



## PERSONAL INFORMATION

NAME  
ADDRESS  
PHONE  
E-MAIL  
CITIZENSHIP  
DATE OF BIRTH

**MAG. DIPL.-ING. DR. TECHN. ROLAND EISL**  
**OBERWEG 26, 4844 REGAU, AUSTRIA**  
**++43 650 22 38 360**  
Roland.Eisl@enrag.at  
Austria  
22.04.1981

## WORK EXPERIENCE

### **SINCE FEBRUARY 2016**

Certified Court Expert (according to Austrian law) for calculation and simulation of thermodynamical and fluidmechanical processes; for combustion and gasification technologies, for steam generators and for computational fluid dynamics (CFD)

### **SEPTEMBER 2013-DEZEMBER 2017**

BIUCO GmbH  
General Manager (Chief Technician, CTO)  
Company selling and engineering biomass gasification combined heat and power plants for small and medium size based on a patented fluidized bed technology.

### **SINCE JUNE 2010**

ENRAG GmbH  
CEO  
Engineering Company for mechanical engineering (power engineering)  
Business operation areas: Modelling and simulation of thermodynamical and fluid mechanical processes and systems; Development of thermal energy storage systems; Process- and power engineering; Optimization of combustion systems

### **SEPTEMBER 2011-OCTOBER 2013**

Research Studio Austria HELIOFLOAT (Vienna University of Technology)  
CEO  
Business development, marketing, entrepreneurship, acquisition of funding and investors.

### **MARCH 2007 – MARCH 2010**

Vienna University of Technology, Institute for Energy Systems and Thermodynamics.  
Junior Scientist  
Tasks:  
Providing simulations and solutions for industrial partners in the fields of combustion-, power- and process engineering as well as computational fluid dynamics simulations (CFD simulation).  
Working and writing on the PhD thesis: „CFD modelling of the coal fragmentation,

-drying and -devolatilization inside a moving bed of a COREX melter gasifier.“; in cooperation with SIEMENS VAI

#### **AUGUST AND SEPTEMBER 2009**

SANDIA National Laboratories, Livermore, California, US

Guest scientist at the CRF (Combustion Research Facility)

Tasks: Research on combustion and gasification of solid fuels

## EDUCATION

#### **1991-1995**

Grammar school Bad Ischl, Austria

#### **1995-2000**

Higher Technical Education Institute, Vöcklabruck, Austria

Building services and Energy systems

A-Level (**passed with distinction**)

#### **2001 – 2007**

Vienna University of Technology: Bachelor and Master in mechanical engineering

Field of in-depth study:

Energy systems and power engineering:

- Advanced power plants
- Thermal energy systems

Finished May 2007 (**passed with distinction**)

Degree: **Diplom Ingenieur (Master of Science, MSc)**

#### **2001-2009**

Vienna University of Economics and Business: Bachelor and Master in business administration

Fields of in-depth study:

- Corporate Finance
- Banking and investment banking
- Corporate and capital market law

Finished March 2009

Degree: **Magister der Sozial- und Wirtschaftswissenschaften (Master of Science, MSc)**

#### **2007-2010**

Vienna University of Technology: Doctorate program in technical sciences

Modelling and simulation in thermal- and process engineering

PhD thesis: „*CFD modelling of the coal fragmentation, -drying and -*

*devolatilization inside a moving bed of a COREX melter gasifier.*“; in cooperation with SIEMENS VAI.

Finished March 2010 (**passed with distinction**)

Degree: **Doktor der technischen Wissenschaften (PhD)**

## PERSONAL SKILLS

### FIRST LANGUAGE

**German**

### ADDITIONAL LANGUAGE

**English**

Fluent in written and spoken

## SOCIAL SKILLS

Elected member of the students union, 2003-2005.

Elected student member of different commissions of the faculty of mechanical

engineering, 2003-2006

Voluntary employee at the students union press office of Vienna University of Technology, 2003-2005

## TEACHING

Numerical methods for thermal energy systems (summer terms 08, 09)

## TECHNICAL SKILLS

### SOFTWARE:

Office (special Excel VBA knowledge), LaTeX

CAD

Mathcad, Matlab

Process simulation: Gate Cycle, IPSE Pro, KED, GT Pro, EBSILON, Aspen+

CFD: FLUENT

DEM: LIGGGHTS

FEM: Altair Hyperworks

Linux

## PUBLICATIONS

R. Eisl, H. Ofner: E<sup>3</sup>SteP: *Enhanced Energy Efficient Iron- and Steel Production*, Klimafonds Science Brunch, 2018

