Hyperbolic Coordinates

T. Tiendrebeogo, D. Ahmat and D. Magoni

SEC4: Invited Papers Session

Room: Shogun 2

Improving Trust and Privacy Models in Social Networks

Nafaa Jabeur, Sherali Zeadally, Sergey Maydebura

Towards Security Certification Schemas For The Internet of Services

Volkmar Lotz, Samuel Paul Kaluvuri, Francesco Di Cerbo, Antonino Sabetta

Redefining Security Engineering

Carsten Rudolph, Andreas Fuchs

12:30 - 14:00

Lunch Break

14:00 - 15:30

MWN7: Mobile & Vehicular Networks

Room: Shogun 1

Multi-agent systems Negotiation approach for handoff in mobile cognitive radio networks

E. Trigui, M. Esseghir and L. Merghem-Boulaïhia

Real-life Performance Analysis of Always-Best-Connected Network

J. Kellokoski, J. Koskinen and T. Hämäläinen

Learning Traffic Light Phase Schedules from Velocity Profiles in the Cloud

M. Kerper, C. Wewetzer, A. Sasse and M. Mauve

A Topology-Based Approach to the Predictive Analysis of Intelligent Transportation Systems Dynamics

A. Hamlili

NT3: Advanced Services for the Future Internet

Room: Sakura

SCOUT: Social COntext-aware Ubiquitous sysTem

D. Abed Rabbou, A. Mtibaa and K. Harras

Content-Aware Rate Control for Video Transmission with Buffer Constraints in Multipath Networks

M. H. Hajiesmaili, A. Sehati and A. Khonsari

Context-aware, trust-based access control for the digital.me userware

M. Heupel, L. Fischer, M. Bourimi, D. Kesdogan, S. Scerri, F. Hermann and R. Giménez

Automatic Identification Based on Hand Geometry and Probabilistic Neural Networks

E. S. El-Alfy

SEC5: Cryptographic protocols

Room: Shogun 2

Dethroning Transport Layer Security in the Embedded World

S. Unger, S. Pfeiffer and D. Timmermann

Perfect Confidentiality Network - A solution for information theoretically secure key agreement

J. Braun and J. Buchmann

Anonymous Identity-Based Encryption With Distributed Private-Key Generator and Searchable Encryption

A. Siad

Self-Timed Physically Unclonable Functions

J. Murphy, M. O'Neill, F. Burns, A. Bystrov and A. Yakovlev

15:30 - 16:00

Coffee Break

16:00 - 17:15

MWN8: Wireless Sensor & Relay Networks

Room: Shogun 1

Effective Energy Management in Routing Protocol for Wireless Sensor Networks

Z. Aliouat and M. Aliouat

Towards an Energy-Efficient Algorithm based Sleep-Scheduling for Wireless Sensor Networks

B. Zebbane

Energy Efficient Optimization and Route Recovery for Gradient Broadcast Routing Protocol for Wireless Sensor Networks

A. Apavatjirut

Opportunistic Relay Selection for Wireless Cooperative Network

T. Jamal, P. Mendes and A. Zúquete

16:00 - 17:00

NT4: Application Development for the Future Internet

Room: Sakura

SUCH: A Cloud Computing Management Tool

H. Yu, J. Rann and J. Zhan

Fingerprinting seismic activity across an internet of things

J. Moore and J. Bagale

HumanS: A Human Mobility Sensing Simulator

T. Kanaya, A. Hiromori, H. Yamaguchi and T. Higashino

16:00 - 17:30

SEC6: Attacks and malware

Room: Shogun 2

On Clock Frequency Effects in Side Channel Attacks of Symmetric Block Ciphers

Q. Tian and S. Huss

Cache Attacks: An Information and Complexity Theoretic Approach

E. Savas and C. Yilmaz

A Study of Trojan Propagation in Online Social Networks

M. R. Faghani, A. Matrawy and C. H. Lung

Fighting phishing the information-centric way

N. Fotiou, G. Marias and G. Polyzos

19:00 – 22:30

Conference Banquet



Thursday, May 10

09:00 - 10:30

MWN9: Wireless Network Design & Deployment

Room: Shogun 1

Wireless sensor network redeployment under the target coverage constraint

D. Zorbas and T. Razafindralambo

A Relay Deployment Mechanism for One Scenario of Cost-Effective Coverage Extension in IEEE 802.16j Networks

M. Zolotukhin, T. Hämäläinen and A. Garnaev

Energy Efficient Resource Allocation and Deployment Strategies for Wireless Networks

T. u. R. Ahsin and S. Ben Slimane

Resource Location for Opportunistic Networks

A. Poersch, D. Macedo and J. M. Nogueira

SEC7: Implementation

Room: Shogun 2

Compact Implementation of Threefish and Skein on FPGA

N. At, J. L. Beuchat and Í. San

Pseudorandom Number Generation in Smart Cards: An Implementation, Performance and Randomness Analysis

R. N. Akram, K. Markantonakis and K. Mayes

Towards strong security in embedded and pervasive systems: energy and area optimized serial polynomial multipliers in $GF(2^k)$

Z. Dyka, P. Langendoerfer, F. Vater and S. Peter

Architectural Optimizations & Hardware Implementations of Chinese WLANs Encryption Standard

N. Sklavos and P. Kitsos

10:30 - 11:00

Coffee Break

11:00 - 12:30

MWN10: Cognitive Radio & Vehicular Networking

Room: Shogun 1

Toward cognitive radio resource management based on multi-agent systems for improvement of real-time application performance

B. Benmamar

Implementation and benchmarking of CUSUM algorithm for spectrum sensing under low SNR regimes on ANRC Cognitive Radio testbed

R. Budihal and Jamadagni

Vehicular Broadcast Messaging Reliability Enhancement Protocol for Emergency Vehicle Communications

N. Jaber, W. Cassidy, E. Abdel-Raheem and K. Tepe

Aided Navigation Techniques for Indoor and Outdoor Unmanned Vehicles

Gurkan Tuna, Kayhan Gulez

Power Consumption Analysis of the Always-Best-Connected User Equipment

J. Kellokoski, J. Koskinen and T. Hämäläinen

SEC8: Selected topics in Information Security

Room: Shogun 2

Refining a Quantitative Information Flow Metric

S. Haj Hussein

Evaluation of Security Problems and Intrusion Detection Systems for Routing Attacks in Wireless Self-organised Networks

A. Okoli, E. Igbesoko and M. Ghassemian

Towards Smart Anti-Malwares for Battery-Powered Devices

H. Al Housani, H. Otrouk, R. Mizouni, J. M. Robert and A. Mourad

Key Management Scheme for Routing in Clustered Heterogeneous Sensor Networks

K. Gagneja and K. Nygard

Non-Transferable Proxy Re-Encryption Scheme

Y. J. He, T. W. Chim, Hui and S. M. Yiu

12:30 - 14:00

Lunch