

The logo features the word "AES" in blue with a grey arrow curving over it, followed by "VISION" in black. Below this, the year "2020" is written in large, bold, black numerals.

**AES VISION
2020**

**Member Services – SMART Objectives
Review and Actions**

September 28, 2018

Rome Park Hotel, Rome, Italy

Member Services

SMART Objectives Review

- Strengthen links between AESS BoG and the AESS Bodies.
- Exploit Distinguished Lectures for Serving AESS Members.
- Exploit the Hülsmeier Event for AESS Awareness in EU.
- Exploit Social Networks for Intra/Inter Chapter Communications.
- Encourage Mentoring Program directly in the class rooms.
- Support Creation of New AESS Chapters.
- Identify new scientific/technical events related to AESS.



Site of the Hüls-
meyer milestone
in Cologne by
the River Rhine



SMART Objective: Exploit the Hülsmeier Event for AESS Awareness in EU.

Update:

Meanwhile, the milestone proposal has passed all municipal and IEEE bodies (US / Germany).

Proposal:

Have the IEEE BoG Fall Meeting 2019 right after the annual IEEE AESS Symposium *Sensor Data Fusion - Trends, Solutions, Applications* at the conference center of the University of Bonn on October 11 – 12, 2019 in **Bonn**.

A meeting room is provisionally blocked for us.



Bonn, October 9 – 11, 2018



12th Symposium *Sensor Data Fusion: Trends, Solutions, and Applications*

Technical Program

Prior to its technological realization or the scientific reflection on it, sensor data fusion, a branch of Artificial Intelligence, is an omnipresent capability. Fusion algorithms provide informational elements for situation pictures, the basis of appropriate action. SDF 2018, the 12th consecutive annual symposium, addresses numerous application aspects of sensor data fusion, as well as methodologically oriented topics. Its 22 presentations are grouped into 7 sessions. Particular emphasis is placed on advances in estimation and tracking theory, emitter localization, ground surveillance, resource management, selected aspects of higher-level fusion, and even ethical aspects of data fusion. The contributions from industry, academia, and research institutions let us expect an exchange of ideas, lively discussions, and mutual cross-fertilization. For more detailed information see: www.fkie.fraunhofer.de/sdf2018.

Location: Universitätsclub Bonn e.V., Konviktstr. 9, 53113 Bonn, Germany.
www.uniclub-bonn.de

Organisation

Executive Chairs:

Wolfgang Koch, Fraunhofer FKIE and University of Bonn.

Peter Willett, University of Connecticut, USA.

Stefano Coraluppi, Systems and Technology Research (STR), USA.

Technical Program Chair:

Felix Govaers, Fraunhofer FKIE, Germany.

