



INSPIRE-5Gplus

5G+ Security News

Issue 2-3 / August-November 2020

Editorial

Dear reader,

The Covid-19 pandemic keeps on affecting the work of INSPIRE-5Gplus, like it affects the 5G PPP as a whole. That is particularly true for dissemination events, which also in the second half of this crisis year are held almost exclusively online. Despite these limitations, INSPIRE-5Gplus has significantly progressed its work since summer, as you can read in this double-issue of our newsletter for Q3 and Q4, which covers the period August-November 2020.

In the Results section, we present our latest deliverable on 5G security test cases as well as our White Paper on intelligent security architecture and the IETF Internet-Draft on EDHOC authentication by consortium partner University of Murcia.

In the Events section, we report about a number of conferences and workshops to which INSPIRE-5Gplus contributed, including SecSoft 2020, ICTON 2020, the IEEE 5G World Forum 2020, where we organised a Workshop on 5G Security, the first IEEE TEMS Latin American Industrial Forum, and more. See also our upcoming events.

If you would like to stay up-to-date with our activities and results, we recommend to follow us on Twitter, where we regularly post under @INSPIRE_5Gplus. In addition, you could also regularly check the News section on our project website.

We hope you find the information in our newsletter interesting and valuable, and we look forward to any questions or comments you may have.

Kind regards,

The INSPIRE-5Gplus Team

Results

[INSPIRE-5Gplus
deliverable on 5G
security test cases](#)



The latest INSPIRE-5Gplus deliverable D5.1 on "5G security test cases", published on 4th November, presents the set of test cases selected for validation in the

INSPIRE-5Gplus project. This set of test cases was selected by performing an exhaustive requirements elicitation of 5G security use cases defined by INSPIRE-5Gplus in WP2, stemming from the new and enhanced 5G security and trust/liability ...

[Read more.](#)



[White Paper on Intelligent Security Architecture for 5G and Beyond Networks](#)

INSPIRE-5Gplus has published a White Paper on "Intelligent Security Architecture for 5G and Beyond Networks" (November 2020). The White Paper introduces the overall INSPIRE-5Gplus framework's High-Level Architecture, its main functional blocks and their role in enabling intelligent closed-loop security operations. To illustrate how the INSPIRE-5Gplus framework can be applied as a zero-touch security management solution for 5G systems, the White ...

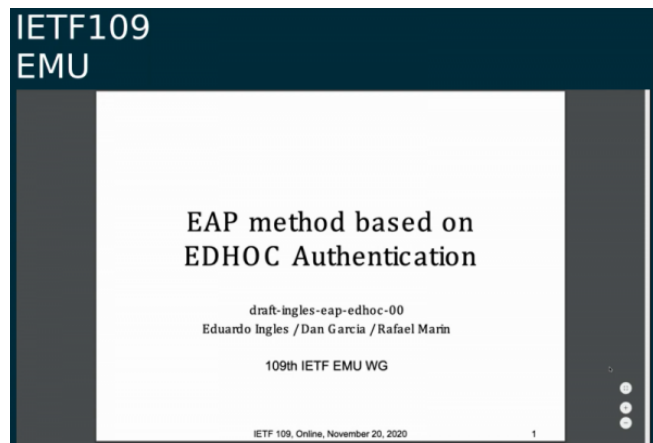
[Read more.](#)

[IETF Internet-Draft on EDHOC authentication presented](#)

On 20th November, a team from INSPIRE-5Gplus partner University of Murcia presented an IETF Internet-Draft on "AAA-based assisted EDHOC Authentication" at a meeting

of the IETF Working Group on EAP Method Update (EMU). The draft is related to the authentication process of IoT end devices in the 5G architecture. The document describes a proposal to place an Ephemeral Diffie-Hellman Over ...

[Read more.](#)



Event Reports



**What Happens Next?
Beyond Security with Liability in Future
Networks**

Gürkan Gür
ZHAW InIT

**MSPN 2020, Paris, France
Keynote Speech**

(*Joint work with INSPIRE-5Gplus team)
(** Special thanks to Chrystel Gaber@Orange)

INSPIRE-5Gplus

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Keynote on liability concepts at MSPN 2020

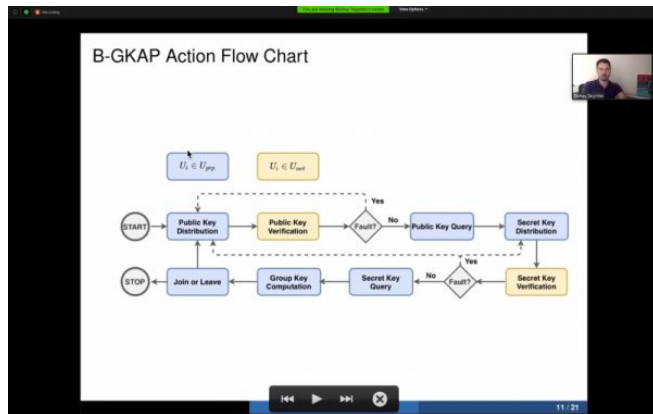
On 29 October 2020, Dr. Gürkan Gür from INSPIRE-5Gplus partner Zurich University of Applied Sciences (ZHAW) gave a keynote titled "What Happens Next? Going Beyond Security via Liability in Future

