

PROGRAM
2018

2nd Edition

Take note:

This is a translation of the original program. Most of the session lectures will be presented in German. Only lectures marked with a star * will be presented in English. During the plenary session an English translation will be offered.

50. KRAFTWERKSTECHNISCHES KOLLOQUIUM

23rd and 24th October 2018

International Congress Center Dresden
Ostra-Ufer 2 | 01067 Dresden

Patronage

Martin Dulig, Saxony's Minister of State for Economic Affairs,
Labor and Transport and Deputy Prime Minister of Saxony

Scientific Advisory Board

Professor Dr.-Ing. Michael Beckmann, Technische Universität Dresden
Professor Dr.-Ing. habil. Antonio Hurtado, Technische Universität Dresden

Advisory Board

Dipl.-Ing. Hubertus Altmann, Lausitz Energie Bergbau AG and Lausitz Energie
Kraftwerke AG, Cottbus

Dipl.-Ing. Reiner Block, TÜV SÜD Division Industry Service, München

Dipl.-Ing. Britta Daume, Qesy GmbH & Co. KG, Burgwedel

Dipl.-Verwaltungswirt (FH) Erich Fritz, SAXONIA Standortentwicklungs-
and -verwaltungsgesellschaft mbH, Freiberg

Dr.-Ing. habil. Rutger Kretschmer, DREWAG-Stadtwerke Dresden GmbH

Dr. Reinhard Maaß, FDBR Fachverband Anlagenbau. Energie. Umwelt.
Prozessindustrie, Düsseldorf

Professor Dr.-Ing. Bernd Meyer, Technische Universität Bergakademie Freiberg

Dipl.-Ing. Gabriela Msuya, HAUS DES KFZ-GEWERBES GmbH, Dresden

Dipl.-Ing. Peter Nothnagel, Wirtschaftsförderung Sachsen GmbH, Dresden

Hans-Joachim Polk, VNG AG, Infrastruktur/Technik, Leipzig

Dr.-Ing. Oliver Then, VGB PowerTech e.V., Essen

Professor Dr. Thomas Thiemann, Siemens AG, Mülheim an der Ruhr

Professor Dr. Andrea Versteyl, avr- Andrea Versteyl Rechtsanwälte, Berlin

Dipl.-Ing. (FH) Roland Zepeck, IBD International Business Development, Freising



TECHNISCHE
UNIVERSITÄT
DRESDEN

Tuesday, 23rd October 2018

■ Hall 4/5 Plenary session

Session Chair: Professor Dr.-Ing. Michael Beckmann, Technische Universität Dresden

- 09.30 am **Registration and exhibition opening with coffee and cake**
- 10.30 am **Welcome and award of the Boie Prize**
Professor Dr.-Ing. Michael Beckmann, Technische Universität Dresden
- 11.00 am **Global trends and their impact on energy production**
Dipl.-Ing. Willi Meixner, Siemens AG, CEO Division Power & Gas, Erlangen
- 11.30 am **Energy supply in the Czech Republic - situation and perspective**
Ing. Tomáš Hüner, Minister of Industry and Trade of the Czech Republic **requested**
- 12.00 pm **Energy transformation in Europe**
Professor Dr. Klaus-Dieter Borchardt, European Commission, Director of the Internal Energy Market, Brussels
- 12.30 pm **Energy policy of the Free State of Saxony – With a view to Germany and Europe**
Prime Minister of Saxony Michael Kretschmer, Dresden

01.00 pm **Lunch break**

Session Chair: Professor Dr.-Ing. habil. Antonio Hurtado, Technische Universität Dresden

- 02.15 pm **Integrated energy supply – The strategy of the ENBW**
Dr.-Ing. Hans-Josef Zimmer, CTO EnBW Energie Baden-Württemberg AG, Karlsruhe
- 02.45 pm **LEAG – The guarantor for security of supply, flexibility, price stability and integrated energy supply**
Dipl.-Ing. Hubertus Altmann, CTO Lausitz Energie Kraftwerke AG and Lausitz Energie Bergbau AG, Cottbus
- 03.15 pm **The failure of the media in reporting on the energy transformation**
Roland Tichy, Member of the Ludwig Erhard Foundation and editor of the monthly magazine Tichys Einblick, Frankfurt am Main

