

U.R.S.I Member Committee Federal Republic of Germany

President: Prof. Dr.-Ing. Wolfgang Mathis
Institut für Theoretische Elektrotechnik
Leibniz Universität Hannover

Vice-President: Dr.-Ing. Larissa Vietzorreck
Institut für Hochfrequenztechnik
Technische Universität München







founded 1954

Supported by Deutsche Forschungsgemeinschaft

National Member Committee: 10 commissions

Organisation: Copernicus-Gesellschaft





Goals:

- Platform to support joint research of physicists and electrical engineers in the area of electromagnetic fields
- Special mission: support of interdisciplinary collaboration of young scientists in Germany (U.R.S.I. Young Scientist Award)
- National Forum: Kleinheubacher Tagung in Miltenberg (anual 3-day symposium in September/October)
 - Sessions by commissions, joint sessions, invited sessions
 - Invited plenary talks
 - Commission meetings
 - Meeting of commission chairs
 - Member meeting of U.R.S.I. Deutschland
- Co-operation with organisations and other national committees (NC's)
 - national: VDE/ITG, IEEE, DPG, . . .
 - international: neighboured national committees





Publication: Open Access Journal "Advances of Radio Sciences"

Advances in Radio Science (ARS)



Advances in Radio Science (ARS) is an international, interdisciplinary journal for fast publication of collections of short, but self-contained as well as of individual refereed communications in radio science and engineering, published in separate volumes online with the option of a publication on paper (print-on-demand). The collections may include papers presented at scientific meetings (proceedings) or articles on a well defined topic compiled by individual editors or organizations (special publications).

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Union Radio-Scientifique Internationale

International Union of Radio Science



Commission A:

- **Topics:** Development of measurement systems, calibration, radar systems, antennas, UAV measurements, interference with wind energy plant.....
- Memberships in various national/international standardization committees (CEN, OIML, DIN, IEEE, EURAMET, CCTF.....)

Commission B:

- Topics: Electromagnetic Field Simulation (Finite Elements, Finite Integration, Integral Equations, Method of Lines, asymptotic methods, hybrids, algorithms and formulations, local and global modelling, gauging, stability of formulations, algebraic solvers, model order reduction, uncertainty quantification, high-performance computing, coupled simulations (thermal, motion, and others), analytical methods)
 Applications / Component and system design (antennas and radar for automotive, sensors, navigation systems, aviation, microwave components, MEMS, bio-electromagnetism, material modelling, metamaterials, linear optics, plasmaphysics, EMC,low-frequency applications)
- Regular participation/organisation at EMTS (next 2016), ICEAA





Commission C:

- Topics: Communications engineeering, RF-ID technologie, Coding theory, Efficient hardware implementation of codes, Cognitive Radio, Modeling of nonlinear circuits and systems, Electromagnetic interference modeling, Sensor systems
- Memorial session for Alfred Fettweis at KHB 2016

Commission D:

- **Topics:** Analog circuits and signal processing, less on optics and opto-electronics. (bio-medical sensors, implantable electronics, neural interfaces, power supply, energy management and energy harvesting in mobile electronics, medical applications and autonomous sensors, ultra-low power A/D conversion for medical and autonomous sensors, high speed continuous time delta sigma modulators)
- Regular participation/organisation at ISSCC, ISCAS or ESSCIRC,
- Organisation of annual Analogue workshop at German universities





Commission E:

- Topics: Field theoretical methods in EMC, High Power Electromagnetics, EMC in Automotive
- Vice-Chair of international comission, participation/organisation at AT-RASC and AP-RASC 2016

Commission F:

- **Topics:** Multiparameter Radar and Radiometer Remote Sensing, Tropospheric Propagation, mm-wave propagation, Driver Assisstant Systems, Multiparameters Sensor fusion
- Special Sessions planned: URSI GASS 2016 (Tropospheric Propagation), GEMIC 2016 (Multiparameter radars)
- Joint efforts with French commission-F (Prof. Tullio Tanzi) on RSB Publications,
 Scientific cooperation with Prof. Erich Leitgeb, URSI Austria





Commission G:

- **Topics:** Middle atmosphere studies (wind, temperatures, polar mesospheric summer echos (PMSE), using radars (e.g., Andoya), VHF, and LF radio waves), Near-Earth satellite missions (e.g. Swarm), upper atmosphere, external magnetic field variations, M-I-T coupling, Space Weather science, Total electron content (TEC) studies, using GNSS, GPS
- Members mainly from 5 institutions: Max Planck Institute for Solar System Research (Göttingen), Institute for Atmospheric Physics (Uni Rostock, Kühlungsborn), DLR Institute of Communications and Navigation (Oberpfaffenhofen-Wessling bzw. Neustrelitz), Geophysical Observatory Collm (University Leipzig), GFZ German Research Centre for Geosciences (Helmholtz Centre Potsdam)

