

NAFEMS Technical Working Group Overview

Multiphysics (MPWG)
2019

Multiphysics

- The NAFEMS multiphysics working group (MPWG) has been set up to promote and support the use of Multiphysics simulation in industry
- Industrial use of multiphysics simulations is a diverse and challenging topic. The main driving force is the need for more realistic numerical simulations of coupled problems, combined with the continuing improvements in hardware and software.
- Monthly online meetings.
- Yearly physical meetings during the NAFEMS World Congress and Multiphysics conference.
- **Chair** - Alfred J. Svobodnik, Mvoid Group, Vienna, Austria
Vice Chair - Henrik Nordborg, HSR - University of Applied Sciences, Rapperswil, Switzerland
- The MPWG includes representatives of AdCo EngineeringGW, Airbus, Altair, ANSYS, ATOA Scientific Technologies, Dassault Systemes, DYNAmore, ESI, Festo, Fraunhofer SCAL, Free Field Technologies, Fujifilm, HSR University of Applied Sciences, IMAMOTER-CNR, John Deere, MVOID Group, National Physical Laboratory, TETRA PAK, TimeTooth Technologies, University of Luxembourg, University of Manchester, Veryst Engineering
- Information about the Multiphysics Working Group can be found on the NAFEMS website at www.nafems.org/community/working-groups/multiphysics
- To enquire about joining this working group complete the online form at www.nafems.org/community/working-groups/multiphysics/get_involved

Multiphysics

- **Areas of Current Interest**

- Webinar on Multiphysics
- NAFEMS Journal on Multiphysics
- Publication: How to do MP
- An online repository for Multiphysics case studies

- **Recent Outputs**

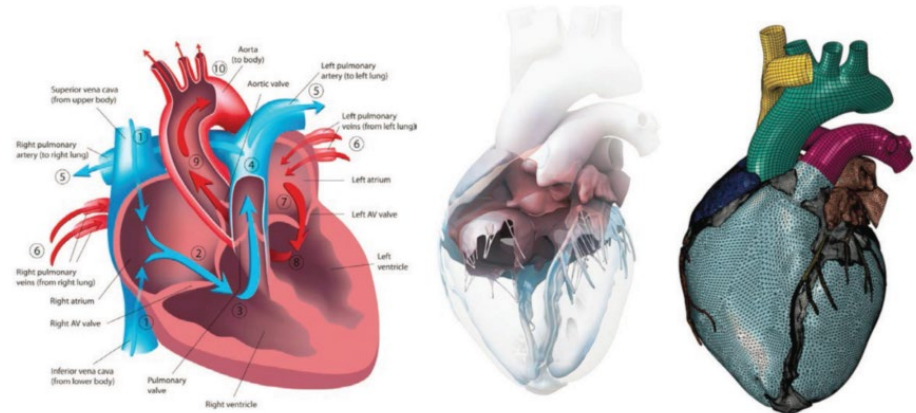
- MPWG recently produced the first issue of the NAFEMS International Journal of Multiphysics Case Studies.
- A guide to Multiphysics analysis titled “Why Do Multiphysics Analysis?” was commissioned by the working group.
- The proceedings from the NAFEMS European Multiphysics Conference are available for NAFEMS members to view.

- **Past Events**

- European Multiphysics Conference, Budapest, October 2018
- European Multiphysics Conference, Copenhagen, November 2016
- European Multiphysics Conference, Manchester, October 2014
- European Multiphysics Conference, Frankfurt, October 2012

- **Future Plans**

- European Multiphysics Conference, tbd, October/November 2020



Chair Bio

Dr. Alfred J. Svobodnik, President & CEO of the Mvoid Group, is an entrepreneur, thought leader, engineer and scientist. He has been researching for more than 25 years in the areas of Multiphysics and virtual as well as computational acoustics. His passion is Jazz music.

Previously, Alfred spent five years with Harman International Inc. where he held several senior managerial and executive advisor positions in the areas of simulation and virtual acoustics for audio systems. Alfred started his career as founding member, Executive Partner and CTO in 1990 with Numerical Analysis and Design, a company specialized in engineering analysis with finite and boundary elements for stress analysis, structural dynamics and computational acoustics.

He is honorary member of NAFEMS, member of the NAFEMS German Steering Committee and Chair of the NAFEMS Multiphysics Working Group as well as founding member of the NAFEMS Professional Simulation Engineering Scheme. Furthermore, he is a full member of the Audio Engineering Society (AES) and Chairman of the AES Technical Committee for Automotive Audio.

Alfred: 'One of my favorite quotes is: "Nothing is more powerful than an idea whose time has come" (Victor Hugo). For me, this guiding principle includes: always act with foresight, take a look at new, undiscovered ideas, sometimes move away from conventional ways, think outside the box in order to give ideas room to evolve. Ideas, whose time have come.