03.45 pm **Coffee break**

■ Hall 3 Mercury reductions in Power Plants I

Session Chair: Professor Dr.-Ing. Michael Beckmann, Technische Universität Dresden

- 04.15 pm **BREF – A challenge for the economic power plant operation**
Dipl.-Ing. Matthias Schneider, Dipl.-Ing. Jan Constantin Hintzen, Dr. rer. nat. Kai Keldenich, STEAG Energy Services GmbH, Essen
- 04.45 pm **Challenges of Hg capture in the lignite power plants of the Lausitz Energie Kraftwerke AG**
Dipl.-Ing. Günter Heimann, Dipl.-Ing. Andreas Schröter, Dr.-Ing. Olaf Höhne, Lausitz Energie Kraftwerke AG, Cottbus
- 05.15 pm **Hg reduction in Schkopau**
Dr.-Ing. Jan Schütze, IEM-Fördertechnik GmbH, Kastl
- 05.45 pm **Hg emissions capture in fabric filters of CFB boilers – experiences from real power plant**
Ing. Petr Karafiát, Alpiq Generation (CZ) s.r.o., Kladno, Tschechische Republik

06.15 pm **End of lecture**

TUESDAY
23.10.2018

06.30 pm Welcome drink
exhibition hall

Sponsored by



07.30 pm Evening event
terrace level , Internat. Congress Center Dresden

■ Hall 4 Combustion 4.0 I

Session Chair: Dr.-Ing. Andreas Feldmüller, Siemens AG, Mülheim an der Ruhr

- 04.15 pm **Plant management: What digital possibilities exist?**
Wolfgang Gerndt, Siemens AG, Berlin
- 04.45 pm **Digitalization @ RWE - New paths in power plant optimization**
Dr.-Ing. Frank Neumann, Prof. Dr.-Ing. Reinhold Elsen, Dr.-Ing. Natividad Jordan Escalona, RWE Power AG, Essen
- 05.15 pm **Model-based operational data analysis to increase efficiency - Linking of process model and sensor data of a power plant**
Dr.-Ing. Martin Pohl, Dr.-Ing. Tao Wen, ENVERUM Ingenieurgesellschaft für Energie- und Umweltverfahrenstechnik mbH, Dresden
- 05.45 pm **Incident analysis and operational analysis via dynamic reproduction of historical process images**
Dipl.-Ing. (TH) Uwe Siebert, Mitsubishi Electric Group, Ratingen
Dipl.-Ing. Olaf Ries, Me-Automation Projects GmbH, Fuldabrück
- 06.15 pm **End of lecture**

■ Hall 5 Flexibility I

Session Chair: Dipl.-Ing. Thomas Hörtinger, Lausitz Energie Bergbau AG and Lausitz Energie Kraftwerke AG, Cottbus

- 04.15 pm **Fatigue forecast in flexible operation – Solution strategies for new challenges**
Dipl.-Ing. Christian Hüttner, Dipl.-Ing. Franz Binder, Dipl.-Ing. Stefan Pfeffer, TÜV SÜD Industrie Service GmbH, München
- 04.45 pm **Flexibilization of a 400 MW combined cycle power plant by bypass operation to maximize district heating**
Dr.-Ing. Nicolas Mertens, Prof. Dr.-Ing. Henning Zindler, Dipl.-Ing. Marc-Hendrik Prabucki, Uniper Technologies GmbH, Gelsenkirchen
- 05.15 pm **Influences of single burners and their interaction on the mode of operation and optimization of steam generator firing**
Dr.-Ing. Steffen Griebe, Dipl.-Ing. Volker Biesold, Dipl.-Ing. Helge Kaß, VPC GmbH, Peitz
Dipl.-Ing. Axel Becker, KNG Kraftwerks- und Netzgesellschaft mbH, Rostock
Dr.-Ing. Thomas Brunne, Lausitz Energie Kraftwerke AG, Cottbus
Dipl.-Ing. Martin Fricke, Trianel Kohlekraftwerk Lünen GmbH & Co. KG
Dipl.-Ing. Thorsten Thimme, Vattenfall Wärme AG, Berlin
- 05.45 pm **Operation reliability, safety and flexibility enhancement using online furnace and flame monitoring system with thermographical analysis: Case study at 300 MWEL oil-& gasfired boilers in Kuwait ***
Gheorghe Medinschi, Babcock Borsig Steinmüller GmbH, Al-Sharq, Kuwait
Emad Hussain Alkoot, Ministerium für Wasser und Elektrizität, Kuwait
Dr. Francesco Turoni, EUTECH Scientific Engineering GmbH, Aachen
- 06.15 pm **End of lecture**

