

# International MAGMA User Meeting 2024

October 9-11, 2024

RADISSON BLU – Frankfurt

BE  
PART  
OF IT!

MAGMA

Wednesday, October 9, 2024

19:00 **MAGMAwelcome** / Radisson BLU

Thursday, October 10, 2024

08:30 Registration

09:00 **Welcome and Plenary Presentation I**

- **Mechanical Properties Prediction with MAGMASOFT® - From Deterministic to Probabilistic Modeling**  
Vanessa Glück Nardi, MAGMA GmbH, Germany
- **Data-Driven Prediction Study of Elongation Dispersion in High-Pressure Cast Components**  
Jin-Kwan Kim, Hyundai Motor Company Namyang R&D Center, South Korea
- **Creative Solutions for an E-Mobility Housing Using Sand Cores in Low-Pressure Casting**  
Baris Çavunt & Deniz Güler, Döktaş A.Ş. Manisa, Türkiye

10:30 Coffee Break

11:00 **Plenary Presentation II**

- **MAGMASOFT® 6.1**  
Tristan Kotthoff, MAGMA GmbH, Germany
- **Developments in MAGMASOFT® – An Outlook**  
Jesper Thorborg, MAGMA GmbH, Germany

12:30 Lunch

14:00 **MAGMAworkshops**  
**Cast Iron**

- **Lightweight Efforts on Cast Iron Parts**  
Cem Aydın & Mahmut Mert Buldu, Döktaş Döküm-cülük Ticaret ve Sanayi A.Ş. Orhangazi, Türkiye
- **Finding a Real Solution**  
Ayyappan Manikandan, Aquasub Engineering Unit V, India
- **Continuous Improvement with Creative Solutions for Optimizing Casting Quality**  
Volkan Nesipoğlu, Trakya Döküm San. ve Tic. A.Ş., Türkiye

➤ **Application of MAGMASOFT® on Engine Components**

Chen Xiuming, Weichai Power Co. Ltd., P.R. China

➤ **MAGMA ECONOMICS**

Mathias Bodenburg, MAGMA GmbH, Germany

**Steel Casting**

- **Simulation Topics of Solidification of Sand Steel Casting**  
Albert An, China Machinery Industrial Products Co., Ltd., P.R. China
- **Record-Breaking Casting Success Powered by MAGMA's Expertise**  
Canan Seçgen, Akdaş Döküm Sanayi ve Tic. A.Ş., Türkiye
- **Optimized Production Using MAGMASOFT® Rotacaster & Investment Casting**  
Emir Subašić, ACCESS e.V., Germany
- **Overcoming Challenges of Steel Castings in Pinar Döküm with MAGMASOFT®**  
Gülşah Uslu, Pinar Döküm Sanayi ve Tic. A.Ş., Türkiye
- **Useful Tips for Realistic Simulation of Steel Investment Castings**  
Petr Kotas, MAGMA GmbH, Czech Republic
- **MAGMA ECONOMICS**  
Paul Rähmer, MAGMA GmbH, Germany

**Die Casting (HPDC)**

- **How to Achieve the Best Compact Gating Design and Balanced Filling for Multi-Cavity HPDC?**  
Devrim Bildirici, Süperpar Otomotiv Sanayi ve Tic. A.Ş., Türkiye
- **Using a Modified Neural Network with MAGMASOFT® Optimization Data to Select Optimum Conditions for HPDC Processes**  
Fredrik Cooper, Pressure Die Casting Pty. Ltd., South Africa
- **Simulation Study on the Application of Rheocasting to a Cast Structural Component**  
Martin Fehlbier, University of Kassel, Germany
- **Indirect Squeeze Casting Technology for the Automotive Industry**  
Milan Luňák, Top Alulit s.r.o., Czech Republic

- **Castability Study and Reducing Scrap With Optimization of a Steering Housing**  
Sefer Sezen, Can Metal Enjeksiyon Döküm Sanayi ve Tic. A.Ş., Türkiye
- **Attempt to do First Time Right through MAGMASOFT® Simulation**  
Chittaranjan Swain, Godrej & Boyce Mfg. Co. Ltd., India
- **Adjustment of Alloy Properties and Heat Transfer Conditions for Realistic Simulations**  
Siddhant Thobhani, Bocar GmbH, Germany
- **Filling Phase Optimization with MAGMASOFT® in HPDC**  
Çağatay Zadeoğlu, Kirpart Otomotiv San. ve Tic. A.Ş., Türkiye
- **Simulating GIGA Casting Projects (Tips & Tricks)**  
Guido Dietrich, MAGMA GmbH, Germany
- **MAGMA ECONOMICS**  
Tobias Wilden, MAGMA GmbH, Germany

#### Non-Ferrous Applications

(Permanent Mold/LPDC/Sand Casting)

- **Mechanical Properties Comparison Between Simulated and Measured Data on an AISi7Mg03 LPDC Crossmember Through T6 Heat Treatment**  
Alessia Casari, Fonderie Mario Mazzucconi S.p.A., Italy
- **Evaluation of Residual Stresses in Structural Analysis with MAGMALink**  
Yiğit Çatal, Döktaş AŞ Manisa, Türkiye
- **HIGH DYNAMIC VACUUM SYSTEM – Revolutionizing Aluminum Casting – The Introduction of ROBOCAST V for Greater Efficiency**  
Edmundo Oliveira, Fill Gesellschaft m.b.H., Austria
- **Design and Realization of Complex Cast Salt Cores for FRP- and Casting Applications**  
Simon Schmidt, Fraunhofer-Institut für Fertigungstechnik und angewandte Materialforschung IFAM, Germany
- **Obtaining the Better Cooling Efficiency With Using The Different Kind Materials at the Same Mold Part**  
Ali Uzunca & Eren Bozkurt, CMS Jant ve Makina Sanayii A.Ş., Türkiye

