



(Senior) Research Scientist (m/f/d) – Applied Security for Industrial Connected Systems

Basic Info

Location **Ladenburg, Baden-
Württemberg, Germany**

Job type **Full-Time**

Contract **Regular/Permanent**

Join ABB and work in a team that is dedicated to creating a future where innovative digital technologies allow greater access to cleaner energy.

You are an expert in applied security research for industrial systems? You are additionally interested in industrial Internet of Things (IoT)/edge solutions and system integration? Then join ABB, a global key player in industrial automation and smart electrification, operating in more than 100 countries. Apply your technical expertise in a challenging and fascinating environment and collaborate with ABB divisions and partners worldwide, to develop the foundations of future ABB digital solutions.

Your responsibilities

- ABB is a technology leader driving the digital transformation of industries toward autonomous industrial plants and buildings. Security is a key requirement in this transformation. Industrial systems comprise automation systems, networks and devices, software tools and platforms, and control solutions. Embedded devices, industrial networks, and connected systems face increased challenges toward cyber security and privacy, and flexible and interoperable integration solutions. You will work on related technical challenges, e.g., application-driven network and device security concepts, software-based security concepts, trustworthy edge/cloud systems and security architectures.
- With your experience, you initiate, lead, and participate in innovative research projects and work with international ABB divisions, end customers, and renowned academic institutes.
- In international, multi-disciplinary teams, you generate new ideas and scout emerging technologies in applied security, information modeling and digital twin, and edge/cloud integration solutions.
- You develop innovative security concepts, design sustainable and trustworthy security architectures, and implement and integrate software components for secure systems.
- You validate concepts by prototypes, showcase them in demonstrators, present results to relevant stakeholders inside and outside of ABB, and support product development.
- You publish scientific articles and secure intellectual property by patent applications.

Your background

- We expect you to have cross-cultural communication skills and to bring creativity, initiative, and result orientation to drive your innovations toward new products and services. Proficient English skills are mandatory.
- For this role, you have an above average degree in IT security, computer science, automation engineering or a related field, combined with either academic experience (PhD) or professional experience in applied security, industrial networks and architectures, and system integration.
- We are looking for a researcher with the following background:

- Experience with network and device security (e.g., IDS, PKI, trusted computing concepts), security engineering (e.g., security and privacy by design, IEC 62443, threat analysis), and prototypical validation of software-based security concepts
- Experience with security and communication architectures, preferably with focus on modeling and integration technologies (e.g., OPC UA, RDF/OWL, EMF/Ecore) or industrial networking technologies (e.g., OPC UA, 5G)
- Hands-on experience in (embedded) software development (e.g., C++, C, C#, Java)
- Expertise in one of the following fields is a plus: fieldbus (e.g., PROFINET IO, Ethernet/IP), domain knowledge in process automation or smart buildings, experience with lean/agile software development processes (e.g., Scrum, Kanban) or project management (e.g., PMI)

More about us

Bring your very own sense of pride and purpose as you help us drive forward the Fourth Industrial Revolution – creating a sustainable future for our planet, and your career. Join ABB and harness the power of our diverse global network, as you collaborate with and learn from our world-class teams. Above all, challenge yourself every day. Let's write the future, together.

ABB is able to offer you an interesting role within a highly motivated team with open communication structures. You will be given the opportunity to acquire the confidence needed to work independently and self-reliantly within your assigned area. ABB is also able to provide a wealth of opportunity for personal development, the aim being to assist you in attaining your career goals. Personalized development programs with targeted training measures will help you to enhance your skills continuously.

ABB Data Privacy Statement:

<https://new.abb.com/privacy-notice/candidate>

Would you like to receive further information?

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