

DR. ABDULLAH S. AL-SHRA'A

Assistant professor and researcher at Jordan University of Science and Technology (JUST) with several years of experience in cybersecurity and communication networks in addition to excellent skills as a developer and teacher.



ABOUT ABDULLAH

Assistant Professor of Cybersecurity at Jordan University of Science and Technology (JUST), where I apply an energetic and creative approach to both research and teaching. My academic journey began in Jordan, where I earned Bachelor's and Master's degrees in Computer Science; my master's thesis focused on optimizing cluster head election in wireless sensor networks. I further expanded my expertise by completing a Ph.D. at Technische Universität Ilmenau in Germany in 2022, contributing to the field of Software-Defined Networking (SDN) security. Afterward, I worked as an Assistant Professor at FAU University in Germany and AUM University in Jordan. My current research is dedicated to evaluating and advancing cybersecurity in critical areas such as Intrusion Detection Systems (IDS), Intrusion Prevention Systems (IPS), SDN, and Smart Grids among other related topics. I am known for being a flexible and persistent team player with a strong work ethic and the ability to leverage resources effectively.

CONTACT

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- linkedin: Abdullah Alshra'a
- ResearchGate: Abdullah Alshra'a
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- +9620000000

SKILLS

- Programming
- Mininet
- Python
- C++
- Java
- Visual basic
- OMNeT++
- Matlab
- Bash



OBJECTIVE

Eager to leverage extensive expertise in Cybersecurity, AI/ML, and advanced networking (SDN, Virtualization, IoT) to handle new challenges within a dynamic academic or research environment. I am currently focused on my work as an Assistant Professor at JUST and am proud of the contributions I'm making here. However, I am always open to exploring compelling new challenges and opportunities that align with my expertise in cybersecurity, AI, and advanced networking."

WORK EXPERIENCE

- Oct 2025 - Present
Jordan University of Science and Technology (JUST)
Assistant professor
- Oct 2024 - Oct 2025
American University of Madaba (AUM)
Assistant professor
- July 2022 - Oct 2025
Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU).
Assistant professor
- 2017 - January 27, 2022
Technische Universität Ilmenau
Assistant Researcher
- Position responsibilities**
Supervision of research projects (15) and master student theses (5).
Performing literature reviews. Conducting research and summarizing findings.
- 2008 - 2016
Ministry of Education in Jordan
for Elementary and Secondary levels.
Computer Teacher

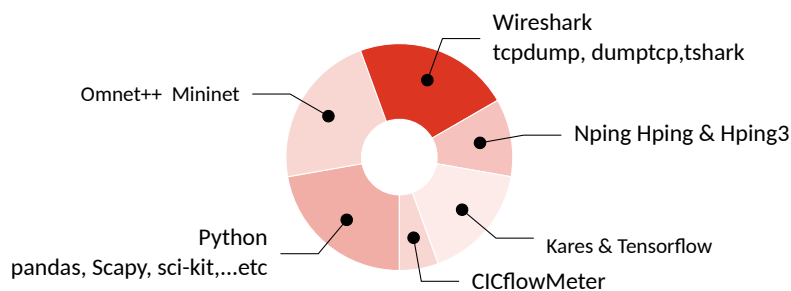
EDUCATION

- 2017 - January 2022
TU Ilmenau / Germany
Dr.-Ing. in CyberSecurity
- Dissertation Title:** Intrusion Detection System Against Denial of Service Attack in SDN
- Ph.D. Courses**
 - Communications Networks
 - Communications Engineering
 - Integrated Communication Systems
- 2009 - 2013
AL AL-Bayt University /Jordan
Master's degree of Computer science
- Dissertation Title:** Cluster Head Election in Wireless Sensor Networks
- 2003 - 2008
AL AL-Bayt University /Jordan
Bachelor's degree of Computer science

GENERAL SKILLS

- Research and Development
- CyberSecurity
- Computer Science
- Network Security
- Teaching
- Simulation
- Artificial Intelligence
- Machine Learning
- Deep Learning
- Networking
- IoT
- Network Calculus
- Programming
- Software-Defined Networking
- Smart Grids
- Communication networks
- Wireless Networks

