

Call for Papers Special Issue on Information-Centric Networking

Scope

Information-Centric Networking (ICN) is proposed as an architecture for the future Internet. The basic idea is to make units of information accessible to the networking protocols and turn them into the unit of networking. Main advantages are conjectured to come from a much better support for mobility, data security, as well as caching and replication. ICN has by now been investigated in a number of projects.

This special issue aims to collect new, innovative material on the theory, the design, and the practical applicability of ICN. In particular, material that advances the level of maturity, scalability and real-life dependability of ICN are welcome. Topics of interest include (but are not limited to) the following:

- Analytic models for the behavior of information-centric networking, especially for scalability properties
- Models for workloads (both amount of traffic as well as kinds and size of objects along with request patterns)
- Capacity analysis of ICN
- Caching in ICN, in particular, cache placement and cache management (e.g., replacement algorithms) along with resource management for caches, links, and routers
- Coexistence of ICN protocol stacks with legacy stacks (e.g., IP) as well as coexistence of multiple ICNs with each other on the same network fabric
- Suitability of ICN for all kinds of workloads, in particular, streaming and interactive multimedia workloads
- Security in ICN
- Mobility support by ICN
- Energy efficiency of ICN
- Active objects in ICN, adding functionality and execution semantics to information objects
- Consistency and coherence models for replicated, static or active information objects, along with revision handling and updating protocols
- Structuring applications on top of ICN (both legacy and possible new applications) as well as suitable application programming interfaces (complementing or replacing a “socket”-style interface standard)
- Interoperability between different ICN solutions
- Practical experience, test-beds, open-source software

Tentative Schedule

Submission deadline: April. 15, 2012

Author notification: June 30, 2012

Revised paper due: July 31, 2012

Final author notification: September 1, 2012

Guest Editors

Bengt Ahlgren
Swedish Institute of
Computer Science

Holger Karl
Universität
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Dirk Kutscher
NEC Laboratories
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Instructions for submission:

The submission website for this journal is located at <http://ees.elsevier.com/comcom>. To ensure that all manuscripts are correctly identified for consideration by the Special Issue, the authors should select "**Special Issue: Information-Centric Networking**" when they reach the “Article Type” step in the submission process.