Technical Program Committee

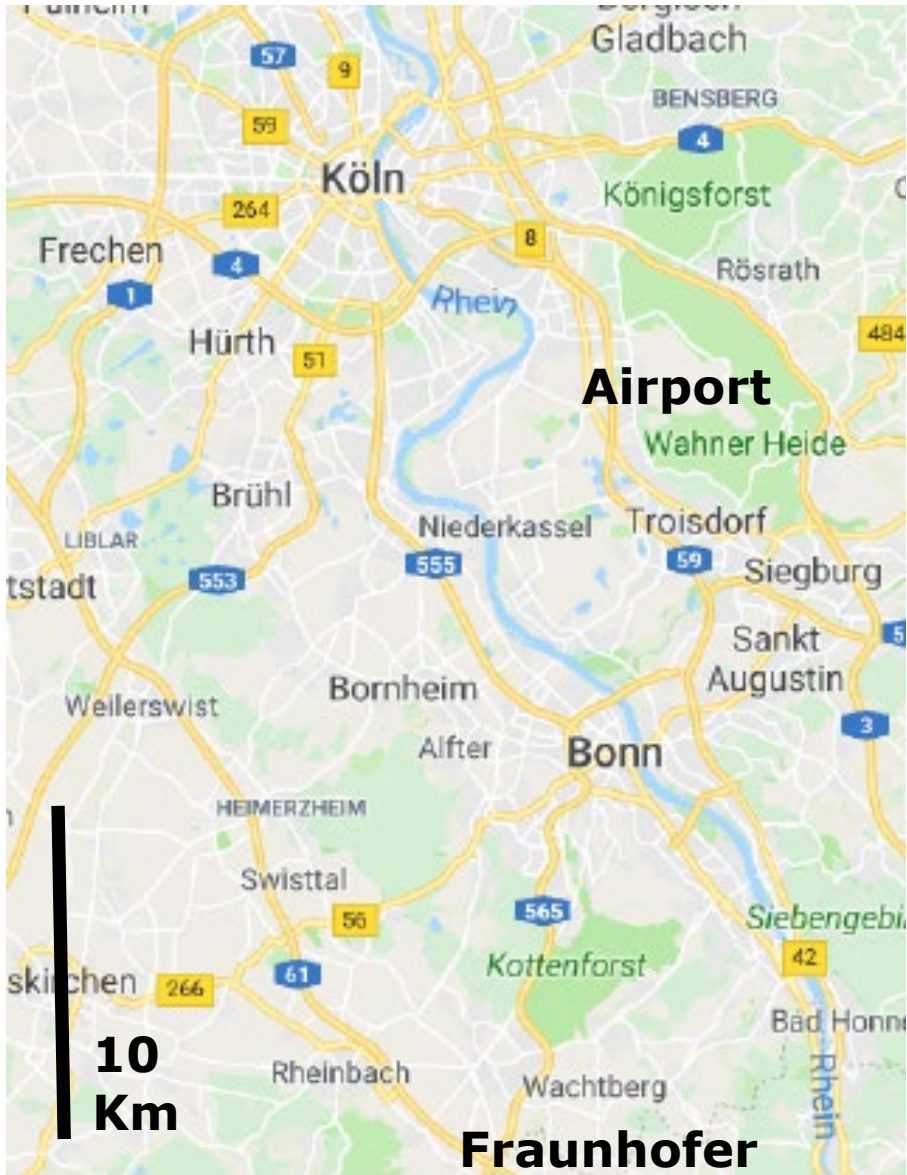
Marcus BAUM, University of Göttingen, GER; Jürgen BEYERER, Fraunhofer IOSB, GER; Chee CHONG, Consultant, CA, USA; Stefano CORALUPPI, STO, MA, USA; Daniel CREMERS, Technical University Munich, GER; Klaus DIETMAYER, University of Ulm, GER; Darin DUNHAM, Lockheed Martin, USA; Bharanidhar DURAISAMY, Daimler, GER; Murat EFE, Ankara University, TK; Frank EHLERS, FWG, GER; Dietrich FRÄNKEN, Airbus Defence and Space, GER; Jesus GARCIA, University Carlos III, Madrid, ES; Fredrik GUSTAFSSON, Linköping University, SW; Uwe D. HANEBECK, Karlsruhe Institute of Technology KIT, GER; Dann LANEUVILLE, DCNS, FR; Henry LEUNG, University of Calgary, CA; Lyudmila MIHAYLOVA, University of Sheffield, UK; Gee Wah NG, DSO, SGP; Umüt ORGÜNER, University of Ankara, TR; Stefan REUTER, Robert Bosch GmbH, GER; Eicke RUTHOTTO, Atlas, GER; Lauro SNIDARO, University of Udine, IT; Roy L. STREIT, Metron Inc., USA; Jörn THIELECKE, Universität Erlangen, GER; Reiner THOMÄ, Technical University Ilmenau, GER; Martin ULMKE, Fraunhofer FKIE, GER; Anthony WEISS, Tel Aviv University, IS; Alexander YAROVY, TU Delft, NL.



Right in the historic center of Bonn

a limited number of rooms in the Uniclub, many hotels to be reached by foot.





Saturday afternoon and evening, October 12:

The Hülsmeier event in Cologne

- Drinks and welcome speeches at *Dom Hotel* (public)
- Unveiling of the milestone by the River Rhine (public)
- Short symposium / flying buffet at the *Hyatt* (invited)



The IEEE AESS will be inviting member and non-members.
A press / media event.

High speed train from Frankfurt Airport in 45 min.

IEEE HISTORIC MILESTONE

Christian Hülsmeier: Invention and First Demonstration of Radar, 1904

Hugh Griffiths¹, Peter Knott², Wolfgang Koch³

1. Introduction

2019 will see the inauguration of an IEEE Historic Milestone recognizing the invention and first demonstration of radar by Christian Hülsmeier, in Germany in 1904.

The IEEE Historic Milestone program marks significant developments in the history of electrical, electronic and computer engineering. There are currently some 150 milestones that have been commemorated in this way worldwide, and these are listed at [1]. Nominations are evaluated rigorously to ensure their validity and significance, and each is marked by a plaque on public display, with a short citation. An example is shown in Figure 1.