- **Casting Optimization and Robust Design Considering Composition Uncertainties of Secondary Alloys in the Horizon Europe Project 'RecAL'**  
Alberto Vergnano & Hamed Rezvanpour, University of Modena and Reggio Emilia - UNIMORE, Italy
- **LPDC in MAGMASOFT® 6.1**  
Marcus Schopen, Hartmut Rockmann, MAGMA GmbH, Germany
- **MAGMA ECONOMICS**  
Marcus Schopen, MAGMA GmbH, Germany

#### Core Making Processes

- **The Impact of Local Amine Concentration on Core Hardening: A Study Using Experiments and Simulations**  
Mohammed Shakeer Khan, TU Bergakademie Freiberg, Germany
- **Tips & Tricks**  
Lubos Pavlak, MAGMA GmbH, Germany
- **MAGMA ECONOMICS**  
Lubos Pavlak, MAGMA GmbH, Germany
- **About the Importance of Process Knowledge**  
Joern Schmidt, MAGMA Engenharia do Brasil Ltda., Brazil
- **Pressure Calculator**  
Ingo Wagner, MAGMA GmbH, Germany

#### Continuous Casting

- **Behavior of Grain Refiner Particles in the Tundish/Launders of R&D Casting Facility**  
Thien Dang, TRIMET Aluminium SE, Germany
- **News in MAGMA CC**  
Erik Hepp, MAGMA GmbH, Germany
- **Advanced Control of Casting Speed**  
Constantino Krafthöfer, MAGMA GmbH, Germany
- **MAGMA ECONOMICS**  
Constantino Krafthöfer, MAGMA GmbH, Germany
- **Applications in US**  
Gerald Richard, MAGMA Foundry Technologies Inc., USA

17:00 End of Day 1

18:30 **MAGMAevening** / DEPOT 1899





Friday, October 11, 2024

08:30 **Plenary Presentation III**

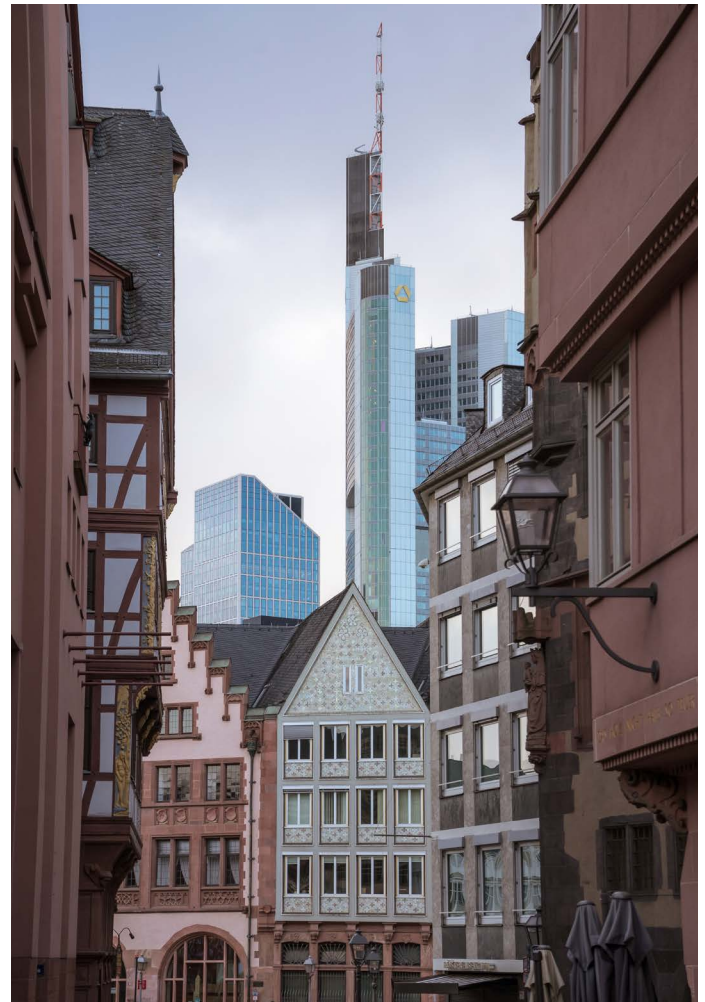
- **Hardware / Performance Benchmarks**  
Bo Wang, MAGMA GmbH, Germany
- **Validating Flow Simulations with AI-Based Optical Quality Control: A Systematic Approach to Detecting Sub-Millimeter Defects**  
Stephan Goeke, Volkswagen AG, Werk Kassel, Germany

10:00 **MAGMAforums**

- Usability / Optimization
- Stresses / Core Distortion
- Geometry / Mesh
- Result Assessment / Images / Movies / Interact

13:00 **Résumé & Closing of the User Meeting**

13:15 Lunch





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