R. Eisl, D. Buchberger, R. Redl, B. Hiebl: *Design and optimization of iron ore pelletizing plants with coupled numerical simulations*, EUROPEAN STEEL TECHNOLOGY AND APPLICATION DAYS 2017

M. Hämmerle, M. Haider, R. Willinger, K. Schwaiger, R. Eisl, K. Schenzel: „*Saline cavern adiabatic compressed air energy storage using sand as heat storage material*“; 10th Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik, Croatia; 27.09.2015 - 02.10.2015; in: "Proceedings of the 10th Conference on Sustainable Development of Energy, Water and Environment Systems", (2015),

K. Schwaiger, M. Haider, F. Holzleithner, R. Eisl: "A comparison between passive regenerative and active fluidized bed thermal energy storage systems"; Journal of Physics: Conference Series, 395 (2012), 395; 8 S.

K. Schwaiger, M. Haider, F. Holzleithner, R. Eisl: "A comparison between passive regenerative and active fluidized bed thermal energy storage systems"; Vortrag: 6th European Thermal Sciences Conference (Eurotherm 2012), Poitiers; 04.09.2012 - 07.09.2012.

K. Schwaiger, M. Haider, F. Holzleithner, R. Eisl: "sandTES - A novel Thermal Energy Storage System based on Sand"; 21st International Conference on Fluidized Bed Combustion, Naples; 03.06.2012 - 06.06.2012; in: "21st International Conference on Fluidized Bed Combustion", (2012)

K. Schwaiger, M. Haider, F. Holzleithner, R. Eisl: "A comparison between passive regenerative and active fluidized bed thermal energy storage systems"; Journal of Physics: Conference Series, 395 (2012), 395; 8 S.

M. Rammerstorfer, R. Eisl: "Carbon Capture and Storage - Investment Strategies for the future?" Energy Policy, vol. 39, 7103-7111, 2011.

M. Haider, K. Schwaiger, F. Holzleithner, R. Eisl: "SandTES - A novel thermal energy storage system based on sand"; Presentation: Eurotherm Seminar No. 93, Bordeaux; 16.11.2011 - 18.11.2011.

R. Eisl, F. Holzeithner, M. Haider, G. Aichinger:  
"CFD Simulation of Process-driven Particle Fragmentation in a Coal Bed Gasifier";  
presentation: 8th European Conference on Coal Research and its Applications:  
ECCRIA 8, Leeds, 06.09.2010 - 07.09.2010.

A. Steiner, R. Eisl, M. Haider:  
"Energy survey "ECOCEM""; Report for Gmundner Zementwerke Produktions- u.  
Handels GmbH; 2010.

R. Eisl:  
"CFD modeling of the coal fragmentation, -drying and -devolatilization inside a  
moving bed of a COREX melter gasifier", Vienna, Vienna University of Technology,  
PhD thesis, 2010.

R. Eisl, M. Rammerstorfer:  
"Carbon capture and storage - Investment strategies for the future"; Melbourne  
Derivatives Research Group Conference, Melbourne; 2009.

R. Eisl:  
"Computational Fluid Dynamics - A powerful tool to optimize waste incineration";  
Solid Waste Management Symposium, Vienna; 2009.

R. Eisl:  
„Validation of CO2 storage and – transportation facilities via real options  
analysis“, Vienna, Vienna University of Economics and Business., Master thesis,  
2009

R. Eisl, A. Werner, H. Walter, M. Haider:  
"A Comparison between CFD-Simulation and Experimental Observation of Solids  
Distribution in a CFB-Test Rig"; 9th International Conference on Circulating  
Fluidized Beds, Hamburg, Germany, in: "Circulating Fluidized Bed Technology IX",  
J. Werther, W. Nowak, K. Wirth, E. Hartge (Hrg.), 2008

R. Eisl:  
"Modeling the gas- solids distribution in a circulating fluidized bed with  
computational fluid dynamics (CFD) ", Vienna, Vienna University of Technology,  
Master thesis, 2007.

## PATENTS

R. Eisl, M. Haider, F. Holzeithner:  
"Wärmespeichersystem" (engl: "Heat Storage System");  
Patent: Austria, Nr. 510897 B1  
European Patent, EP 2612098 B1

## DRIVING LICENSES

A, B, C, E, F, G, crane