



SEMIOTICS: Smart End-to-end Massive IoT Interoperability, Connectivity and Security

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## **SEMIOTICS Status**

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The main highlights in the context of SEMIoTICS during the last 6 months (June 2019 - December 2019), can be summarized as follows:

- SEMIoTICS participated in various standardization events for **Security** and **Cryptography**
- Three technical papers of SEMIoTICS were presented in **IEEE GLOBECOM 2019**
- SEMIOTICS participated in the **Researchers' Night** at Crete and Barcelona, demonstrating various solutions





## **SEMIoTICS Standardization Activities**



SEMIOTICS (through UP) participated in the **Cybersec4Europe** conference in Toulouse. The event itself allowed for briefly introducing a key aspect (i.e., Identity Management) of the SEMIOTICS project to the many participants from all over Europe.

SEMIoTICS participated in the 59th meeting of WG2 on **Cryptography and security mechanisms** and the 29th meeting of WG 4 on **Security controls and services** that took place in Paris, France.

### ISO/IEC JTC 1

# ISO/IEC JTC 1/SC 27 Information security, cybersecurity and privacy protection

# SEMIoTICS presence in IEEE GLOBECOM 2019



In the context of SEMIoTICS, three technical papers have been presented in IEEE GLOBECOM 2019 that took place in Hawaii, USA.

# SEMIoTICS at Researchers' Night



SEMIoTICS' Mobile communication infrastructure demonstration at Researchers Night at Crete, September 2019.



Smart Home and Network Slicing for energy management demonstration at Researchers Night at Barcelona, September 2019.

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## **Publications**

- 1. S. Krenn, H. C. Pöhls, K. Samelin and D. Slamanig, **Fully Invisible Protean Signatures Schemes**, IET Information Security, Nov. 2019.
- 2. I. Sarrigiannis, K. Ramantas, P.-V. Mekikis, A. Antonopoulos. E. Kartsakli, C. Verikoukis, **Online VNF Lifecycle Management in a MEC-enabled 5G IoT Architecture**, to appear in IEEE Journal on Internet of Things
- 3. K. Fysarakis, M. Papoutsakis, N. Petroulakis, and G. Spanoudakis, **Towards IoT Orchestrations with Security, Privacy, Dependability and Interoperability Guarantees**, IEEE GLOBECOM, Waikoloa, HI, USA, Dec. 9-13, 2019.
- 4. G. Hatzivasilis, O. Soultatos, E. Lakka, S. Ioannidis, D. Anicic, A. Bröring, K. Fysarakis, G. Spanoudakis, M. Falchettom, and L. Ciechomski, **Secure Semantic Interoperability for IoT Applications with Linked Data**, IEEE GLOBECOM, Waikoloa, HI, USA, Dec. 9-13, 2019
- 5. O. Soultatos, M. Papoutsakis, K. Fysarakis, G. Hatzivasilis, M. Michalodimitrakis, G. Spanoudakis, and S. Ioannidis, **Pattern-driven Security, Privacy, Dependability and Interoperability management of IoT environments**, 24th IEEE CAMAD, Limassol, Cyprus, Sept. 11-13, 2019
- 6. E. Sakic, S.C. Bermudez, E. Goshi, N. Deric, W. Kellerer, **P4BFT: A Demonstration of Hardware-Accelerated BFT in Fault-Tolerant Network Control Plane**, ACM SIGCOMM '19 Posters and Demos, 2019, Beijing, China.
- 7. E. Sakic, W. Kellerer, **BFT Protocols for Heterogeneous Resource Allocations in Distributed SDN Control Plane,** IEEE ICC, 20-24 May 2019, Shanghai, China.
- 8. P. Vizarreta, E. Sakic, W. Kellerer, C. Mas Machuca, **Mining Software Repositories for Predictive Modelling of Defects in SDN Controller**, IFIP/IEEE International Symposium on Integrated Network Management, Washington, USA, 2019.
- 9. C. Tzagkarakis, N. Petroulakis, S. Ioannidis, **Botnet Attack Detection at the IoT Edge Based on Sparse Representation**, Global IoT Summit 2019 (GIoTS'19), Aarhus, Denmark, June 17-21, 2019.

# SEMIoTICS in Social Media



We're on the Web! Find us at: https://www.semioticsproject.eu/ SEMIoTICS is present in:



Please follow us @semiotics\_eu to keep up to date with the project progress!