■ Conference room 1

Sewage sludge treatment – Politics, law, strategies and market

Session Chair: Professor Dr. Andrea Versteyl, avr – Andrea Versteyl, Rechtsanwälte Partnerschaftsgesellschaft mbB, Berlin

- 04.15 pm **Sewage sludge – A valuable resource**
Gunda Röstel, Stadtentwässerung Dresden
- 04.45 pm **Legal consequences of the sewage sludge regulation for the disposal practice**
Prof. Dr. Andrea Versteyl, avr – Andrea Versteyl Rechtsanwälte Partnerschaftsgesellschaft mbB, Berlin
- 05.15 pm **Phosphate recycling - recovery of an essential raw material**
Prof. Dr. rer. nat. habil. Martin Bertau, TU Bergakademie Freiberg
- 05.45 pm **Sludge recycling as a growth opportunity**
Dipl.-Ing., Dipl.-Wirt.-Ing. Manfred Becker, MVA Bonn GmbH
- 06.15 pm **End of lecture**

Conference room 2/3

System Integration I

Session Chair: Professor Dr.-Ing. habil. Klaus Görner, Universität Duisburg-Essen, Essen

- 04.15 pm Novel ancillary services: extended island operation capability using thermal power plants**
Dr.-Ing. Gunnar Löhning, Florian Wenzel, M.Eng., Dipl.-Ing. Dietmar Haake, Dipl.-Kfm. techn. Frank Mehlow, Lausitz Energie Kraftwerke AG, Cottbus
- 04.45 pm Flexibilization of a natural gas power plant by integration of methanol synthesis**
Dipl.-Ing. Florian Möllenbruck, Mike Dressler, M.Sc., Dr.-Ing. Gerd Oeljeklaus, Prof. Dr.-Ing. habil. Klaus Görner, Universität Duisburg-Essen, Essen
- 05.15 pm Boundary conditions for power-to-MeOH applied as flexible power consumption process, battery, grid-connected system**
Dipl.-Ing. (FH), Dipl.-Ök. Christian Schweitzer, Robert Hensel, Sten Wranik, bse Engineering Leipzig GmbH
- 05.45 pm ALIGN-CCUS: Diesel fuel substitute DME from separated CO₂ from the Niederaussem power plant**
Dr. rer. nat. Peter Moser, Dipl.-Ing. Georg Wiechers, Dr.-Ing. Sandra Schmidt, Dipl.-Ing. Knut Stahl, RWE Power AG, Essen | Dr.-Ing. Muhammad Majid, Dr.-Ing. Arthur Heberle, Mitsubishi Hitachi Power Systems Europe GmbH, Duisburg
Hiroshi Kakihira, M.Sc., Dr. rer. nat. Mitsuhiro Maruyama, Asahi Kasei Europe GmbH, Düsseldorf
Prof. Dr.-Ing. Ralf Peters, Stefan Weiske, M.Sc., Dr.-Ing. Petra Zapp, Dr.-Ing. Stefanie Troy, Forschungszentrum Jülich GmbH
Marcel Neumann, M.Sc., Dipl.-Ing. Bastian Lehrheuer, VKA, RWTH Aachen
Dr.-Ing. Sharareh Schaub, Dr.-Ing. Thorsten Schnorbus, FEV Europe GmbH, Aachen
- 06.15 pm End of lecture**