Networks" at the 6th International Conference on Mobile, Secure and Programmable Networking (MSPN 2020, 28-29 October 2020). His talk focused on the liability concepts and liability-aware security architecture developed in ...

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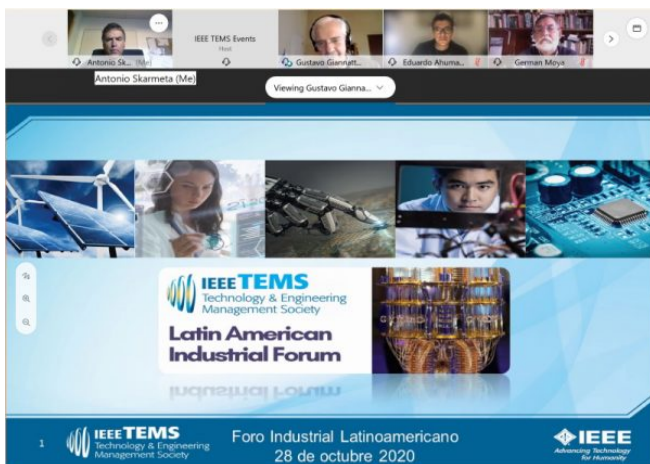
Paper on DGKA presented at AIBlock workshop

The INSPIRE-5Gplus related paper titled "Dynamic group key agreement for resource-constrained devices using blockchains" was presented on 19 October 2020 at the AIBlock workshop, which was held in



conjunction with the 18th International Conference on Applied Cryptography and Network Security (ACNS) 2020. INSPIRE-5Gplus partner Zurich University of Applied Sciences (ZHAW) collaborated with researchers from other universities to devise a group ...

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INSPIRE-5Gplus at first IEEE TEMS Latin American Industrial Forum

On 28th October 2020, the IEEE Technology & Engineering Management Society (TEMS) organised its first Latin American Industrial Forum. INSPIRE-5Gplus

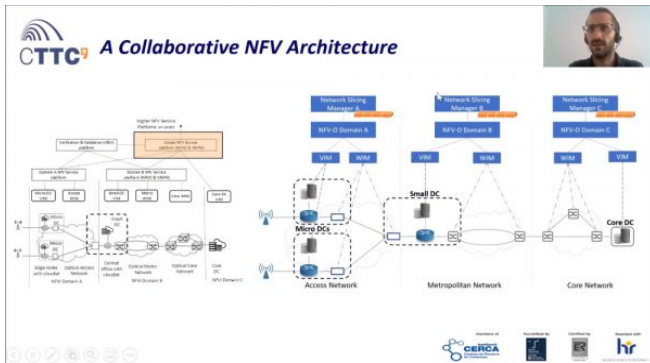
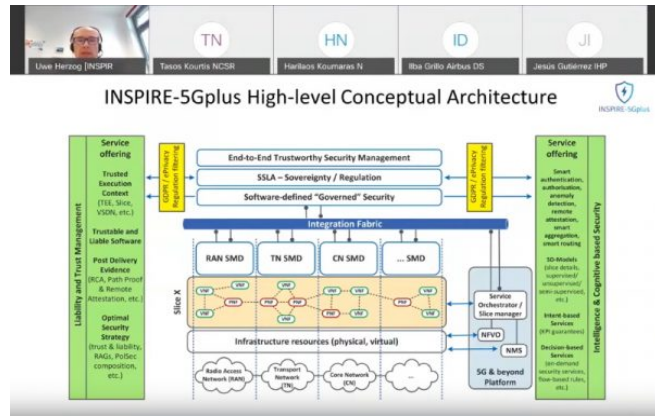
was represented at the event by Antonio Skarmeta from the University of Murcia. In session 1, which was dedicated to the Internet of Things (IoT), he gave an invited talk on "IoT and 5G: New Opportunities". His presentation focused on ...

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[INSPIRE-5Gplus at Online Workshop on 5G Trials in Europe](#)

On 14 October, INSPIRE-5Gplus coordinator Uwe Herzog from Eurescom presented the INSPIRE-5Gplus project at an online workshop on "5G Experimentation Facilities and Vertical Trials: Current Status and Future Perspectives". The workshop attracted almost 100 participants. It was organised by the Institute of Informatics & Telecommunications of the Greek National Centre of Scientific Research "Demokritos" in the framework of 5G PPP ...

