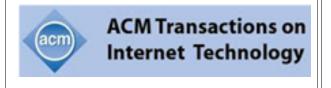Call for Papers for a Special Section on
Fog, Edge, and Cloud Integration for Smart Environments
http://toit.acm.org/announcements.cfm

ACM Transactions on Internet Technology

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Important deadlines

Submission: 1 December 2017
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Submission Instructions

http://toit.acm.org/submission.html
Please select "Special Section: Fog, Edge, and
Cloud Integration for Smart Environments" in the
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An emerging theme that combines elements of cloud computing and the Internet of Things is centered on exploiting the capabilities of embedded smart devices that are closer (geographically and in terms of latency) to users and their decision-making. Fog Computing tries to distribute some of the resources and services of computation, communication, control & storage away from centralized data centers, by exploiting the concept of *cloudlets*. Edge Computing extends such concept incorporating also IoT devices.

The integration between Cloud, Edge and Fog computing gives rise to research challenges spanning from: design & implementation of mechanisms and policies for device management to issues in the enrollment of mobile devices and users, from trust and identity management in federated environments to distributed data analytics algorithms and frameworks. A central challenge is the effective orchestration of capabilities across edge devices and centralized data centres (which can be multiple hops away from a user).

The objectives of this special section is to focus on novel solutions and innovative approaches that contribute to enhance the synergy between the Cloud, Fog and Edge computing, and the use of these in smart environments and applications (e.g. smart cities, smart homes/building, industry 4.0). Topics of interest include:

Theoretical Foundations
- Modelling languages and notations
- Policy-based provisioning and resource management
- Porting and development of applications & services
- Configuration management and adaptation
- Security: policies, privacy & access control

Resource Management Mechanisms
- Devices/infrastructures configuration and management
- Architectures and reference models
- Security, Identity and trust management
- Mobile Crowdsensing
- Performance monitoring & evaluation
- Service placement, migration and adaptation

Applications
- Case studies: smart cities, Industry 4.0, smart homes/buildings, intelligent transport, or other areas
- Scalable data analytics & stream processing
- Scenarios demonstrating practical use and deployment
- Revenue-generating applications and services