

**Bioassays, Microsystems and Engineering Platforms for Enabling
Precision Health**

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University of Arizona**

**Seminar on November 15, 2016 at 11:00 am in 2004 Black
Seminar host: Daniel Attinger**

Abstract

This seminar will review materials and device prototyping processing techniques for developing integrated microsystems tools in life science and medicine. A special emphasis will be presented for developing microfluidic devices for automating the workflow process for molecular diagnostics, but also combining smartphone-based microscopy for point-of-care analysis. Application to biomarkers discovery and emerging field of organs-on-chip will also be discussed in the perspective of gaining new biomedical knowledge and translating these technologies for guiding medical procedures and improving the healthcare delivery system.

Dr. **Frederic Zenhausern** is endowed chair Professor of Basic Medical Sciences, Professor of Radiation Oncology and Director of the Center for Applied Nanobioscience and Medicine (ANBM) at The University of Arizona (UA), College of Medicine – Phoenix. He is also Professor at the Translational Genomics Research Institute (TGen) and Fellow of the National Academy of Inventor (NAI). He received his BS in biochemistry from the University of Geneva, a MBA in finance from Rutgers University and his Doctorate Es Science in Applied Physics from the department of Condensed Physics Matter at the University of Geneva in Switzerland. Prior to joining The University of Arizona, he was Director of the Center for Applied Nanobioscience at the Arizona State University's (ASU) Biodesign Institute. At ASU, he was co-founding R&D director of the Flexible Display Center and then CTO at ASU MacroTechnology Works. He also served as a tenured professor with both the Electrical Engineering Department and the School of Materials at ASU's Ira A. Fulton School of Engineering. Prior to his academic roles, he spent 10 years running corporate research laboratories at IBM and then Motorola Labs. Dr. Zenhausern holds over 20 U.S. patents, authored about 50 peer-reviewed publications and founded four startups.

This seminar counts towards the ME 600 seminar requirement for Mechanical Engineering graduate students.

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