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[5G Security Workshop at 5G World Forum 2020](#)

At the virtual IEEE 5G World Forum 2020, INSPIRE-5Gplus co-organised and sponsored a workshop on "5G Security: Current Trends, Challenges

and New Enablers" (WS1) on 10th September. The workshop aimed at providing a forum for industry and academia to disseminate new results on 5G security. Researchers from Europe and America presented nine high-quality papers on a wide range of 5G ...

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[Novel E2E slicing architecture by INSPIRE-5Gplus presented at ICTON 2020](#)



At ICTON 2020, Pol Alemany from CTTC presented the first architecture design aimed at developing a solution for managing end-to-end (E2E) network slices. The paper presentation at the 22nd International Conference on Transparent Optical Networks (ICTON) was given online on 23rd July. The invited paper written by INSPIRE-5Gplus partners CTTC and Thales has the title "Transport network slices with security ...

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Dynamic Security Management on IoT through Network Softwareization
Antonio Skarmeta
Universidad de Murcia (Spain)
askarmeta@um.es

2nd International Workshop on Cyber-Security Threats, Trust and Privacy Management in Software-defined and Virtualized Infrastructures (SecSoft), July 3-4, 2020

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INSPIRE-5Gplus has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N° 871808




results presented in keynote at SecSoft 2020

At SecSoft 2020, the 2nd International Workshop on Cyber-

Security Threats, Trust and Privacy Management in Software-defined and Virtualized Infrastructures on 3rd July 2020, Antonio Skarmeta from INSPIRE-5Gplus partner University of Murcia gave the keynote speech. In his speech, he presented some INSPIRE-5Gplus results related to the dynamic security management in SDN/VFN. The title of his presentation was "Dynamic Security Management ..."

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Upcoming Events





Security of UAS-to-UAS Networking

Gürkan Gür

Zurich Uni. of Applied Sciences (ZHAW)
InIT - Information Security Group

November 2020

IEEE VTC2020-Fall
Tutorial#16: Tutorial on Aerial Communications and Networks
Part 2: Security

*Special thanks to Drow Visit Dures

IEEE VTC2020-Fall

Dr. Gürkan Gür from INSPIRE-5Gplus partner Zurich University of Applied Sciences (ZHAW) will contribute to the "Tutorial on Aerial Communications and Networks" at the IEEE VTC2020-Fall from 18 November to 16 December 2020. It will be a joint virtual tutorial by Kamesh Namuduri, University of

North Texas, USA, Serge Chaumette, Université de Bordeaux, France, Ravikumar Pragada, InterDigital, Inc., USA, Helka-Liina ...

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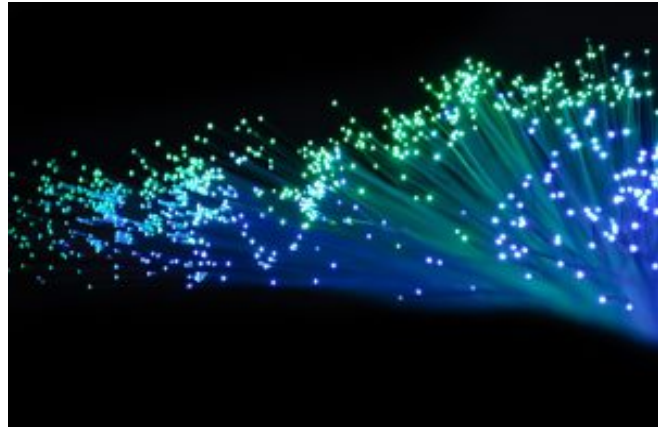


ETSI Virtual Event on Boosting the Impact of Research and Innovation through Standardization

INSPIRE-5Gplus will be presented at the ETSI Virtual Event on Boosting the Impact of Research & Innovation through Standardization (24-25 November 2020). On Day 2 (Wednesday, 25 November) at 09:55 UTC, Chrystel Gaber from INSPIRE-5Gplus partner Orange will be co-presenter in a session on "Leveraging research and innovation in security standards: The example of INSPIRE-5Gplus", together with Alex Leadbeater from ...

[Read more.](#)

[European Conference On Optical Communications - ECOC 2020](#)



ECOC is the largest conference on optical communication in Europe. The 46th edition of ECOC will take place online from 6th to 10th December 2020. INSPIRE-5Gplus will present a paper on "Managing Network Slicing Resources Using Blockchain in a Multi-Domain Software Defined Optical Network Scenario" and a tutorial on "Controlling and Monitoring Optical Network Equipment in Optical SDN Networks". Further ...

[Read more.](#)



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