

Fikret Basic  
Graz University of Technology  
Institute of Technical Informatics (4480)



## Employment

### Graz University of Technology

Institute of Technical Informatics (4480)

Graz University of Technology (90000)

Graz, Austria

1 Oct 2023 → present

## Research outputs

### BACON: Improving Broadcast Audio Authentication

Gasteiger, T., Perazzo, P., Schuß, M., Boano, C. A., Basic, F., Dini, G. & Römer, K. U., 29 Oct 2024, *MILCOM 2024 - 2024 IEEE Military Communications Conference (MILCOM)*. IEEE Xplore

### Highway Hijackers: Evaluating Patch Attack Susceptibility in Autonomous Driving Lane Detection Systems

Blažević, R., Toch, A. & Basic, F., 2024, (Accepted/In press) *The 3rd Workshop on Security and Privacy in Connected Embedded Systems (SPICES 2024)*. 6 p.

### Next-Generation Battery Management Systems: Integrating RFID for Battery Passport Applications

Scherr, F., Basic, F., Eder, P., Steger, C. & Kofler, R., 2024, (Accepted/In press) *IEEE RFID-TA 2024 – RFID Technology and Applications*.

### Secure Data Acquisition for Battery Management Systems

Basic, F., Seifert, C., Steger, C. & Kofler, R., 5 Sept 2023, (E-pub ahead of print) *2023 26th Euromicro Conference on Digital System Design (DSD)*. IEEE Xplore, 8 p.

### Enabling Secure and Wireless Battery Management Systems

Basic, F., Aug 2023, 231 p.

### Trust your BMS: Designing a Lightweight Authentication Architecture for Industrial Networks

Basic, F., Steger, C., Seifert, C. & Kofler, R., Jan 2023, *2022 IEEE International Conference on Industrial Technology (ICIT)*. 6 p.

### Establishing Dynamic Secure Sessions for ECQV Implicit Certificates in Embedded Systems

Basic, F., Steger, C. & Kofler, R., 2023, *2023 Design, Automation and Test in Europe Conference and Exhibition, DATE 2023 - Proceedings*. 6 p.

### Wireless BMS Architecture for Secure Readout in Vehicle and Second life Applications

Basic, F., Laube, C. R., Stratznig, P., Steger, C. & Kofler, R., 2023, *2023 8th International Conference on Smart and Sustainable Technologies, SpliTech 2023*. Solic, P., Nizetic, S., Rodrigues, J. J. P. C., Rodrigues, J. J. P. C., Rodrigues, J. J. P. C., Lopez-de-Ipina Gonzalez-de-Artaza, D., Perkovic, T., Catarinucci, L. & Patrono, L. (eds.). Institute of Electrical and Electronics Engineers

### A Novel Secure NFC-based Approach for BMS Monitoring and Diagnostic Readout

Basic, F., Laube, C. R., Steger, C. & Kofler, R., 19 May 2022, *2022 IEEE International Conference on RFID, RFID 2022*. ACM/IEEE, p. 23-28 6 p. 9795979

**Poster: Establishing Dynamic Secure Sessions for Intra-Vehicle Communication Using Implicit Certificates**  
Basic, F., Steger, C. & Kofler, R., 2022.

**Secure and Trustworthy NFC-based Sensor Readout for Battery Packs in Battery Management Systems**  
Basic, F., Gaertner, M. & Steger, C., 2022, In: *IEEE Journal of Radio Frequency Identification*. 6, p. 637-648 12 p., 9763024.

**Embedded Platform Patterns for Distributed and Secure Logging**

Basic, F., Steger, C. & Kofler, R., 2021, *Proceedings of the European Conference on Pattern Languages of Programs, EuroPLoP 2021*. Graz, Austria: Association of Computing Machinery, 9 p. 27. (ACM International Conference Proceeding Series).

**Towards Trustworthy NFC-based Sensor Readout for Battery Packs in Battery Management Systems**

Basic, F., Gärtner, M. & Steger, C., 2021, *2021 IEEE International Conference on RFID Technology and Applications, RFID-TA 2021*. Delhi, India: IEEE Publications, Vol. 11. p. 285-288 4 p. (2021 IEEE International Conference on RFID Technology and Applications, RFID-TA 2021).