Conference room 4/5

Transfer of existing facilities

Session Chair: Dipl.-Ing./IWE Hans Christian Schröder, Schröder Anlagenservice GmbH, Weinheim

- 04.15 pm Technical challenges during the transfer of existing facilities to other locations in the European context**
Dipl.-Ing./IWE Hans Christian Schröder, Schröder Anlagenservice GmbH, Weinheim
Dipl.-Ing. Klaus Gerwers, Standardkessel Baumgarte Service GmbH, Duisburg
- 04.45 pm Risk and insurance management for new and rebuild projects**
Dr. Michael Härig, Marsh GmbH, Düsseldorf
- 05.15 pm Relocation of power plant facilities: Risks and opportunities in the licensing procedure**
Dr. Michael Neupert, Kümmerlein Rechtsanwälte & Notare, Essen
- 05.45 pm Condition registration and procedures for rebuilding at a new location from ZÜS perspective and a notified body**
Dipl.-Ing./IWE Achim Foos, TÜV SÜD Industrie Service GmbH, Filderstadt
Dipl.-Ing./IWE Hans Christian Schröder, Schröder Anlagenservice GmbH, Weinheim
- 06.15 pm End of lecture**

Conference room 6

Measuring technology and control technology

Session Chair: Professor Dr.-Ing. Alfons Kather, Technische Universität Hamburg

- 04.15 pm Official emission determination in practice using PEMS as an alternative to conventional AMS**
Dipl.-Math. Florian Schunke, DURAG data systems GmbH, Freiberg
- 04.45 pm Continuous classification of fine dust particles – The future of dust measurement**
Dipl.-Ing. univ. Kai Klinder, Dr. Alexander Schladitz, SICK Engineering GmbH, Ottendorf-Okrilla
- 05.15 pm Dealing with electrical and electronic safety devices at combustion plants in the context of deterministic and probabilistic failure preventing strategies**
Dipl.-Ing. (FH) Johann Ströbl, TÜV SÜD Industrie Service GmbH, Regensburg
- 05.45 pm A field report on flame stability analyses with a flame detector**
Dipl.-Ing. Christian Deselaers, Dr. rer. nat. Cornelius Wülker, Dipl.-Ing. Mathias Klostermann, DURAG GmbH, Hamburg
- 06.15 pm End of lecture**

Hall 3 Mercury reductions in Power Plants II

Session Chair: Dr. rer. nat. Kai Keldenich, STEAG Energy Services GmbH, Essen

- 08.30 am Oxidation behavior of mercury in coal combustion**
Dipl.-Ing. Anne-Christin Schwieger, Dr.-Ing. Andrea Ohle, Prof. Dr.-Ing. Michael Beckmann, Technische Universität Dresden
- 09.00 am Cost-effective mercury abatement at hardcoal-fired boilers by small amounts of bromide and PRAVO® ***
Prof. Dr.-Ing. Bernhard Vosteen, Vosteen Consulting GmbH, Köln
Dr. Gabor Fülöp, PANCHEMIE Dr. Gabor Fülöp e.K., Kerpen
Michael Kramer, Andreas Gruber-Waltl, M.Sc., Andritz AG, Raaba, Österreich
- 09.30 am Continuous mercury emission measurement in Europe**
Dipl.-Wirt.-Ing. Florian Greiter, SICK AG, Überlingen
Michael Klein, SICK Vertriebs-GmbH, Düsseldorf
- 10.00 pm Long-term sampling - A reliable method for safe monitoring of dioxin and mercury emissions in the course of BAT revisions**
Dipl.-Phys. Jürgen Reinmann, Environment S.A Deutschland, Bad Homburg

