



FloEFD in Education: Empowering the Next Generation of Talent

Mentor, Mechanical Analysis Division

Dr. Ivo Weinhold, University & Technology Partnerships Manager



Motivation

- Ensure that engineering graduates enter industry proficient in state-of-the-art CAE tools and techniques
- Introduce the next generation of engineers to Mentor Graphics' leading edge CFD simulation software and test hardware
- Help MAD customers in industry to recruit trained young engineers
- Support top-class academic research with sophisticated simulation tools
- Leverage academic research results to enhance MAD's technology and products through partnerships





Benefits for Industry

- Graduates get trained in MAD's CFD software, ready to start in their first position in industry
- Graduates get familiar with industrial best practices for CFD – not only academic!
- MAD's support of student design teams, e.g. various student racing teams, expose students and graduates to team work and typical simulation-based design workflows
- MAD's University Partnerships help linking actual industry requirements with academic education and research, and vice versa
- MAD's support of Interns, Master and PhD students working on industry research-related projects helps feed research results directly back to industry
- MAD's University Partnerships can assist with finding the best talents for open positions in industry



Benefits for Engineering Education

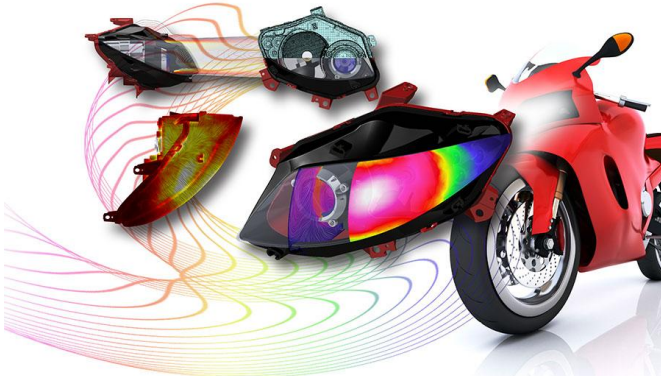
- MAD's CFD software is ideally suited for those studying engineering at all levels
 - MAD's CFD software is extremely easy to learn and use – typically, a full CFD simulation workflow can be learned within one hands-on session
 - MAD's FloEFD CFD tool is CAD-embedded
 - Most engineering students are familiar with one or more leading CAD packages – thus they are already familiar with the user interface of FloEFD
- MAD's CFD software is based on highly sophisticated, leading-edge technology
- Lecturers can design courses to teach principles of applied fluid dynamics, simulation-based design and virtual prototyping
- Focus on overall learning objectives rather than spending all available time for teaching how to use a CFD code
- Allows to directly integrate hands-on simulation sessions into courses to link theory content with practical applications, maximizing learning success

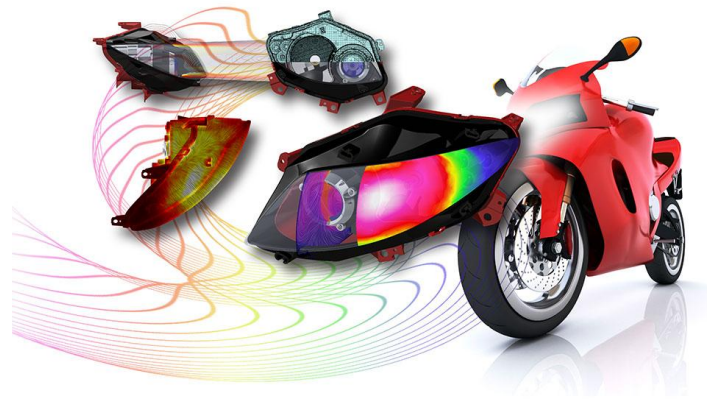


Mentor's Higher Education Program (HEP)



HEP – Mechanical Analysis Package

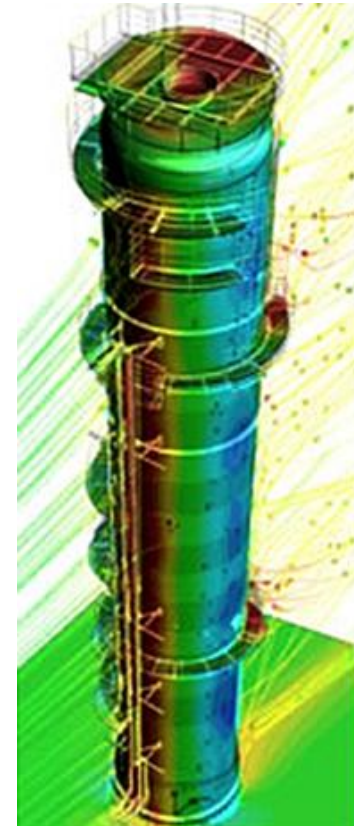
- **FloEFD for SolidEdge including modules**
 - **FloEFD for Siemens NX including modules**
 - **FloEFD (standalone) including modules**
 - FloMASTER
 - FloTHERM XT
 - FloTHERM
 - FloTHERM PCB
 - FloVENT
- 
- A red sports motorcycle is shown from a side profile, facing right. It is surrounded by colorful, swirling streamlines that represent fluid flow or aerodynamic simulation. The streamlines are in shades of pink, orange, yellow, green, and blue, indicating different flow velocities or pressures. Several components of the motorcycle, such as the front fairing, side fairing, and engine cover, are shown in a semi-transparent or exploded view, revealing internal structures and components. The background is white.