**Multi-Layered IoT System Design Towards End-to-End Secure Communication**

Rech, A., Gressl, L. A., Basic, F., Steger, C., Sinnhofer, A. D. & Seifert, C., 18 Oct 2020, *Proceedings - IECON 2020: 46th Annual Conference of the IEEE Industrial Electronics Society*. p. 2213-2220 8 p. 9254556. (IECON Proceedings (Industrial Electronics Conference); vol. 2020-October).

**SimPar - A Concurrent Simulation System for Evaluation of Power-Aware Smart Sensors**

Basic, F., Oct 2018, 117 p.

## Activities

**43rd IEEE International Conference on Consumer Electronics - ICCE 2025 (Event)**

Basic, F. (Peer reviewer)  
11 Jan 2025 → 14 Jan 2025

**3rd Workshop on Security and Privacy in Connected Embedded Systems, SPICES 2024**

Basic, F. (Member of programme committee)  
10 Dec 2024

**Revolutionizing Autonomous Systems with Generative AI, and Large Language Models for Zero Trust Architecture: Enhancing Security, Resilience, and Safety of Systems Managing Edge Autonomous Devices**

Basic, F. (Participant)  
12 Nov 2024 → 13 Nov 2024

**Presenter at the GEED 2024**

Basic, F. (Presenter)  
17 Sept 2024 → 18 Sept 2024

**29th European Conference on Pattern Languages of Programs, People, and Practices - EuroPLoP 2024 (Event)**

Basic, F. (Peer reviewer)  
3 Jul 2024 → 7 Jul 2024

**Lange Nacht der Forschung 2024**

Basic, F. (Participant), Scherr, F. (Participant) & Steger, C. (Participant)  
24 May 2024

**AVL Hans List Fonds Preis Award Ceremony**

Basic, F. (Speaker)  
16 Oct 2023

**Didaktik-Werkstatt 2023 Get Together**

Basic, F. (Speaker)  
16 Oct 2023

**Rigorosum - Enabling Secure and Wireless Battery Management Systems**

Basic, F. (Speaker)  
25 Sept 2023

**Secure Data Acquisition for Battery Management Systems**

Basic, F. (Speaker)  
7 Sept 2023

**26th Euromicro Conference on Digital System Design (DSD) and 49th Euromicro Conference Series on Software Engineering and Advanced Applications (SEAA)**

Basic, F. (Chair)  
6 Sept 2023 → 8 Sept 2023

**Wireless BMS Architecture for Secure Readout in Vehicle and Second life Applications**

Basic, F. (Speaker)  
22 Jun 2023

**8th International Conference on Smart and Sustainable Technologies**

Basic, F. (Participant)  
20 Jun 2023 → 23 Jun 2023

**Establishing Dynamic Secure Sessions for ECQV Implicit Certificates in Embedded Systems**

Basic, F. (Speaker)  
18 Apr 2023

**Design, Automation & Test in Europe Conference & Exhibition**

Basic, F. (Participant)  
17 Apr 2023 → 19 Apr 2023

**Didaktik Werkstatt 2023: Ein Fortbildungsprogramm der Steirischen Hochschulkonferenz zur Hochschuldidaktik**

Basic, F. (Participant)  
5 Feb 2023 → 15 Jun 2023

**Poster: Establishing Dynamic Secure Sessions for Intra-Vehicle Communication Using Implicit Certificates**

Basic, F. (Speaker)  
4 Oct 2022 → 5 Oct 2022

**Trust your BMS: Designing a Lightweight Authentication Architecture for Industrial Networks**

Basic, F. (Speaker)  
25 Aug 2022

**Higher Education Didactics 1: Basics of Teaching and Learning**

Basic, F. (Participant)  
4 Jul 2022 → 5 Jul 2022

**A Novel Secure NFC-based Approach for BMS Monitoring and Diagnostic Readout**

Basic, F. (Speaker)

