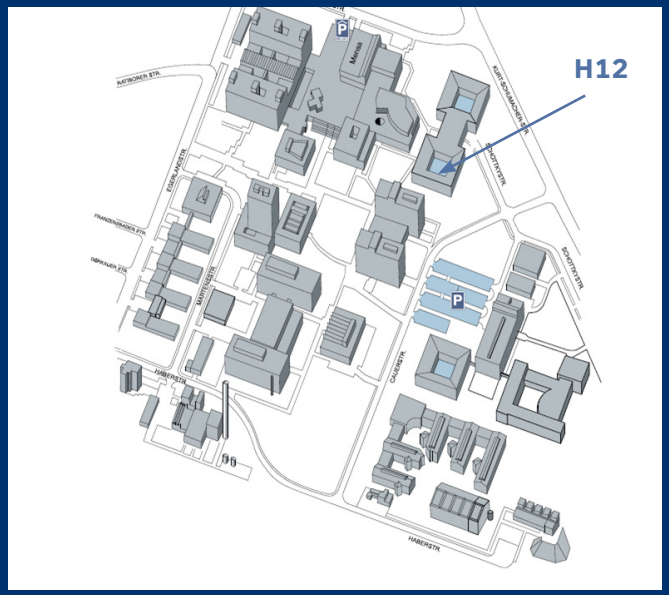
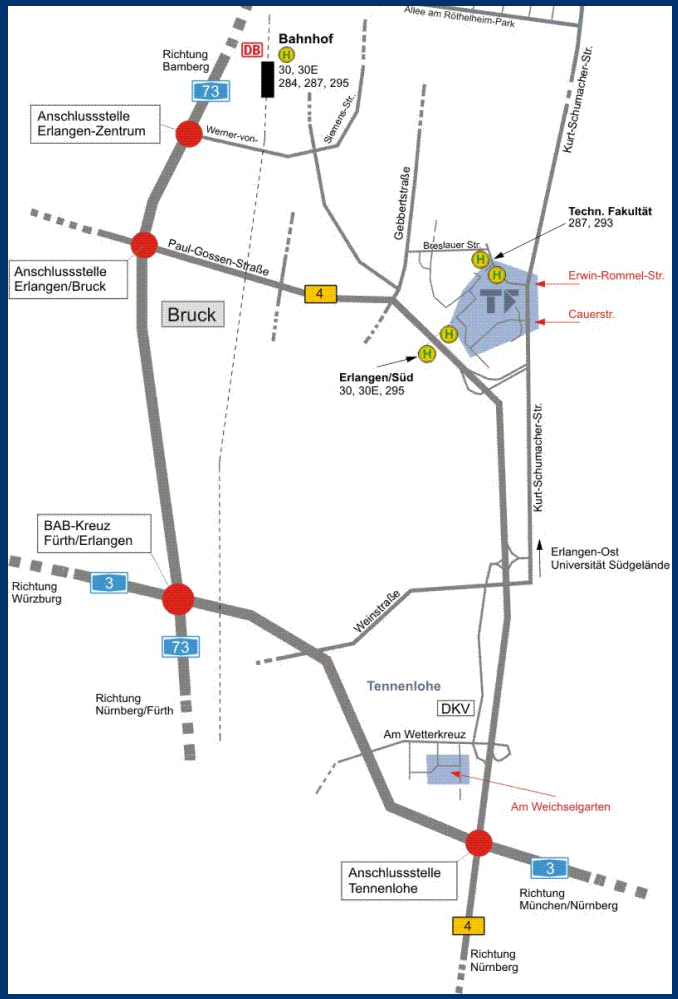
Embedded Talk @ FAU

The Embedded Talk is an established series of events that is an ideal information and communication forum to promote regular exchange between experts from science and industry. Immerse yourself into the world of Embedded AI and find out more about the latest developments in this field at the 19th Embedded Talk.

The research focus “Embedded AI” deals with the application of artificial intelligence for the design of (embedded) electronic systems as well as the design of intelligent electronic systems, in particular autonomous systems. However, lightweight implementations of such embedded autonomous systems present researchers and developers with major challenges that have not yet been adequately solved in terms of data volumes, storage and processing performance, as well as the correctness, safety and security of such intelligent systems.



esi.fau.de



By Train / Bus
from
Erlangen Central Station:
Bus 287 or 293
direction
„Sebaldussiedlung“
Stop:
„Technische Fakultät“

By Car
A3 Würzburg - Nürnberg;
B4 direction Erlangen;
Follow signs to
„Universität Südgelände“

Parking facilities:
at Cauerstraße

esi.fau.de

FAU

Friedrich-Alexander-Universität
Research Center
Embedded Systems Initiative | ESI

Deep Learning on Narrow Resources

Embedded Talk, October 10th, 2025

esi.fau.de

About us

The FAU Research Center Embedded Systems Initiative (FAU ESI) is a central scientific institution at FAU.

A research center is closely linked to FAU's overarching research priorities and is active in at least one joint project. FAU ESI is located in the research focus area „Developing future technologies", as energy systems of the future, medical technology achievements or the full automation of production processes require innovative, future-oriented embedded systems and their (automated) design methods, models and tools.

FAU ESI was founded in 2022, based on the Interdisciplinary Center for Embedded Systems that existed from 2007 to 2021. It acts as a pioneer and incubator for basic research in the field of design, design automation and applications of future electronic embedded hardware/software systems. Its current research fields include Embedded AI, Post Silicon Technologies and Open Source Hardware.

FAU ESI currently has 22 members from 16 different chairs, 6 departments and 3 faculties.

Picture Credits:

- Andreas Bininda, FAU (Title)
- Dr.-Ing. Torsten Klie, FAU (Talk & Poster)
- Fraunhofer IIS (Panel)

esi.fau.de

Agenda

13:00 **Welcome Remarks**

Prof. Dr.-Ing. Jürgen Teich
Speaker FAU ESI
FAU Erlangen-Nürnberg

13:15 **Keynote: Resource-Aware Machine Learning for Cyber-Physical Systems**

Prof. Dr. Jian-Jia Chen
TU Dortmund / Lamarr Institute for Machine Learning and Artificial Intelligence

14:00 **Real-World Challenges of Deploying Embedded AI**

Jan Seyler
Lead Advanced Develop. Analytics and Control
Festo SE & Co KG

14:45 **Coffee Break**

15:15 **On-Device Training of Deep Neural Networks on Cortex-M Microcontrollers**

Mark Deutel
Researcher
FAU Erlangen-Nürnberg / Fraunhofer IIS

16:00 **Panel Discussion: Deep Learning on Narrow Resources**

Prof. Dr. Jian-Jia Chen
Jan Seyler
Mark Deutel

16:45 **Poster-Session, Get-together and Networking**

17:30 **End of the Event**

Venue

Campus Südgelände
FAU Erlangen-Nürnberg
Emmy-Noether-Hörsaal (H12)
Cauerstraße 11
91058 Erlangen

Registration

https://www.esi.fau.de/et19

Participation is free of charge.

We are looking forward to your registration!

esi.fau.de