10.30 am Coffee break

Mercury reductions in Power Plants III

Session Chair: Dipl.-Ing. Sylvio Sauer, Uniper-Kraftwerk Schkopau

- 11.00 am Mercury, SO₃ & co. – New paths in dry flue gas cleaning in power plants**
Dipl.-Ing. Martin Sindram, Dr.-Ing. Diethelm Walter, Lhoist Germany Rheinkalk GmbH, Wülfrath
Dipl.-Ing. (FH) Frank Hernitschek, Walhalla Kalk GmbH & Co. KG, Regensburg
- 11.30 am Researches on the distribution of hearth furnace coke in dust-laden flue gas by laser absorption at the pilot plant for Hg emission reduction at BoA1 in Niederaußem**
Dr. rer. nat. Peter Moser, Dipl.-Ing. Knut Stahl, Dipl.-Ing. Andreas Pudel, Thomas Reinartz, Beate Reusch, RWE Power AG, Essen
Prof. Dr.-Ing. Reinhold Kneer, Dr.-Ing. Bernd Hillemacher, Dr.-Ing. Manuel Reddemann, Dipl.-Ing. Matthias Höfler, Dr.-Ing. Tim Gronarz, en2Aix – energy engineering Aachen GmbH
- 12.00 pm Simultaneous mercury and SO₂ separation from exhaust gases with stationary sorbents – Results and experiences from lignite power plants**
Dr. rer. nat. Ole Petzoldt, W.L. Gore & Associates GmbH, Putzbrunn

12.30 pm Lunch break

Mercury reductions in Power Plants IV

Session Chair: Dipl.-Ing. Günter Heimann, Lausitz Energie Kraftwerke AG, Cottbus

- 01.30 pm Fixing mercury from flue gas, WFGD and waste water - Only HgS mercury sulfide is an acceptable mineral for final disposal**
Dipl.-Ing. (FH) Jürgen Fritzsche, NET GmbH, Mannheim
Dipl.-Ing. Lutz Peter Nethe, LPN Consulting, Potsdam
- 02.00 pm Novel approach to mercury emission control for WFGDs ***
John Meier, Dan Schwarz, Raul Espinosa, Nicholas Denny, Steve Hoefs, Nalco Water, USA
- 02.30 pm Removing mercury in WFGDs - A comparison between the state of research and practical experiences**
Dr.-Ing. Margot Bittig, Isabelle Klöfer, M.Sc., Institut für Energie- und Umwelttechnik e.V., Duisburg
Dipl.-Ing. Daniel Herrmann, Dr.-Ing. Andrea Ohle, Technische Universität Dresden

03.00 pm End of lecture

Hall 4 Combustion 4.0 II

Session Chair: Dr.-Ing. Martin Pohl, ENVERUM Ingenieurgesellschaft für Energie- und Umweltverfahrenstechnik mbH, Dresden

- 08.30 am **Optimizing operations in power plants: What about fuzzy control, big data & co.?**
Dr.-Ing. Martin Horeni, solutions-ahead Schweiz GmbH, Zürich
- 09.00 am **Hybrid model-based optimization of power plant operation**
Dr.-Ing. Martin Habermehl, Dipl.-Ing. Stefan Tschunko, Dr.-Ing. Martin Weng, aixprocess GmbH, Aachen
- 09.30 am **Digital WIP - Increasing efficiency and reducing emissions by using big data**
Dipl.-Ing. Robert von Raven, Dr.-Ing. Axel Hanenkamp, Martin GmbH für Umwelt- und Energietechnik, München
- 10.00 am **Application of thermodynamic models for diagnosis and monitoring**
Waldemar Hoffmann, M.Eng., Dipl.-Math. Thomas Will, Dr.-Ing. Ralph Ernst, Steinmüller Engineering GmbH, Gummersbach
- 10.30 am **Coffee break**

Combustion 4.0 III

Session Chair: Dr. Frank Neumann, RWE Power AG, Essen

- 11.00 am **Power plant Mannheim - Calculation of KPIs with high information content to avoid loss of efficiency and unscheduled failures**
Dipl.-Ing. Peter Krüger, Dipl.-Ing. Christian Pagel, STEAG Energy Services GmbH, Essen
Dipl.-Ing. Torsten Driemer, Grosskraftwerk Mannheim AG
- 11.30 am **Reduced fuel consumption and improved reliability due to anomaly detection in power plant data**
Dr. rer. nat. Peter Deeskow, Dipl.-Ing. Urs Steinmetz, STEAG Energy Services GmbH, Essen
Dr.-Ing. Jürgen Brandt, RWE Power AG, Grevenbroich
- 12.00 pm **Systematic digital collection of data**
Dipl.-Ing. (FH) Jürgen Wilkening, INP Deutschland GmbH, Römerberg
- 12.30 pm **Lunch break**

