

# Sokol Kosta

Curriculum Vitae

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## Current Position

**Postdoc at the Computer Science Department, Sapienza University, Rome, Italy.**

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## Research Interests

Mobile cloud computing, Analysis and modeling of mobile social networks, Security of wireless networks and systems, Parallel and distributed systems.

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## Education

- 2009–2012 **PhD**, *Computer Science Department, Sapienza University of Rome, Italy.*  
- Final evaluation: *Outstanding.*  
- Thesis title: *“Mobility Models, Mobile Code Offloading, and P2P Networks of Smartphones on the Cloud”*  
- Advisor: *Prof. Alessandro Mei.*
- 2006–2009 **Master’s degree**, *Computer Science Department, Sapienza University of Rome, Italy.*  
- Graduated with *Summa Cum Laude.*  
- Thesis title: *“Models and Community Structures in Mobile Social Networks”*  
- Supervisor: *Prof. Alessandro Mei.*
- 2002–2006 **Bachelor’s degree**, *Computer Science Department, Sapienza University of Rome, Italy.*  
- Graduated with *110/110.*  
- Thesis title: *“Connectivity and Temporal Connectivity of Mobile Sensor Networks”*  
- Supervisor: *Prof. Alessandro Mei.*

## Grants

- July 2013 **Research Starting Grant**, *from the Sapienza University of Rome.*
- April 2013 **IEEE INFOCOM 2013 Student Travel Grant.**
- 2003–2009 **CS Department’s Scholarship**, *CS Department, Sapienza University of Rome.*
- 2002–2009 **Laziodisu Scholarship**, *from the Italian Institution for the Right of Higher Education.*

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## Experiences

### European Projects

- 2012–ongoing **ICT TROPIC: Distributed computing, storage and radio resource allocation over cooperative femtocells, STREP FP7.**
- 2012 **IoT-A: Internet of Things Architecture, STREP FP7.**

## Internships

- Feb. 2011 – **Mobile Cloud Computing**, *Deutsche Telekom Laboratories*, Berlin, Germany.  
May 2011 Internship with Dr. Pan Hui on Mobile Cloud Computing, Code Offloading and Energy estimation for Mobile Phones
- Sep. 2010 – **Opportunistic networks & Distributed Computing**, *Deutsche Telekom Laboratories*, Berlin, Germany.  
Dec. 2010 Internship with Dr. Pan Hui on studying the QoS of Opportunistic networks.

## Working

- '07 **Webmaster**, *Fondazione mondo digitale*, Rome, Italy.  
Creation and maintenance of websites.

## Teaching

- 2014 **Tutor**, *Python course for Olympiad of Informatics*, Computer Science Department, Sapienza University, Rome, Italy.
- 2013 **Teaching assistant**, *Python Programming language*, Department of Statistics, Sapienza University, Rome, Italy.
- 2012 **Teaching assistant**, *Computer Organization and Design*, Computer Science Department, Sapienza University, Rome, Italy.
- 2012 **Tutor**, *Python course for Olympiad of Informatics*, Computer Science Department, Sapienza University, Rome, Italy.
- 2012 **Tutor**, *C Programming language course*, Department of Mathematics, Sapienza University, Rome, Italy.

## Participations

- October '11 **SWING 11: 6<sup>th</sup> PhD School on Security of Wireless Networking**, Bertinoro, Italy.
- June '11 **EIT Cloud Computing Summer School 2011**, Helsinki, Finland.
- July '10 **SWING 10: 5<sup>th</sup> PhD School on Security of Wireless Networking**, Bertinoro, Italy.
- July '09 **SWING 09: 4<sup>th</sup> PhD School on Security of Wireless Networking**, Bertinoro, Italy.
- May '09 **IPDPS – IEEE International Parallel & Distributed Processing Symposium**, Rome, Italy, (Volunteer for the conference organization).
- March '09 **(Computational) Complexity in Everyday Life**, Rome, Italy.  
Seminar held by Prof. Madhu Sudan (*MIT, Boston, USA*).
- July '08 **SWING 08: 3<sup>rd</sup> PhD School on Security of Wireless Networking**, Bertinoro, Italy.
- '10 – current **Sm@rt, Short Meetings Addressing Relevant Topics in Computer Science**, *Computer Science Department of Sapienza University*, Rome, Italy.  
Every Monday at 2:30pm a meeting with students and researchers.

## Presentations

- March '14 **StreamSmart: P2P Video Streaming for Smartphones Through The Cloud**, *Demo session at Future Internet Assembly (FIA) 2014*, Athens, Greece.
- March '14 **TROPIC and CROWD European projects**, *Future Internet Assembly (FIA) 2014*, Athens, Greece.

- January '14 **Demo presentation for TROPIC EU project**, *Project review*, Brussels, Belgium.
- June '13 **StreamSmart: P2P Video Streaming for Smartphones Through The Cloud**, *IEEE SECON 2013, Demo Session*, New Orleans, USA.
- April '13 **CDroid: Towards a Cloud-Integrated Mobile Operating System**, *IEEE INFOCOM 2013, Demo session*, Turin, Italy.
- April '13 **CloneDoc: Exploiting the Cloud to Leverage Secure Group Collaboration Mechanisms for Smartphones**, *IEEE INFOCOM 2013, Demo session*, Turin, Italy.
- February '13 **PhD defense**, *Computer Science Department of Sapienza University*, Rome, Italy.
- October '11 **Presentation for the 3<sup>rd</sup> year of PhD**, *Computer Science Department of Sapienza University*, Rome, Italy.
- June '11 **Poster presentation of ThinkAir**, *EIT Cloud Computing Summer School 2011*, Helsinki, Finland.
- October '10 **Performance and Energy Efficiency Improvement using ThinkAir**, *Deutsche Telekom Laboratories*, Berlin, Germany.
- July '10 **Communities in Synthetic Wireless Social Mobile Networks**, *SWING 2010*, Bertinoro, Italy.
- June '10 **Small World In Motion (SWIM): Modeling Communities in Ad-Hoc Mobile Networking**, *SECON 2010*, Boston, Massachusetts, USA.
- May '10 **Making Peer-Assisted Content Distribution Robust to Collusion Using Bandwidth Puzzles**, *Computer Science Department of Sapienza University*, Rome, Italy.

