

Welcome to FUSION 2016

Welcome to the 19th International Conference of Information Fusion, FUSION 2016, the premier forum for the exchange of the latest research results in information fusion, its applications, and its impact on our society. The conference brings together researchers and practitioners from industry, government, and academia to report on the latest scientific and technical advances.

Welcome to Germany this summer! We Germans, were honored selected to run another example of the highly successful series of the ISIF IEEE Fusion Conferences, and we are grateful to provide a home to all of you, to the international information fusion community, again this year.

And welcome to Heidelberg as well, perhaps one of the most symbolic cities in Germany, situated in the very heart of “Old Europe”. Near Germany’s oldest and one of its most reputed universities, Heidelberg represents the very idea of European university life that is “fusing” ideas, attitudes, and mentalities from many countries. Moreover, the romantic ruins of Heidelberg’s castle symbolize the successful “fusion” of former enemies that has become the root of modern Europe. May the city of Heidelberg inspire us to discover new frontiers in one of the most fascinating and dynamically evolving branches of knowledge: Information Fusion.

As the venue for Fusion 2016, we selected the Kongresshaus Stadthalle Heidelberg (Heidelberg Convention Center) as it is centrally located and can be reached easily. Thirteen function rooms provide 2500 square meters of floor space for conventions, congresses, and events for up to 1250 people. With its sumptuous, late 19th century architecture and flashes of art nouveau brilliance, the Kongresshaus forms a stunning backdrop for conventions, congresses, balls, banquets, receptions, and concerts. While the Großer Saal (Great Hall) with its broad sweeping gallery and a capacity for 1250 persons is the jewel in the crown, smaller rooms such as the Ballsaal (Ball Room) or the Kammermusiksaal (Chamber Music Hall) are also historical gems in their own right. The Kongresshaus is nowadays equipped with the latest audio, projection, lighting, and communication technology. An in-house catering team serves international specialties, fine regional cuisine, and hearty snacks.

The Kongresshaus is a house with history. It was dedicated as a gathering and festival building for the city’s residents on the occasion of the 100th anniversary of the University Reform in 1903. Ideally situated within the Old Town, the Kongresshaus sits right on the banks of the River Neckar within the historic city of Heidelberg. Hotels, restaurants, and attractions such as the Old Bridge or the famous castle are just a few minutes away. No wonder that conventions in Heidelberg are considered “Congresses of short distances”. Directly in front of the entrance, the boats of the “Weisse Flotte” (“White Fleet”) provide a really special extension area for very large gatherings. Romance meets Science – it is this mixture that makes Heidelberg such a unique venue for international and national conventions and congresses. We arranged for an extensive social program. The welcome reception takes place at the conference venue, the Heidelberg Convention Center, on Tuesday July 5, directly after the last tutorials. For the Gala dinner, we move to the historic city of Speyer, where the Gala dinner is held within the Space Flight Exhibition Hall of the Technic Museum Speyer. Regular shuttle services will be available between Heidelberg and Speyer.

The conference chairs believe that we offer an extraordinary technical program. First of all, we would like to thank the many researchers and scientist from all over the world for their contributions. 413 full draft papers were received and 312 (75.5%) of those were accepted for publication in the proceedings. A strict single-blind peer-review process was applied with at least three reviews per paper. In this context, we thank the Technical Program Committee chaired by Peter Willett, Müjdat Çetin, Fredrik Gustafsson, and Elisa Shahbazian with their 258 volunteer reviewers, who produced a total of 1239 reviews. The technical program consists of 310 oral presentations organized in eight tracks with nine sessions over three days. We thank Program Chairs Stefano Coraluppi and Lyudmila Mihaylova who did the time and space scheduling.

We were supported by many colleagues from around the world that organized special sessions and attracted a lot of high-quality papers. These papers were subject to exactly the same review process as the regular papers we received. Here, we thank Ondřej Straka and Ramona Georgescu for their hard work in bringing these special sessions together. A record number of 22 special sessions will be part of the technical program this year.

Besides the main technical program, we have an extraordinary tutorial program put together by Sten Andler and Marco Guerriero. A total of 27 tutorial proposals was received, 24 of those tutorials are given by internationally recognized experts providing excellent introductions into the information fusion methodology and its various applications.

The state of the art in our scientific discipline and the general lines for potential future progress is discussed in several plenary talks delivered by Fredrik Gustafsson, Simon Godsill, and Ba Tuong Vo. As a specialty this year, an industry-related plenary talk is given by Oliver Pink from our sponsor Robert Bosch GmbH.

We are grateful to all the people that supported us while organizing this conference. Much of the work has been done by the Local Arrangements Chairs Marcus Baum and Florian Pfaff and our local organizing team from Congress & More. Marcus Baum and Congress & More arranged the venue and a fantastic social program. Without the hard work of Florian Pfaff, this conference probably would not have happened. Finance Chair Chee Chong, our partner VDE conference services, and Congress & More dealt with registration, budgeting, and payments. Cynda Covert from Conference Catalysts LLC did an amazing job by managing the submission system. The Awards Committee chaired by Roy Streit and Xiao-Rong Li selected the various awards. Last but not least, we would like to thank our Publications Chair Felix Govaers who worked day and night at managing the publication process and at assembling this wonderful program booklet.

We are in the lucky position to receive financial support from a large number of sources, mostly thanks to our Publicity Chair Felix Opitz. First of all, we have to mention our prime sponsors ISIF and the AESS society of the IEEE. In addition, we are extremely grateful to our Platinum sponsors Robert Bosch, Atlas Elektronik, and Random Sets, our Gold sponsors Systems and Technology Research, Metron, Continental, and Airbus Defence and Space, and our Silver sponsors Beckhoff and Springer that help to reduce the financial load and offer an exciting exhibition of their various products and technologies.

Organizing a top-class conference such as FUSION is a wonderful experience and, in fact, one of the last few real adventures modern life can offer. It requires many heads, hearts, and hands to make it a success. In our view, the FUSION 2016 technical program clearly demonstrates that Information Fusion has actually evolved into a mature branch of Applied Science characterized by its own methodologies, technologies, and fields of application. We hope that the 19th International Conference on Information Fusion gives you as much pleasure as we had when preparing it for you.

On behalf of the Organizing Committee, Conference General Chairs:

Uwe Hanebeck & Wolfgang Koch