
THE SYNERGY
PLATFORM FOR
CREATING AN EFFECTIVE
DRIVE TECHNOLOGY FOR
THE FUTURE

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The International Academic Bearing Conference

FVA – The German Research Association for drive technology is organizing the second International Bearing Conference in 2018 at the TU Kaiserslautern facilities on 6 – 7 March 2018.

The FVA always focuses on areas where something is driven, controlled and moved. Research projects concentrate on mechanical and electrical or mechatronic drive technology in stationary industrial plants, in motor vehicles and mobile machines, through to aircraft. All links in the value added chain are put to the test, from materials, production technologies and quality assurance, components and systems and their calculation, lubricants, through to environmental compatibility, quality, costs and innovation management. Currently approx. 180 ongoing projects are coordinated each year by 25 active working groups.

The research results are integrated into the calculation platform FVA Workbench and are consequently available for direct implementation. Smaller and medium-sized enterprises profit from their membership in the FVA as they can participate in extensive research projects and benefit from their results without having to undertake incalculable financial risks.

We tried to reveal the story behind FVA's International Bearing Conference BEARINGWORLD during an interview with Prof. Dr.-Ing. Gerhard Poll, Leibniz University Hannover.

What is the main goal of the Bearing World conference?

We want to create an international Forum for bearing technology with the main focus on rolling element bearings. So far, there are established international conferences dedicated e.g. to hydrodynamic plain bearings or seals. Rolling element bearings are addressed by general mechanical engineering conferences or are part of material science and tribology events. We are striving for a holistic approach where all aspects – mechanics, chemistry respectively lubrication and material science – are covered in one conference while maintaining a high scientific standard.

Who should attend the Bearing World conference?

Researchers from all disciplines mentioned above, technical experts from the bearing industry as well as from all branches of industry where bearings are used.

What is your role in the organization?

My colleague Prof. Bernd Sauer and me had the idea to establish a workshop on rolling element bearing research some years ago which took place since 2012 on an annual basis at the universities in Hannover and Kaiserslautern. VDMA and FVA the approached us with the idea of extending this concept into an international conference under the "roof" of VDMA. The first Bearing World conference took place in Hannover in 2016 and I became involved in its organization, especially in selecting the scientific board, soliciting contributions and heading the program committee.

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Can you tell us more about the main elements for the selected presentations?

This time we really cover almost everything related to bearings. Still, fatigue and failure modes get a lot of attention, but it is even more important to look at lessons learned and the improvements both regarding life extension and friction reduction. Plain bearings are included this time as there is increasing interest to look at both alternatives – rolling element bearings and hydrodynamic resp. hydrostatic bearings - for the same application.

What are the challenges of drive technology applications to bearings in the future?

As an example, the automotive industry is in the process of radical changes which affect bearings, mainly with the increasing importance of electrified drive trains, following the global strive to reduce emissions. In wind power, on the other hand, technological progress allows to increase power density which leaves less space for the bearings or increases their specific load. Operating costs or total life cycle costs need to be reduced which means there are increasing demands regarding maintainability and reliability. In general, additive manufacturing starts to "change the game" and digitization demands more data.

Who are the main sponsors for the event?

SKF and Schaeffler are the main sponsors for the Bearing World event

Is there any new development or change for the organization in comparison of Bearing World 2016?

There are 3 aspects changed in comparison with Bearing World 2016. Fortunately, we have so many presentations from all over the world that the second day will feature parallel sessions. The second aspect is the fact that we will be able to include some presentations on hydrodynamic plain bearings. Last, but not least; we are switching to English as only conference language and no more simultaneous translations!

Which type of organizations are submitting their R&D papers?

We have quite a number of presentations from universities all over the world, from bearing manufacturers and also some contributions from bearing users in different industries.

Why does Bearing World take place in Kaiserslautern this year? Can you tell us something about Prof. Sauer and his institute?

As mentioned before, we continue the tradition of the two alternating locations – Hannover and Kaiserslautern - from the original workshop. We have quite an old tradition in Hannover regarding research on rolling element bearings, while Prof. Sauer succeeded in establishing a continuously growing strong research group on rolling element bearings, originally focusing on MKS simulation and cage dynamics and now covering almost every aspect.