

Mobile and Ubiquitous Computing

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The tremendous advances in wireless networks, mobile computing, sensor networks along with the rapid growth of small, portable and powerful computing devices offers opportunities for pervasive computing and communications. Topic 14 deals with cutting-edge research in various aspects related to the theory or practice of mobile computing or wireless and mobile networking, including architectures, algorithms, networks, protocols, modeling and performance, applications, services, and data management.

This year, we received 11 submissions for Topic 14. Each paper was peer reviewed by at least three reviewers. We selected 7 regular papers. The accepted papers discuss very interesting issues about wireless ad-hoc networks, mobile telecommunication systems and sensor networks.

In their paper “cTrust: Trust Aggregation in Cyclic Mobile Ad Hoc Networks” Huanyu Zhao, Xin Yang, Xiaolin (Andy) Li describe a novel trust aggregation scheme for cyclic MANETs. The second paper “On Deploying Tree Structured Agent Applications in Embedded Systems” by Nikos Tziritas, Thanasis Loukopoulos, Spyros Lalis, Petros Lampsas presents a distributed algorithm aiming at arranging communicating agents over a set of wireless nodes in order to optimize the deployment of embedded applications. The third paper by Nicholas Loulloudes, George Pallis, Marios Dikaiaikos is entitled “Caching Dynamic Information in Vehicular Ad-Hoc Networks”. It proposes an approach based on caching techniques for minimizing network overhead imposed by Vehicular Ad Hoc Networks and for assessing the performance of Vehicular Information Systems. The fourth paper “Meaningful Metrics for Evaluating Eventual Consistency” by Joao Pedro Barreto, Paulo Ferreira analyses different metrics for evaluating the effectiveness of eventually consistent systems. In the fifth paper, “Collaborative GSM-based Location”, David Navalho and Nuno Preguica examine how information sharing among nearby mobile devices can be used to improve the accuracy of GSM- or UMTS-based location estimation. The sixth paper is entitled “@Flood: Auto-Tunable Flooding for Wireless Ad Hoc Networks” by Jose Mocito, Luis Rodrigues, Hugo Miranda. It proposes an adaptive routing system in which each node is able to adapt the routing process dynamically with respect to the current system context. The approach integrates multiple routing protocols in a single system. Finally, the paper “Maximizing Growth Codes Utility in Large-scale Wireless Sensor Networks” by Zhao Yao, Xin Wang extends existing work on robust information distribution in wireless sensor networks using Growth Codes by loosening assumptions made in the original approach. This allows to apply Growth Codes to a wider range of applications.

We would like to take the opportunity to thank all authors who submitted a contribution, the Euro-Par Organizing Committee, and all reviewers for their hard and valuable work. Their efforts made this conference and this topic possible.