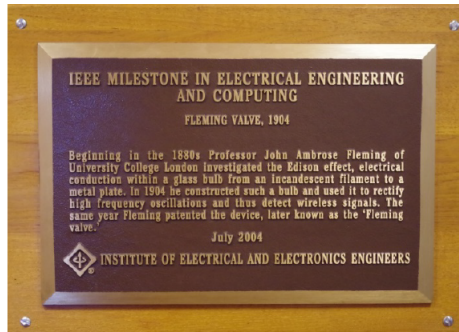


Figure 1: An example of an IEEE milestone plaque – in this case marking the invention of the diode valve in 1904 by John Ambrose Fleming at University College London..

For those of us that work in radar, this event is really rather special. It marks the very first demonstration of radar, and hence the start of something that has become truly global in its significance, in so many ways.

Related IEEE AESS Publications

Currently prepared:

Article in the IEEE AESS Magazine to appear in October 2019

Publication of a “Festschrift” (a monography):

“Radar – Yesterday and Tomorrow” (working title)

History and engineering, social implications

Promised contribution: *Hülsmeier in the Post War Peace Process* by Konrad Adenauer (the grandson)

Springer is interested, IEEE Press more advisable?

SMART Objective:

Identify new scientific/technical events related to AESS.

Update: Technically, the NATO Science and Technology Organization is THE natural parallel organization to AESS, especially the Sensors and Electronics Systems Panel.



SCIENCE AND TECHNOLOGY ORGANISATION

SPECIALISTS' MEETING on



ARTIFICIAL INTELLIGENCE FOR MILITARY MULTISENSOR FUSION ENGINES

NATO-SET-262

organized by the Sensors and Electronics Technology Panel, MSE Focus Group

05-06 November 2018, Budapest, (HUN)

NATO UNCLASSIFIED open to AUS, CHE, FIN, SWE,

Organized by
Wolfgang Koch,
Fraunhofer FKIE,
and Tien Pham,
US Army Research Lab

Also in the past: lecture
series, symposia,
research task groups

SMART Objective:

Identify new scientific/technical events related to AESS.

Update: Technically, the NATO Science and Technology Organization is THE natural parallel organization to AESS, especially the Sensors and Electronics Systems Panel.

Points of Discussion:

Probably appointed German MaL in the NATO STO SET Panel: a natural link.

Problem: IEEE AESS – a global organization, NATO – a closed club (though large).

Practically: Most IEEE activities are relevant for NATO and pushed by NATO nationals

Opportunity: IEEE AESS and NATO STO events are free of cost. Promotion?

What are possible action items to let AESS profit from NATO and vice versa?

AI relevant for AESS **applications**. “Market opportunity”: AI 4 AESS Industry?

SMART Objective: Exploit Distinguished Lectures for Serving AESS Members.

Tutorial / 4.10.2018 - 5.10.2018, 09:00 am - 05:00 pm

IEEE AESS Short Course on Electronic Warfare

Fraunhofer FKIE is pleased to organize two full-day tutorials in cooperation with the IEEE Germany Section, IEEE Aerospace and Electronic Systems society German Chapter. The tutorials are introductory in nature and only a basic knowledge of radar is necessary.



Lunch and coffee included

34 participants (September 27)

4 IEEE members (high potential)

2 students

2 UK, 1 Saudi Arabia

24 industry, 2 gov, 7 research

SMART Objective: **Exploit Distinguished Lectures for Serving AESS Members.**

Points of Discussion:

Probably short courses are much more attractive than distinguished lectures.

Astonishingly difficult legal questions: public body transferring money to IEEE.

A step towards a better format: DL + an attractive side program (George at FKIE)

A Proposal for Chapter Development:

Fall event: scientific and research related (example: IEEE AESS SDF)

Spring event: focus on industry, give them an opportunity to present, tutorial

Currently preparing: Short course / tutorial on "AI for Military IRS Technology"

"Export article": gladly to be offered to other chapters of the IEEE AESS.

SMART Objective: Exploit Social Networks for Intra/Inter Chapter Communications.

Update:

I have tried LinkedIn and IEEE Collabratec. Both are neither flexible enough and not suitable as a serious means of communications. The philosophy does not fit.

Conclusion:

Stick to good old personal relationships and email chasing ... Sorry.

SMART Objective: **Encourage Mentoring Program directly in the class rooms.**

Update:

I have tried my best. German students are not used to the idea but interested. They do not like to enter an American „club“ and paying a fee. At least I have ONE new student member who wants to become my mentee.

Conclusion:

The idea is good, but needs time, patience, and perseverance. The best hunters for new student members are student members who tell their fellows that „this IEEE“ is not only good for standardization but for them. What about my mentees?

