CALL FOR PAPERS

SCPA 2012 - Summer

2nd IEEE International Workshop on Smart Communication Protocols and Algorithms – Summer

http://scpa.it.ubi.pt/2012

Scope:
Communication protocols and algorithms are needed to communicate network devices and exchange data between them. The appearance of new technologies usually comes with a protocol procedure and communication rules that allows data communication while taking profit of this new technology. Recent advances in hardware and communication mediums allow proposing new rules, conventions and data structures which could be used by network devices to communicate across the network. Moreover, devices with higher processing capacity let us include more complex algorithms that can be used by the network device to enhance the communication procedure.

Smart communication protocols and algorithms make use of several methods and techniques (such as machine learning techniques, decision making techniques, knowledge representation, network management, network optimization, problem solution techniques, and so on), to communicate the network devices to transfer data between them.

Smart communication protocols and algorithms can be used to perceive the network conditions, or the user behavior, in order to dynamically plan, adapt, decide, take the appropriate actions, and learn from the consequences of its actions. The algorithms can make use of the information gathered from the protocol in order to sense the environment, plan actions according to the input, take consciousness of what is happening in the environment, and take the appropriate decisions using a reasoning engine. Goals such as decide which scenario fits best its end-to-end purpose, or environment prediction, can be achieved with smart protocols and algorithms. Moreover, they could learn from the past and use this knowledge to improve future decisions.

In this workshop, researchers are encouraged to submit papers focused on the design, development, analysis or optimization of smart communication protocols or algorithms at any communication layer. Algorithms and protocols based on artificial intelligence techniques for network management, network monitoring, quality of service enhancement, performance optimization and network secure are included in the workshop.

We welcome technical papers presenting analytical research, simulations, practical results, position papers addressing the pros and cons of specific proposals, and papers addressing the key problems and solutions. The topics suggested by the conference can be discussed in term of concepts, state of the art, standards, deployments, implementations, running experiments and applications.

Topics of interest:
Authors are invited to submit complete unpublished papers, which are not under review in any other conference or journal, including, but are not limited to, the following topic areas:

- Smart network protocols and algorithms for multimedia delivery
- Application layer, transport layer and network layer cognitive protocols
- Cognitive radio network protocols and algorithms
- Automatic protocols and algorithms for environment prediction.
- Algorithms and protocols to predict data network states.
- Intelligent synchronization techniques for network protocols and algorithms
- Smart protocols and algorithms for e-health
- Software applications for smart algorithms design and development.
- Dynamic protocols based on the perception of their performance
- Smart protocols and algorithms for Smartgrids
- Protocols and algorithms focused on building conclusions for taking the appropriate actions.
- Smart Automatic and self-autonomous ad-hoc and sensor networks.
- Artificial intelligence applied in protocols and algorithms for wireless, mobile and dynamic networks.
- Smart security protocols and algorithms
- Smart cryptographic algorithms for communication
- Artificial intelligence applied to power efficiency and energy saving protocols and algorithms
- Smart routing and switching protocols and algorithms
- Cognitive protocol and algorithm models for saving communication costs.
- Any kind of intelligent technique applied to QoS, content delivery, network Monitoring and network management.
- Smart collaborative protocols and algorithms
- Problem recognition and problem solving protocols
- Genetic algorithms, fuzzy logic and neural networks applied to communication protocols and algorithms

Submission guidelines:
All submissions must be full papers in PDF format and uploaded on EDAS.
They must not exceed 10 single-spaced, double-column pages using 10 pt size fonts on 8.5 x 11 inch pages in IEEE style format.

Important Dates
Paper Submission: 9 Dec. 2011 Accept. Notification: 9 Jan. 2012 Camera-Ready Paper: 10 Feb. 2012