

# PROGRAM

14<sup>th</sup> INTERNATIONAL SEMINAR ON FURNACE DESIGN  
Operation & Process Simulation

---

**TUESDAY, JUNE 20**

12:00 – 21:00      **SEMINAR REGISTRATION (Hotel Horal – Lobby)**

**13:00 – 15:00      9<sup>th</sup> GFM USERS' MEETING (for users of GS GFM Software, based on invitation)**

**Place:                      Hotel Horal – Conference Room**

**16:00 – 17:30      MEETING OF TC21/TC15 – GLASS FURNACE DESIGN & OPERATION**

**Program Coordinator:    Aaron Huber**

**Place:                      Hotel Horal – Conference Room**

19:00 – 23:00      **MEET & GREET PARTY (Hotel Horal)**  
**Small Refreshment Served**



# PROGRAM

## 14<sup>th</sup> INTERNATIONAL SEMINAR ON FURNACE DESIGN Operation & Process Simulation

### WEDNESDAY, JUNE 21

06:30 – 08:30      **SEMINAR GOLF TOURNAMENT 2017 (Hotel Horal)**

08:30 – 14:00      **SEMINAR REGISTRATION (Hotel Horal – Lobby)**

**09:00 – 09:15      WELCOME SPEECH**

**Program Coordinator:** Erik Muijsenberg  
**Place:** Hotel Horal – Conference Room

**09:15– 12:45      TECHNICAL SESSION 1 – BATCH MELTING PROCESSES & FURNACE MODELING**

**Chairmen:** Petr Schill, Rajiv Tiwary  
**Place:** Hotel Horal – Conference Room

09:15 – 09:45      **OPENING LECTURE**  
**CFD as a Tool for Operations: Some Examples**  
Aaron Huber, Donn Sederstrom, Narayana Chalasani (Johns Manville)

09:45 – 10:15      **INVITED LECTURE**  
**Analysis of the Physical Constraints of Performance of Fossil Fuel Fired Glass Furnaces**  
Reinhard Conradt (RWTH Aachen University & uniglassAC GmbH)

10:15 – 10:40      **How Batch Preheating System Can Affect the Glass Current Flow in the Melting Furnace**  
Mahdie Moaveni (Simullex GmbH)

10:40 – 11:05      **COFFEE BREAK**

11:05 – 11:30      **Modeling Convective Heat Transfer in Regenerator Checkers Using  $k-k_L-\omega$  Turbulence Model**  
Miroslav Trochta, Miroslav Simcik, Tomas Krobot (Glass Service, a.s.)

11:30 – 11:55      **Results of Different Glass Service GFM Tools for Seed Count Forecasts – Part 3**  
Wolfgang Muschick

11:55 – 12:20      **Physical Model and Analysis of Gob Feeder Performance**  
Tomas Krobot, Pavel Viktorin (Glass Service, a.s.)

12:20 – 12:45      **Numerical Simulation of Glass Fiber Manufacturing Processes: Overview and Challenges**  
Bruno Purnode (Owens Corning Science & Technology)

12:45 – 13:00      **GROUP PHOTO 2017 (Hotel Horal – Terrace)**

13:00 – 14:30      **LUNCH (Hotel Horal – Restaurant)**



# PROGRAM

14<sup>th</sup> INTERNATIONAL SEMINAR ON FURNACE DESIGN  
Operation & Process Simulation

WEDNESDAY, JUNE 21

## 14:30 – 17:25 TECHNICAL SESSION 2 – COMBUSTION SIMULATION & ELECTRIC MELTING

Chairmen: Bruno Purnode, Aaron Huber  
Place: Hotel Horal – Conference Room

- 14:30 – 14:55 **Importance of CFD Modeling in the Development of Novel Oxy-Fuel Solutions for the Glass Industry: Recent Practical Case Studies**  
Julien Pedel, Hisashi Kobayashi, Stefan Laux (Praxair, Inc.)
- 14:55 – 15:20 **PRIME Glass Project: Integrated Experimental Approach for the Validation of Numerical Simulations**  
Simone Tiozzo, Walter Battaglia, Alessandro Migatta (Stazione Sperimentale del Vetro)  
Carlo Cravero, Alessandro Spoladore (Universita degli Studi di Genova)
- 15:20 – 15:45 **Advanced DES Simulations of Oxy-Gas Burner Located into Model of Real Melting Chamber**  
Vojtech Betak (Aerospace Research & Test Establishment, Department of Engines)
- 15:45 – 16:10 **COFFEE BREAK**
- 16:10 – 16:35 **A Numerical Investigation for the Effect of Electric Boosting in an Oxy Fuel Fired Glass Fiber Furnace**  
Merve Durubal, Burcin Gül (Sisecam Science & Technology Center)
- 16:35 – 17:00 **Electric Melting in the Value of Modeling (Dreaming of Modeling & Modeling Dreams)**  
Stuart Hakes (FIC (UK) Limited)
- 17:00 – 17:25 **The Only Future for Glass Industry Will Be "All-Electric"**  
Rene Meuleman (Eurotherm by Schneider-Electric)
- 19:00 – 23:00 **RECEPTION – Welcoming Ceremony (Hotel Horal)**  
**GS MODELING AWARD 2017**