HEP - Details & Benefits

- Members of HEP have access to most MAD software products for use in teaching, class work and academic research
- Mentor Graphics donates the software and levies a small annual support charge based on the design package(s) used, irrespective of the number of licenses
 - Access to as many copies of the software as needed
 - Access to Mentor's Support Center (web-based service)
 - Access to Mentor's Learning Center (web-based on-demand training)
 - Access to online product demonstrations and tutorials for many products
- HEP is open to all educational institutions
- Easy application process – contact Mentor Graphics or your local Distribution Partner

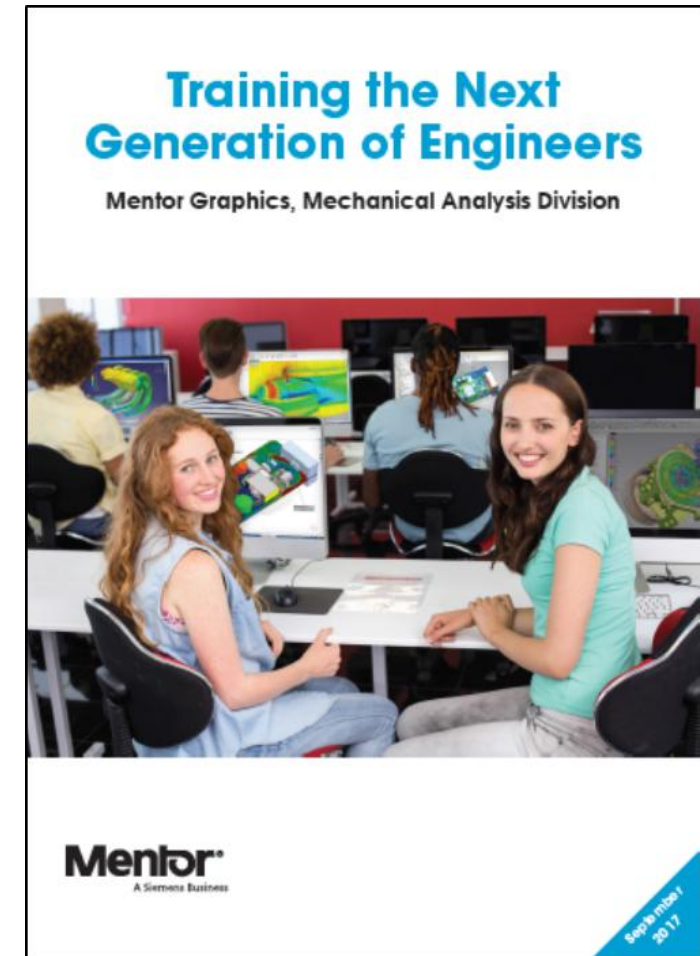




HEP – More Information

- A dedicated brochure about MAD's HEP offerings is available
 - Summary the relevant HEP membership details, prerequisites and conditions
 - Numerous success stories
 - Updated regularly with latest information
- Available for download from Mentor's MAD Resource Pages
 - Direct download link: <http://go.mentor.com/4SxXJ>
- Latest issue: September 2017

Grab a printed copy!





Formula Student Austria

(Red Bull Ring, Austria)

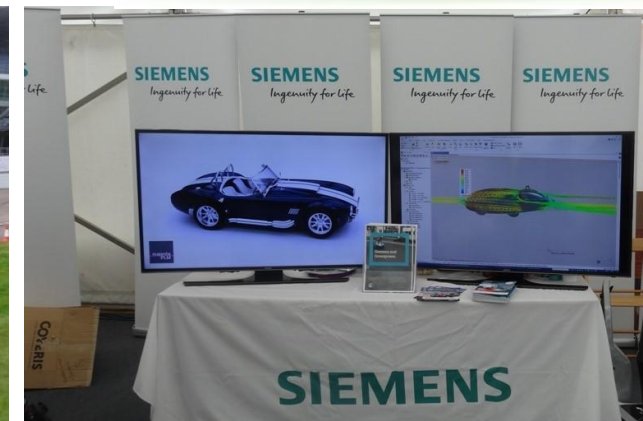
- Boris Marovic acted as Design Judge
- Our MAD Award “Most Efficient Use of CFD for Design” created great attention and happy students



Greenpower International Finals

(Rockingham Motor Speedway, UK)

- All-electric car competition based on enhanced kit cars or fully own designs
- Support of many teams with FloEFD for Solid Edge





The “**Engineering Edge**” regularly features interesting stories about successful students and university projects – check out your paper copies or the online PDF versions:

<https://www.mentor.com/products/mechanical/engineering-edge/>



Thank you!