Commission H:

- Topics: Elektronenbeschleunigung an Stosswellen in der Sonnenkorona und deren Radiosignatur, Radioemission an Planeten
- Strong collaboration with IWF and and University in Graz





Commission J:

- Topics: Galactic and Extragalactic Radio Astronomy and technical developments in Radio Astronomiy, (investigation of pulsars, observations of the neutral hydrogen distribution in our Galaxy, study of the origin and evolution of magnetic fields in the Milky Way, VLBI observations for the investigation of the physics of black holes and jets in Active Galactic Nuclei, improvement of calibration procedures in total power and polarization, support during the development and the commissioning of radio astronomical receivers and backends)
- Participation in large projects: 100-m radio telescope at Bad Münstereifel-Effelsberg,
 LOFAR telescope project, Square Kilometre Array (SKA), "MeerKat" telescope, Russian satellite telescope RadioAstron

Commission K:

- **Topics:** Influence of RF on cells of blood generating system,
- Special session planned for KHB 2016, participation welcome....







Annual meeting:

Kleinheubacher Tagung 2016

Miltenberg, 26.-28. September 2016



- small city in center of Germany (no "escape")
- networking in "well-known" restaurants
- important for young scientists at beginning of career (contacts to colleagues and senior scientists)





Kleinheubacher Tagung

Scientific dates:

- CfP usually published in April
- 500 word abstract
- Submission deadline in July
- 3-day meeting last week of September/beginning of October
- Max. 2 parallel tracks
- Talks in German or English
- Full paper in Advances of Radio Science possible for accepted papers (publication in the following year)

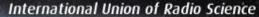
Young Scientist Award

- Organized by Madhu Chandra
- Submission of full paper necessary
- Dedicated session with 6 finalists (longer time for questions)
- Two Prizes "Young Scientist Award of Excellence" (1.200,-€)
- 4 "Certificates of Merit" (500,- €)



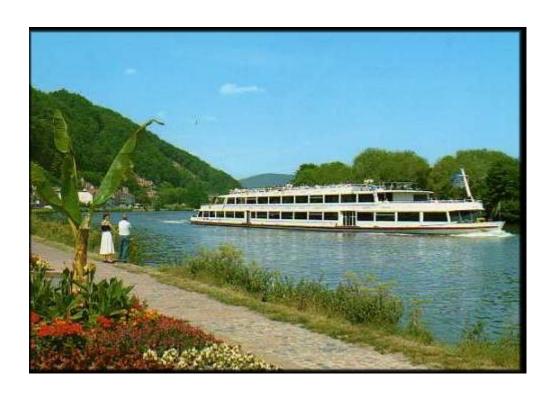


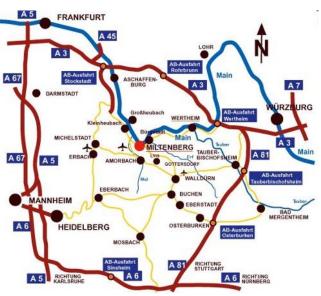






On Tuesday traditional boat trip on the river Main





... with evenings in the "Riesen"







Ältestes Gasthaus Deutschlands

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Gasthaus »Zum Riesen«

Genießen Sie ursprüngliche fränkische Gastlichkeit in unserem Gasthaus, in welchem seit dem 12. Jahrhundert schon unzählige gekrönte Häupter Gast waren. 1711 weilte hier Kaiser Karl VI morgen vielleicht Sie!

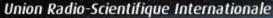
Im Frühjahr 2001 fand nach einer grundlegenden Renovierung der Innenräume durch das Brauhaus Faust zu Miltenberg die Neueröffnung des Gasthauses »Zum Riesen« statt. Das Brauhaus Faust führt seitdem auch die Geschäfte des »Riesen«.

Heute befindet sich hier wieder ein traditionelles Wirtshaus in dem sich Miltenberger und Gäste gleich welchen Alters und welcher Profession wohlfühlen. Traditionell und gleichzeitig einmalig!

Wir freuen uns auf Ihren Besuch

Ihre Wirtsleut





International Union of Radio Science







The next meetings Kleinheubacher Tagung in Miltenberg

KH 2016:

26. – 28. September 2016

Scientific chair:

Prof. Dr. Ralph Urbansky, Dr. Wolfgang Sauer-Greff (TU Kaiserslautern)

(Kommission C)

KH 2017:

25. – 27. September 2017

Scientific chair:

Prof. Dr. Romanus Dyczij-Edlinger (Uni Saarland)

(Kommission B)