# PROGRAM

## 14<sup>th</sup> INTERNATIONAL SEMINAR ON FURNACE DESIGN Operation & Process Simulation

THURSDAY, JUNE 22

09:15 – 12:35 **TECHNICAL SESSION 3 – OPERATION (INDUSTRY 4.0) & COMBUSTION HEAT TRANSFER**

**Chairmen:** Wolfgang Muschick, Reinhard Conradt  
**Place:** Hotel Horal – Conference Room

- 09:15 – 09:40 **Glass Melting Models Examined Across Length Scales**  
William Johnson (Corning)
- 09:40 – 10:05 **The Impact of Energy Distribution on the Glass Melting Performance of the Melting Channel Examined by Mathematical Modeling**  
Lukas Hrbek, Lubomir Nemec, Marcela Jebava  
(Laboratory of Inorganic Materials, joint workplace of the University of Chemistry and Technology Prague, and the Institute of Rock Structure and Mechanics of the AS CR, v.v.i.)
- 10:05 – 10:30 **Regenerator Design Study Combining Numerical Simulations and Statistical Tools**  
Zakaria Habibi, Francois Bioul (AGC Glass Europe)
- 10:30 – 10:55 **Heat Transfer Optimization and NO<sub>x</sub> Reduction by FlammaTec Burners**  
Petr Vojtech (FlammaTec, spol. s r.o.)  
Erik Muijsenberg (Glass Service, a.s.)
- 10:55 – 11:20 **COFFEE BREAK**
- 11:20 – 11:45 **Container Glass Industry 4.0 – Process Control 2025**  
Harald Zimmermann (Verallia Deutschland)
- 11:45 – 12:10 **High Temperature Camera Identification Software – Part of ES 4.0 and A Key Component towards Industry 4.0**  
Oldrich Liska (Glass Service, a.s.)  
Presented by: Erik Muijsenberg (Glass Service, a.s.)
- 12:10 – 12:35 **Advantages of ESIII™ Full Automatic Control of Glass Feeders**  
Menno Eisenga (Glass Service, B.V.)  
Presented by: Erik Muijsenberg (Glass Service, a.s.)
- 13:00 – 14:30 **LUNCH (Hotel Horal – Restaurant)**



# PROGRAM

14<sup>th</sup> INTERNATIONAL SEMINAR ON FURNACE DESIGN  
Operation & Process Simulation

THURSDAY, JUNE 22

14:30 – 17:00 **TECHNICAL SESSION 4 – EMISSIONS, REFRACTORY, DEFECTS & FLOAT FORMING**

Chairmen: William Johnson, Mark Powys

Place: Hotel Horal – Conference Room

14:30 – 14:55 **Solid Glass Defects Identification Using SEM-EDX Microanalysis**  
Martina Jezikova (Glass Service, a.s.)

14:55 – 15:20 **How to Reduce Glass Defects Generated by Fused-Cast AZS**  
Jerome Canaguier (Comercial Quimica Masso)

15:20 – 15:45 **Ecopure Catalytic Candle Filter – The New Alternative for Flue Gas Treatment**  
Matthias Hagen (Luft-und Thermotechnik Bayreuth GmbH, part of DÜRR group)

15:45 – 16:10 **COFFEE BREAK**

16:10 – 16:35 **Combined Modeling Approach to the Tin Bath Simulation**  
Jan Boros (GS Advanced Computational Technologies s.r.o.)  
Vaclav Heidler (Faculty of Applied Science, University of West Bohemia)  
Petr Schill (Glass Service, a.s.)

16:35 – 17:00 **Diffuse Interface Models and Their Application in Float Forming**  
Martin Rehor (Faculty of Mathematics and Physics, Charles University in Prague)

19:00 – 24:00 **FAREWELL PARTY with Live Music & Dancing (Hotel Horal)**

WITH SINCERE THANKS TO OUR SPONSORS:

