

Academic Curriculum Vitæ

Details

Professional titles: FH-Prof. Priv.-Doz.
Titles: Dipl.-Ing. (FH) Dipl.-Ing. Dr. techn.
Name: **Andreas Unterweger**
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Date of birth: July 31, 1986

Education

- March 2012 – February 2015: Doctoral degree *Dr. techn.* (thesis advisor: Univ.-Prof. Mag. Dr. Andreas Uhl) in Engineering Sciences, *Department of Computer Sciences*, University of Salzburg, Salzburg, Austria.
- October 2009 – December 2011: Master's degree *Dipl.-Ing.* (with distinction; thesis advisor: Univ.-Prof. Dr.-Ing. Christoph Kirsch) in Applied Computer Science, *Department of Computer Sciences*, University of Salzburg, Salzburg, Austria.
- September 2004 – June 2008: Diploma degree *Dipl.-Ing. (FH)* (with distinction; thesis advisor: Dipl.-Ing. (FH) Peter Haber) in Information Technology and Systems Management, *School of Information Technology and Systems Management*, Salzburg University of Applied Sciences, Puch bei Hallein, Austria.

Work experience

Academic leadership positions

- May 2023 – now: Head of Academic Area *Networking & Cyber Security* at the *Department of Information Technology and Digitalisation*, Salzburg University of Applied Sciences, Puch bei Hallein, Austria.

Recent lecturing positions

- March 2015 – now: Senior lecturer (teaching professor (*FH-Prof.*) since May 2016) at the *School of Information Technology and Systems Management*, Salzburg University of Applied Sciences, Puch bei Hallein, Austria.
- February 2016 – June 2020: External lecturer at the *School of Web Business & Technology*, Kufstein University of Applied Sciences, Kufstein, Austria.

- February 2012 – January 2015: External lecturer at the *School of Information Technology and Systems Management*, Salzburg University of Applied Sciences, Puch bei Hallein, Austria.

Recent research positions

- January 2018 – now: Senior researcher at the *Center for Secure Energy Informatics*, Salzburg University of Applied Sciences, Puch bei Hallein, Austria.
- January 2018 – March 2018: Postdoctoral fellow at the *School of Electrical and Computer Engineering*, Cornell University, Ithaca, New York, USA.
- March 2015 – December 2017: Senior researcher at the *Josef Ressel Center for User-Centric Smart Grid Privacy, Security and Control*, Salzburg University of Applied Sciences, Puch bei Hallein, Austria.

Recent industry positions

- January 2021 – now: Manager R&D, NativeWaves, Himmelreich, Austria.
- September 2019 – December 2020: Lead Video Specialist, NativeWaves, Himmelreich, Austria.
- July 2018 – August 2019: Software engineer for low-delay streaming, NativeWaves, Puch bei Hallein, Austria.

Recent consulting and contractor positions

- February 2021 – March 2022: Expert for PDF signatures and signature verification (freelancer), sproof, Puch bei Hallein, Austria.
- December 2012 – March 2015: Pro-bono scientific and technical consultant on image processing and computer vision, Authentic Vision, Salzburg, Austria.

Selected open source project contributions

- *Multimedia Lecture Demonstrations* (illustration of core concepts of audio, image and video processing as well as related topics): Author, <https://github.com/dustsigns/lecture-demos>, 2016-2022.
- *FFmpeg* and *Libav* (audio and video coding libraries): API usage example for audio transcoding with extensive documentation, <https://github.com/FFmpeg/FFmpeg> and <https://github.com/libav/libav>, 2013-2015, 2017-2018 and 2022.

Selected awards

- Christian-Doppler award for scientific papers, designs and inventions in the field of natural sciences, The Federal State of Salzburg, Salzburg, Austria, December 2019.
- Science award, Chamber of Labour Salzburg, Salzburg, Austria, November 2015.
- Prize of appreciation, Federal Austrian Ministry of Science and Research, Vienna, Austria, November 2008.

Selected publications

Book chapters

- Knirsch, Fabian, Andreas Unterweger, Günther Eibl, and Dominik Engel: Privacy-Preserving Smart Grid Tariff Decisions with Block-Chain-Based Smart Contracts. In Rivera, Wilson (editor): Sustainable Cloud and Energy Services – Principles and Practice, chapter 4, pages 85–116. Springer International Publishing, Cham, Switzerland, September 2017, ISBN 978-3-319-62237-8. Download.

Journal articles

- Radovanovic, Dejan, Andreas Unterweger, Günther Eibl, Dominik Engel, and Johannes Reichl: How unique is weekly smart meter data? Energy Informatics, 5(1):1–10, September 2022. Download.
- Unterweger, Andreas, Fabian Knirsch, Dominik Engel, Daria Musikhina, Ammar Alyousef, and Hermann de Meer: An analysis of privacy preservation in electric vehicle charging. Energy Informatics, 5(3):1–27, May 2022. Download.

Conference papers

- Unterweger, Andreas, Fabian Knirsch, Clemens Brunner, and Dominik Engel: Low-risk Privacy-preserving Electric Vehicle Charging with Payments. In Workshop on Automotive and Autonomous Vehicle Security (AutoSec) 2021, pages 1–6, Online, February 2021. The Internet Society. Download.

Theses

- Unterweger, Andreas: Load Data Processing. Habilitation treatise, University of Salzburg, June 2021. Download.
- Unterweger, Andreas: Post-Compression Multimedia Security. PhD thesis, University of Salzburg, November 2014. Download.

Selected conference organization activities

Publication chair

- 8th D-A-CH+ Conference on Energy Informatics, Salzburg, Austria, September 2019.

Selected review activities

Journals

- Computers & Security, Elsevier, 2023.
- IEEE Transactions on Smart Grid, IEEE, 2015-2017 and 2019-2021.
- International Journal of Electrical Power and Energy Systems, Elsevier, 2021.
- IEEE Transactions on Power Delivery, IEEE, 2019.
- IEEE Transactions on Industrial Informatics, IEEE, 2017.
- IEEE Transactions on Power Systems, IEEE, 2016.
- European Association for Signal Processing (EURASIP) Journal on Information Security, Springer, 2015-2018, 2022.
- IEEE Transactions on Circuits and Systems for Video Technology, IEEE, 2014, 2015 and 2017.
- Signal Processing: Image Communication, Elsevier, 2014 and 2016-2018.

Teaching

Recent lectures

- Cryptography. *School of Information Technology and Systems Management* (Bachelor's degree program, semesters 5 and 6), Salzburg University of Applied Sciences, Puch bei Hallein, Austria, winter and summer semesters 2022/2023-2023/2024.
- Media Informatics. *School of Information Technology and Systems Management* (Bachelor's degree program, semester 5), Salzburg University of Applied Sciences, Puch bei Hallein, Austria, winter semesters 2013/2014-2023/2024.
- Media Technology. *School of Information Technology and Systems Management* (Bachelor's degree program, semester 4), Salzburg University of Applied Sciences, Puch bei Hallein, Austria, summer semesters 2014-2023.
- IT Security. *School of Web Business & Technology* (Bachelor's degree program, semester 4), Kufstein University of Applied Sciences, Kufstein, Austria, summer semesters 2017-2020.

Recent guest lectures

- Peer-to-peer Energy Trading on a Blockchain: Lessons Learned from an Austrian Proof of Concept. SNIPPET Summer School (host: Katholieke Universiteit Leuven), Platania, Greece, October 2022.
- Face encryption in surveillance videos. Warsaw University of Technology, Warsaw, Poland, May 2017.
- Privacy in Smart Grids. Warsaw University of Technology, Warsaw, Poland, May 2017.
- Selected coding methods in H.265/HEVC. Warsaw University of Technology, Warsaw, Poland, May 2017.

Recent courses

- Cyber Security Seminar. *Department of Artificial Intelligence and Human Interfaces* (Bachelor's degree program, semester 5), University of Salzburg, Salzburg, Austria, winter semester 2023/2024.
- Privacy Enhancing Technologies Seminar. *School of Information Technology and Systems Management* (Master's degree program, semester 2), Salzburg University of Applied Sciences, Puch bei Hallein, Austria, summer semester 2023.
- Cryptography Laboratory. *School of Information Technology and Systems Management* (Bachelor's degree program, semester 4 until 2021, after that semesters 5 and 6), Salzburg University of Applied Sciences, Puch bei Hallein, Austria, summer semesters 2018-2021, winter and semesters 2022/2023-2023/2024.
- Laboratory for Media Technology. *School of Information Technology and Systems Management* (Bachelor's degree program, semester 4), Salzburg University of Applied Sciences, Puch bei Hallein, Austria, summer semesters 2014-2022.

Selected supervised theses

- Panzl, Lisa Maria: Bilderkennung zur Rechnungsanalyse. Master's thesis, Salzburg University of Applied Sciences, Puch bei Hallein, Austria, September 2022.
- Riedl, Michael: Migration einer Audio-/Video-Encoder-Steuerungssoftware von Python nach C# .NET 6 unter besonderer Berücksichtigung der Skalierbarkeit/Parallelität. Bachelor 2 thesis, Salzburg University of Applied Sciences, Puch bei Hallein, Austria, September 2022.
- Niedermüller, Armin: Detecting Obstacles in 3D Point Clouds for Collaborative Robot Environments. Bachelor 2 thesis, Salzburg University of Applied Sciences, Puch bei Hallein, Austria, June 2020.