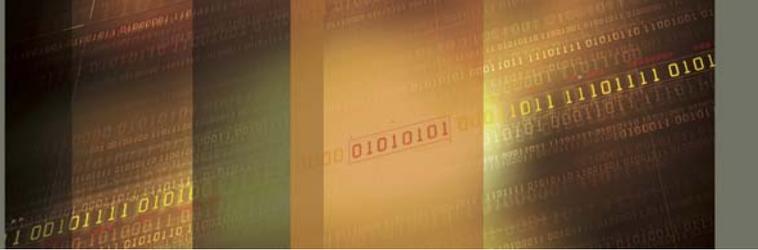# Call for Papers

A Special Issue of Computer Networks on "Challenges in High-Performance Switching and Routing in the Future Internet"

High-performance, high-capacity packet switches and routers in the metro and backbone network are a basic infrastructure requirement to support the Future Internet. Trends in traffic evolution are higher traffic volumes and increasingly unpredictable variations caused by the mobility of heavy multimedia flows. These tendencies translate into challenges to the switching and routing in the aggregation and core networks. Original and survey papers are invited for a special issue on the design of high-performance switching and routing systems to address these challenges, including architectural, planning, traffic engineering and algorithmic aspects of electronic and optical high-speed networks.

Topics of interest include (but are not limited to):

- High-performance switch and router architectures.
- Impairment-aware optical switching fabrics. Optical switch fabrics for electronic packet switching.
- Interconnection networks.
- Packet classification and scheduling. Deep packet inspection.
- High-speed packet processors.
- Address look-up algorithms.
- Switching in data-centers.
- Optical Circuit/Packet/Burst Switching.
- Power-aware switching and routing.
- Protection and recovery.
- QoS, traffic engineering and control.
- Network monitoring, management and operation.
- Cross layer optimization in switching and routing.
- Multicast/anycast switching and routing.
- Routing and signaling protocols.
- Security in high-speed aggregation and backbone networks.
- Clean-slate design for the Internet.

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Important dates

Paper submission:
1 October 2011

Acceptance notification:
1 February 2012

Final papers:
1 March 2012

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Submission format

The submitted papers must be clearly written in excellent English and describe original research which is not published nor currently under review by other journals or conferences. Papers must not exceed 25 pages (one-column, at least 11pt fonts) including figures, tables and references. Author guidelines for preparation of manuscript can be found at www.elsevier.com/locate/comnet.

Submission Guideline

All manuscripts and any supplementary material should be submitted through Elsevier Editorial System (EES). The authors must select as "SI:High-performance S & R" when they reach the "Article Type" step in the submission process. The EES website is located at: http://ees.elsevier.com/comnet/