MS: SMART Objectives Review

- ▣ **Strengthen links between AESS BoG and the AESS Bodies.**
- ▣ Exploit Distinguished Lectures for Serving AESS Members.
- ▣ Exploit the Hülsmeier Event for AESS Awareness in EU.
- ▣ Exploit Social Networks for Intra/Inter Chapter Communications.
- ▣ Encourage Mentoring Program directly in the class rooms.
- ▣ **Support Creation of New AESS Chapters.**
- ▣ Identify new scientific/technical events related to AESS.

Update and Food for Thought

Short courses and other „industry relevant events“, also DLs, might serve as „export goods“.

Conclusion: Offer the format ACTIVELY to the chapter chairs with hints „how to organize“.

Example: The Fraunhofer legal experts worked hard to find a way to share the profit with IEEE. Why not sharing this knowledge as well? It is probably lost quite soon ...

After Lorenzo's Short Course: a brief article in the magazine, stressing the *general* idea.

MS: Ongoing Action Items

- AESS-BOG-Spring '18, AI-0753 - Hold bi-annual EU-AESS face-to-face chapter chair meetings. Report in the Fall. **Leo Ligthart, lead, working with Wolfgang Koch. A key question: Who is paying? Danger: Will it be just talking?**

▪ **A good face-to-face meeting needs much preparation in order to create *sustainable development goals*.**
- AESS-BOG-Spring '18, AI-0754 - Encourage tours of DLs to non-US regions via IEEE AESS Focus Days, bringing more visibility of local chapters. Leverage these meetings to promote AESS. Possibly turn into a Summer School, similar to the Radar Summer School. Possibly a Fusion Summer School. Possibly develop a Summer School that travels around to different locations. **Wolfgang Koch, lead, working with H. Wipf, M. Bentham, W. Krzysztofik. A concrete step towards this direction: the spring course on "AI for FUSION" with a clear industry focus at Fraunhofer. A summer school can evolve from this. Beware: We should not compete with academia, but focus on industrial needs for training. Organizing a summer school needs sponsoring, i.e. to convince internal/external sponsors**
- AESS-BOG-Spring '18, AI-0755 - Exploit the Hülsmeier event for AESS awareness in EU. If appropriate, have the AESS BoG meeting in Colone and combine with the SDF Symposium. **Hugh Griffiths, lead, working with Wolfgang Koch and Leo Ligthart. Done.**
- AESS-BOG-Spring '18, AI-0756 - Explore IEEE Collabratec as an AESS professional network. Report at the Fall meeting. Engage Students and Young Professionals. **Wolfgang Koch, lead. Done.**
- AESS-BOG-Spring '18, AI-0757 - Identify IEEE AESS members lecturing at universities and encourage Mentoring Program directly in the classrooms. **Wolfgang Koch, lead, working with Leo Ligthart. Done.**

Member Services

Ongoing Action Items

- AESS-BOG-Spring '18, AI-0758 - Develop a Chapter Creation Process. Review the Handbook and analyze the difficulties that the Germany Chapter experienced. **Wolfgang Koch, lead.**
- **This is much work. What is “typical German”, what is general? Similar in ISIF: “How to organize a FUSION conference?” Better idea: Offer interested people proven “export goods”, such a short courses (EW, AI). Experience: the interest in forming a chapter is NOT the starting point, but to structure existing activities.**
- AESS-BOG-Spring '18, AI-0759 - Identify new scientific and technical events related to AESS. Proactively contact organizers to establish links to AESS. Leverage workshops. **Wolfgang Koch, lead.**
- **Most promising and natural is NATO STO, especially the SET Panel. European Air Control is not open to IEEE.**
- **Question: How to link the AESS to the AI community? AESS is USING AI technologies not creating them.**
- AESS-BOG-Spring '18, AI-0760 - Pair up the local chapters with our technically co-sponsored conferences. **Wolfgang Koch, lead.**
- AESS-BOG-Spring '18, AI-0766 - Promote opportunities for YPs in our industry fields of interest. **Mike Wicks, lead.**

Member Services Ongoing Action Items

- AESS-BOG-Spring '18, AI-0784 - Review the Chapter Chair Handbook and make sure it is up to date. **Mike Wicks, lead.**
- AESS-BOG-Spring '18, AI-0785 - Review vTools so we know ahead of time what chapters are heading to inactive status. Develop a plan to help the chapter back to active status. **Mike Wicks, lead.**
- AESS-BOG-Spring '18, AI-0789 - Update or set up websites for each Chapter. **Federico Lombardi, lead.**
- AESS-BOG-Spring '18, AI-0790 - Update the website for Student Branches. **Federico Lombardi, lead.**
- AESS-BOG-Spring '18, AI-0766 - Promote opportunities for YPs in our industry fields of interest. **Mike Wicks, lead.**