

## Welcome address

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Welcome to Mito, Ibaraki-Prefecture, Japan. Korea-Japan FIFA world cup has finished and now the most important event for all of us is the magnetic bearing symposium. Academically magnetic bearing has been developed rapidly through this symposia and the application is expanding widely. We are very happy to host The Eighth International Symposium on Magnetic Bearings here in Mito. The city is well know as the vice Shogun's city during Edo era. All the participants can enjoy the historical city as well as have new idea through attending the symposium. All of us should develop this new idea and meet at the next symposium with the fruitful results in 2004. Thank you for joining us and again welcome to Mito.

## Safety and Reliability Aspects for Magnetic Bearing Applications

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The application of magnetic bearings has become state of the art, and spans from research prototypes to industrial series. Users are aware that beyond functionality the aspects of safety and related areas become increasingly important. This survey presentation addresses the issues of safety, dependability, and reliability. It gives a review on existing approaches, and it shows numerous examples of problems and solutions. In the next step a design process is presented which integrates safety requirements into the overall design. And finally, the concept of smart machines is being used to conceive ways of improving safety and dependability of magnetic bearing operations.