18 May 2022

**2021 IEEE International Conference on RFID Technology and Applications (RFID-TA)**

Basic, F. (Speaker)

8 Oct 2021

**EuroPLoP'21: 26th European Conference on Pattern Languages of Programs**

Basic, F. (Speaker)

7 Jul 2021 → 11 Jul 2021

## Prizes

**AVL Hans List Fonds Preis 2023**

Basic, F. (Recipient), Oct 2023

**Best Paper Presentation Award**

Basic, F. (Recipient), 25 Aug 2022

**ITalent South-East 2018**

Basic, F. (Recipient), 2018

**Scientist of the Year 2024**

Basic, F. (Recipient), Oct 2024

**Zertifikat für abgeschlossene Didaktik-Werkstatt 2023 für Hochschullehrende**

Basic, F. (Recipient), 16 Oct 2023

## Press/Media

**Gost: Fikret Bašić, Kladuščanin je koji živi i radi u Austriji (Guest: Fikret Bašić, a native of Kladuša who lives and works in Austria)**

Basic, F.

7/11/23

1 item of Media coverage

**Kleine Zeitung: Lockruf für den IT-Nachwuchs**

Basic, F.

14/05/19

1 item of Media coverage

## Projects

**Hardware/Software-Codesign**

Steger, C. (Co-Investigator (Col)), Seifert, C. (Co-Investigator (Col)), Stelzer, P. (Co-Investigator (Col)), Fiala, G. (Co-Investigator (Col)) & Basic, F. (Co-Investigator (Col))

1/01/95 → 31/12/24

**Intelligent & Networked Embedded Systems**

Boano, C. A. (Co-Investigator (Col)), Römer, K. U. (Co-Investigator (Col)), Schuß, M. (Co-Investigator (Col)), Cao, N. (Co-Investigator (Col)), Saukh, O. (Co-Investigator (Col)), Hofmann, R. (Co-Investigator (Col)), Stocker, M. (Co-Investigator (Col)), Schuh, M. P. (Co-Investigator (Col)), Papst, F. (Co-Investigator (Col)), Salomon, E. (Co-Investigator (Col)), Brunner, H. (Co-Investigator (Col)), Gallacher, M. (Co-Investigator (Col)), Mohamed Hydher, M. H. (Co-Investigator (Col)), Wang, D. (Co-Investigator (Col)), Corti, F. (Co-Investigator (Col)), Krisper, M. (Co-Investigator (Col)), Basic, F. (Co-Investigator (Col)) & Petrovic, K. (Co-Investigator (Col))

1/09/13 → 31/12/24

**OPEVA - Optimization of Electric Vehicle Autonomy**

Steger, C. (Co-Investigator (Col)), Basic, F. (Co-Investigator (Col)), Bürgel, V. (Co-Investigator (Col)), Eder, P. (Co-Investigator (Col)), Macher, G. (Co-Investigator (Col)) & Finsterbusch, A. (Co-Investigator (Col))  
1/01/23 → 31/12/25

**Smart GigaWood - Innovative digitized high-performance wagon for wood and others KV modules**

Steger, C. (Co-Investigator (Col)), Basic, F. (Co-Investigator (Col)) & Feldbacher, M. (Co-Investigator (Col))  
1/04/18 → 31/03/20

**SPiDR2 - Secure, Performant, Intelligent, Dependable, Reliable, and Resilient Wireless Systems**

Schuh, M. P. (Co-Investigator (Col)), Boano, C. A. (Co-Investigator (Col)), Gallacher, M. (Co-Investigator (Col)), Basic, F. (Co-Investigator (Col)) & Schuß, M. (Co-Investigator (Col))  
7/01/25 → 6/01/28

**SPiDR - Secure, Performant, Dependable, and Resilient Wireless Mesh Networks**

Römer, K. U. (Co-Investigator (Col)), Schuß, M. (Co-Investigator (Col)), Boano, C. A. (Co-Investigator (Col)), Gallacher, M. (Co-Investigator (Col)), Schuh, M. P. (Co-Investigator (Col)) & Basic, F. (Co-Investigator (Col))  
1/07/21 → 31/12/24

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