



HSRM IEEE SB International Summer School

September 9 – 13, 2024,
Rüsselsheim, Frankfurt Region, Germany

Computer Engineering, Communication Technology, Electromagnetics,
Signal Processing and Artificial Intelligence for

IoT and Smart Systems

IEEE Distinguish Lecturers & Keynote Speakers:

6G, Artificial Intelligent, IoT, LoRa, Chipless RFID, Smart Cities, ...

Crash Courses:

Software Defined Radio, IoT Networking Systems, EM Simulation
Ray-Tracing Tools, Radar, Detection Techniques, Imaging, ...



IEEE DL AP-S
Prof. Q. Abbasi

Registration Deadline: 15.08.2024



Prof. Dr.-Ing. Mohamed El-Hadidy
Internationalisierungsbeauftragter IET
IoT und Digitale Kommunikationstechnik
mohamed.elhadidy@hs-rm.de



I. Bakri



K. Gehron



M. Lamhamdi

IEEE Student Branch HSRM - Organizers

Monday 09.09.

09:00 – 10:30: **Welcome & Introduction IEEE SB (L)**

10:30 – 11:15: **How to Bring 6G to Reality? Its Enabling Technologies (L)**

Q. Abbasi, *IEEE AP-S DL*

11:15 – 11:30: Coffee Break

11:30 – 13:00: **Chipless RFID, LoRa, IoT, Detection and Real-World Testbed (L)**

M. El Hadidy, K. Gehron, I. Bakri, *IoT & Digital Communication Tech., HSRM*

13:00 – 14:00: Lunch

14:00 – 15:00: **Microwave Liver Ablation System (L)**

B. Schweizer, M. Lamhamdi, A. Esmaeili, *Medical Physics, HSRM*

15:00 – 15:15: Coffee Break

15:15 – 17:00: **Ham Radio Fundamentals and Future (L+W)**

I. Lassrich DL5AL, K. Hechler DL9FBF, D. Rohrberg DF5DR, J. Moltmann DC3MO,
P. Schimanski DF4ZL, *DARC OV Rüsselsheim*

17:30 – Open end: **Welcome Dinner Indian Buffet**

Tuesday 10.09.

09:00 – 09:30: **EM Simulation Tools: Future and Challenges (L)**

M. Walter, Dassaults Systems

09:30 – 12:30: **Antenna Design for Communications: EM and Raytracing Simulation (W)**

M. El Hadidy, *IoT and Digital Communication Tech., HSRM*

12:30 – 13:30: Lunch

13:30 – 14:00: **Communication to Astronauts on the ISS (L)**

R. Maarschalkerweerd, *DARC OV Rüsselsheim*

14:00 – 14:15: Coffee Break

14:15 – 17:15: **Software Defined Radio & Software GNU Radio (W)**

I. Bakri, *IoT and Digital Communication Tech., HSRM*

W = Workshop (Room 408)

L = Lecture (Room 405)

Wednesday 11.09.

09:00 – 12:30: **IoT LoRa to TTN Network (W)**

K. Gehron, IoT & Digital Communication Tech., HSRM

12:30 – 13:30: Lunch

13:30 – 15:00: **MIMO- and Millimeterwave-Radar (L)**

J. Barowski, High Frequency Systems, Ruhr-University Bochum

15:00 – 15:30: Coffee Break

15:30 – 17:00: **Emerging Technologies of 6G Mobile Communication (L)**

A. El Mahdy, IET, German University in Cairo

Thursday 12.09.

09:00 – 10:00: **Rate Splitting Multiple Access Fundamentals & Applications (L)**

A. El Mahdy, IET, German University in Cairo

10:00 – 12:30: **AI for Future Electronics Hardware Design and Smart Cities (L)**

M. Abd El Ghany Salem and M. Salem, IET, German University in Cairo

12:30 – 13:30: Lunch

13:30 – 17:00: **AI for Smart Applications (W)**

M. Abd El Ghany Salem and M. Salem, IET, German University in Cairo

Friday 13.09.

09:00 – 10:00: **Intercultural Communication, Game & Quiz (L)**

K. Gehron, IoT & Digital Communication Tech., HSRM

10:00 – Open End: **Social Event in Rüdeshheim**

With boat tour, cable car, chairlift, sightseeing & restaurant

W = Workshop (Room 408)

L = Lecture (Room 405)

When?

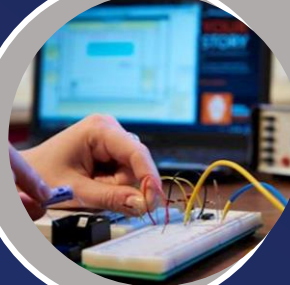
09.09. – 13.09.24

Where?

University of applied
science RheinMain at
campus Rüsselsheim

International
Guests &
Keynote
Speakers

Lectures &
Hands-on
Workshops



09.09. State of the art Research at HSRM

10.09. Simulation Tools & SDR

11.09. 6G, MIMO, Radar & IoT LoRa

12.09. AI for System Design

13.09. Social Event with Games & Quiz



Information &
Registration
Scan Me



SPEAKERS



Prof. Qammar Abbasi



Dr.-Ing. Jan Barowski



Dr. Marko Walter



Prof. Dr.-Ing. M. El Hadidy



M. Eng. Ines Bakri



M. Eng. Kimberley Gehron



Prof. Dr. Schweizer



M. Sc. Mohamed Lamhamdi



M. Sc. Ali Esmaili



Prof. Dr. Mohamed Salem



Prof. Ahmed El Mahdy



Prof. Dr. Eng. M. Abd El Ghany

Deutscher Amateur-Radio-Club (DARC)

Sponsors & Supporters