TOOLS



TEACHING

- 👤 CYBERSECURITY FUNDAMENTALS
- 👤 DATABASE SECURITY
- 👤 WEB SECURITY
- 👤 INTRODUCTION TO OBJECT-ORIENTED
- 👤 Cryptography Theory
- 👤 Infrastructure Security in Linux
- 👤 Digital Forensic
- 👤 Special Topics in Cybersecurity: Python for Cybersecurity
- 👤 Cyber Security for Risk Mangement
- 👤 Computer Security
- 👤 Cybersecurity Programing
- 👤 Cyber Security for Smart Grids
- 👤 Modeling & Simulations II
- 👤 Technical Writing and Documentatio
- 👤 Object Oriented and GUI Laboratory
- 👤 Cybersecurity Programing Lab
- 👤 Seminar: Cyber Security in Smart Grids.

ACHIEVEMENTS

- 🏆 Thüringer Graduiertenförderung, 1.4.2018 - 31.8.2020. (Scholarship)
- 🏆 Preparation of a new course for master's degree students entitled 'Cyber-Scurity for Smart Grids' (CSSG) at FAU University
- 🏆 Award of the outstanding performance for 2023, Erlangen-Nürnberg University
- 🏆 Session Chair for IEEE Green Energy and Smart Systems Conference (IGESSC'23)

CERTIFICATES

- 🌸 Certified in Cybersecurity - CC, (ISC)²
- 🌸 Introduction to Cybersecurity, Cisco
- 🌸 Ethical Hacker, Cisco
- 🌸 Network Defense, Cisco
- 🌸 Junior Cybersecurity Analyst, Cisco
- 🌸 Cyber Threat Management, Cisco
- 🌸 Endpoint Security, Cisco
- 🌸 Networking Basics, Cisco
- 🌸 Network Support and Security, Cisco
- 🌸 Digital Forensics Essential(DFE), EC-Council
- 🌸 Network Defense Essentials (NDE), EC-Council
- 🌸 Introduction to Dark Web, Anonymity, and Cryptocurrency, EC-Council
- 🌸 Ethical Hacking Essentials (EHE), EC-Council
- 🌸 International Computer Driving Licence (ICDL), MoE in Jordan

Operating Systems

Linux
Windows



Software & Tools

Office
LaTeX



Languages

Arabic
English
German (B1 Level)



Next target

I am keen to continue learning Cybersecurity. Therefore, I will attend more courses to upgrade my skills as a main goal for the coming phase. Moreover, I remain committed to advancing the field of cybersecurity and look forward to contributing further to cutting-edge research and innovation.

REFERENCES

Prof. Jochen Seitz
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☎ +49 3677 69-2614
🏠 Jochen Seitz

Prof. Dr.-Ing. Reinhard German
✉ reinhard.german@fau.de
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🏠 Reinhard German

PUBLICATIONS I

Comparative Analysis of Smart Grid Routing Using Mixed-Integer SOCP and Network Calculus

 AS Alshra'a, J Fellerer, KS Hielscher, R German.

 2025  Procedia Computer Science 265, 528-535

Access Control Concepts and Policies in Cyber Security

 Abdullah S. Alshra'a & others.

 2024  Date-Driven Defense: Harnessing Analytics for Proactive Cybersecurity Startgies

Explainable Artificial Intelligence in Malware Analysis and Forensics

 Abdullah S. Alshra'a & others.

 2024  Attacks and Defenses in Explainable Artificial Intelligence

On the Effect of TSN Forwarding Mechanisms on Best-Effort Traffic

 Lisa Maile, Dominik Voitlein, Anna Arestova, **Abdullah S. Alshra'a** , Kai-Steffen Hielscher, Reinhard German

 2024  The 12th International Conference on Computer and Communications Management | July 19-21, 2024 | Kagoshima-shi, Japan

Survey of Cybersecurity in Smart Grids Protocols and Datasets

 Muhammad, Mamdouh; **Abdullah S. Alshra'a** , and Reinhard German.