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## Languages

Albanian	<b>Native Language</b>
English	<b>Excellent</b>
Italian	<b>Fluent</b>
French	<b>Intermediate</b>

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## Computer skills

OS	Linux, Windows, Mac OS, Android OS.
Programming languages	C, C++, Java, Python, Assembly, SQL, Php, HTML, CSS.
CMS	Drupal.

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## Awards

- June 2013 **IEEE SECON 2013 Best Demo Award.**
- April 2013 **IEEE INFOCOM 2013 Best Demo Award.**
- June 2012 **Best PhD student paper award**, *Computer Science Department of Sapienza University*, Rome, Italy.

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## Publications

- [1] M. V. Barbera, S. Kosta, A. Mei, V. C. Perta, and J. Stefa, "Mobile Offloading in the Wild: Findings and Lessons Learned Through a Real-life Experiment with a New Cloud-aware System", **IEEE INFOCOM 2014**, Toronto, Canada, 2014.
- [2] D. Mattiacci, S. Kosta, A. Mei, and J. Stefa, "Supporting Interoperability of Things in IoT Systems", **ACM SENSYS 2013**, Demo Session, Rome, Italy, 2013.
- [3] S. Kosta, V. C. Perta, J. Stefa, P. Hui, and A. Mei, "Clone2Clone (C2C): Peer-to-Peer Networking of Smartphones on the Cloud", **USENIX HotCloud 2013**, San Jose, CA, USA, 2013.
- [4] S. Kosta, A. Mei, and J. Stefa. "Large-Scale Social Mobile Synthetic Networks with SWIM", **IEEE Transactions on Mobile Computing**, 2013.
- [5] A. Gaeta, S. Kosta, J. Stefa, and A. Mei, "StreamSmart: P2P Video Streaming for Smartphones Through The Cloud", **IEEE SECON 2013**, Demo Session, New Orleans, USA, 2013. **Best IEEE SECON 2013 Demo Award**.
- [6] M. V. Barbera, S. Kosta, A. Mei, and J. Stefa, "To Offload or Not to Offload? The Bandwidth and Energy Costs of Mobile Cloud Computing", In **Proc. of IEEE INFOCOM 2013**, Turin, Italy, 2013.
- [7] M. V. Barbera, S. Kosta, A. Mei, V. C. Perta, and J. Stefa, "CDroid: Towards a Cloud-Integrated Mobile Operating System", In **Proc. of IEEE INFOCOM 2013**, Demo Session, Turin, Italy, 2013. **Winner of the IEEE INFOCOM 2013 Best Demo Award**.
- [8] S. Kosta, V. C. Perta, J. Stefa, P. Hui, and A. Mei, "CloneDoc: Exploiting the Cloud to Leverage Secure Group Collaboration Mechanisms for Smartphones", In **Proc. of IEEE INFOCOM 2013**, Demo Session, Turin, Italy, 2013.
- [9] M. V. Barbera, S. Kosta, J. Stefa, P. Hui, and A. Mei, "CloudShield: Efficient Anti-Malware Smartphone Patching with a P2P Network on the Cloud", **IEEE International Conference on Peer-to-Peer Computing**, Tarragona, Spain, 2012.
- [10] S. Kosta, A. Aucinas, P. Hui, R. Mortier, and X. Zhang, "ThinkAir: Dynamic resource allocation and parallel execution on the cloud for mobile code offloading", In **Proc. of IEEE INFOCOM 2012**, Orlando, Florida USA, 2012.
- [11] R. Pal, S. Kosta, and P. Hui, "Settling for less – A QoS compromise mechanism for opportunistic mobile networks", In **Proceedings of ACM SIGMETRICS MAMA**, San Jose, California, USA, 2011. **An improved version of this paper appeared in ACM SIGMETRICS Performance Evaluation Review, November 2011.**
- [12] S. Kosta, A. Mei, and J. Stefa, "Small World in Motion (SWIM): Modeling Communities in Ad-Hoc Mobile Networking", **SECON 2010: The 7th IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks**, Boston, Massachusetts, USA, 2010.

## Patents

- Pan Hui, Sokol Kosta, and Yu Xiao. "Method and system of using networked VM in the cloud to provide mobile applications and services", *filed by Deutsche Telekom AG to the European Patent Office*, October 2011.

## Submitted and Technical reports

- M. V. Barbera, S. Kosta, A. Mei, and J. Stefa, "To Offload or Not to Offload? The Bandwidth and Energy Costs of Mobile Cloud Computing", *Submitted to international journal*, 2013.
- S.Kosta, J.Stefa, P.Hui, R.Mortier, and X.Zhang, "ThinkAir: Dynamic resource allocation and parallel execution on the cloud for mobile code offloading", *Submitted to international journal*, 2013.

- S. Kosta, C. Perta, J. Stefa, P. Hui, and A. Mei. "Clone2Clone (C2C): Enable Peer-to-Peer Networking of Smartphones on the Cloud", *Submitted to international journal*, 2013.
- S. Kosta, A. Aucinas, P. Hui, R. Mortier, and X. Zhang. "Unleashing the Power of Mobile Cloud Computing using ThinkAir", *arXiv:1105.3232v1 [cs.DC]*, 2011.