 2024  The 14th International Conference on Sustainable Energy Information Technology August 5-7, 2024, Marshall University, Huntington, WV, USA

Cybersecurity Strategies for Smart Grids: Leveraging Agile IoT and IIoT Integration

 **Abdullah S. Alshra'a** & others.

 2024  Smart and Agile Cybersecurity for IoT and IIoT Environments

Security Principles in Smart and Agile Cybersecurity for IoT and IIoT Environments

 **Abdullah S. Alshra'a** & others.

 2024  Smart and Agile Cybersecurity for IoT and IIoT Environments

Penetration Testing in Agile Cybersecurity Environments

 **Abdullah S. Alshra'a** & others.

 2024  Agile Security in the Digital Era: Challenges and Cybersecurity Trends

A Novel IDS for DDoS Attack Detection in SDN using VGG-based Convolutional Neural Networks

 Muhammad, Mamdouh; **Abdullah S. Alshra'a** & others.

 2023  The 31st International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2023) | Split, Croatia.

Estimating the Influence of SDN Controller Intervention on Smart Grid Services

 **Abdullah S. Alshra'a** & others.

 2023  IEEE Green Energy and Smart Systems Conference | Long Beach, USA

Combined QoS Analysis of Smart Distribution Grids with Constraint Satisfaction and Network Calculus

 **Abdullah S. Alshra'a** & others.

 2023  IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids | Glasgow, Scotland, UK

Multipath TCP for Short Flows Supported by SDN in Heterogeneous Networks

 Ahmad Abumihsan, Abdalkarim Awad, MOHAMMAD JUBRAN , Aziz Qaroush, Iyad Tumar and **Abdullah S. Alshra'a** .

 2023  ICCCS2023|Guangzhou, China

PUBLICATIONS II

Intrusion Detection System Against Denial of Service Attack in Software-Defined Networking,

Ph.D. Dissertation, DOI:10.22032/dbt.51449,URN:urn:nbn:de:gbv:ilm1-2022000015

 Alshra'a, Abdullah Soliman

 2022  TU Ilmenau

One Dimensional Convolution Neural Network for Detection and Mitigation of DDoS Attacks in SDNs.

 Alshra'a, Abdullah Soliman, and Jochen Seitz.

📅 2021 📖 The 4th International Conference on Machine Learning for Networking (MLN'2021) Virtual conference, December 1-3, 2021

Towards Applying IPSec Between Edge Switches and End Users to Counter DDoS Attacks in SDNs.

👤 Alshra'a, Abdullah Soliman, and Jochen Seitz.

📅 2021 📖 The 19th IEEE International Conference on Smart City (SmartCity-2021)

Deep Learning Algorithms for Detecting Denial of Service Attacks in Software-Defined Networks.

👤 Alshra'a, Abdullah Soliman, and Jochen Seitz.

📅 2021 📖 The 16th International Conference on Future Networks and Communications (FNC). August 9-12, 2021, Leuven, Belgium

External Device to Protect the Software-Defined Network Performance in Case of a Malicious Attack

👤 Alshra'a, Abdullah Soliman, and Jochen Seitz.

📅 2019 📖 Proceedings of the 3rd International Conference on Future Networks and Distributed Systems, ACM

Protection of SDN Networks Against the Existing Security Threats

👤 Alshra'a, Abdullah, A. Bolatto, A. Leroy, R. Levy, E. Mills, D. Meier, S. Veilleux, F. Walter, A. Weiß

📅 2019 📖 Ilmenauer TK-Manager Workshop: Technische Universität Ilmenau, 17. Mai 2019; Tagungsband.

Using inspector device to stop packet injection attack in SDN.

👤 Alshra'a, Abdullah Soliman, , and Jochen Seitz.

📅 2019 📖 IEEE Communications Letters (2019).

Enhanced Failure Recovery Mechanism Using OpenState Pipeline in SDN.

👤 Alshra'a, Abdullah Soliman, , Parag Sewalkar, and Jochen Seitz.

📅 2018 📖 2018 Tenth International Conference on Ubiquitous and Future Networks (ICUFN). IEEE, 2018

Load Balancing Technique Based on Broadcasting and Residual Energy Using Adaptive Clustering Hierarchy Protocol (LBEACH).

👤 Alshra'a, Abdullah Soliman, , and Venus Wazeer Samawi.

📅 2015 📖 Journal of Computer Science 11.6 (2015): 821.