Combustion 4.0 IV

Session Chair: Dipl.-Ing. Robert von Raven, Martin GmbH für Umwelt- und Energietechnik, München

- 01.30 pm **State assessment of electrical operating equipment based on a diagnostic and forecasting tool**
Dr.-Ing. Thomas Krüger, Lausitz Energie Kraftwerke AG, Cottbus
Prof. Dr.-Ing. Wolfgang Kästner, Dipl.-Inform. Jana Hänel, Hochschule Zittau/Görlitz, IPM, Zittau
- 02.00 pm **Digital control over the machinery**
Dipl.-Ing. Ulrich Lieske, ZEDAS GmbH, Senftenberg
- 02.30 pm **Evaluating the dynamic mode of operation of a lignite power plant using high time resolving measurement data and an unsteady process model**
Jan Koltermann, M.Eng., Dr.-Ing. Sebastian Meinke, Lausitz Energie Kraftwerke AG, Cottbus
Jens Hinrich Prause, M.Sc., Dr.-Ing. Moritz Hübel, Prof. Dr.-Ing. habil. Dr. h.c. Egon Hassel, Universität Rostock
- 03.00 pm **End of lecture**

Hall 5 Flexibility II

Session Chair: Dipl.-Ing. Hellmuth Brüggemann, GE Boiler Deutschland GmbH, Stuttgart

- 08.30 am **Use of flue gas heat to increase the energy efficiency of thermal power plants**
Dr.-Ing. Matthias Meierer, Dipl.-Ing. Norbert Eimer, Grosskraftwerk Mannheim AG
- 09.00 am **Damage analyses on dissimilar welds of a power plant superheater**
Dipl.-Ing. Johannes Seichter, Siempelkamp Prüf- und Gutachter-Ges. mbH, Dresden
Dipl.-Ing. (FH) Stefan Wenke, Lausitz Energie Kraftwerke AG, Boxberg
- 09.30 am **Monitoring components of steam generators of the Lausitz Energie Kraftwerke AG under the requirements of load flexibility**
Dipl.-Ing. Thomas Hauke, Dipl.-Ing. Peter Jentsch, Lausitz Energie Kraftwerke AG, Cottbus
- 10.00 am **Fundamental considerations on change fatigue of power plant components in context of extended measures of plant supervision**
Dr.-Ing. Kai Bauerbach, Dr. rer. nat. habil. Paschalis Grammenoudis, MMEC MANNESMANN GmbH, Düsseldorf
- 10.30 am **Coffee break**

Flexibility III

Session Chair: Dr.-Ing. Oliver Then, VGB PowerTech e.V., Essen

- 11.00 am **Evaluation of Ignition and combustion behavior of solid fuels with the support of a plasma torch ***
Reyhane Youssefi, M.Sc., Dipl.-Ing. Jörg Maier, Dr. Stefan Merli, Prof. Dr. Günter Scheffknecht, Universität Stuttgart
- 11.30 am **Plasma-assisted combustion to expand the flexible operation of coal-fired power plants**
Dipl.-Ing. Frank Kluger, Dr.-Ing. Dragisa Ristic, Dipl.-Ing. Rajkumar Daniel, GE Boiler Deutschland GmbH, Stuttgart
- 12.00 pm **Conversion of a steelwork off-gas fired steam generator from constant pressure to modified sliding pressure mode ***
Dipl.-Ing. Laura Zifferer, Dipl.-Ing. Christian Scheinecker, voestalpine Stahl GmbH, Linz, Österreich
Ao.Univ.-Prof. Dipl.-Ing. Dr. techn. Wolfgang Sanz, Technische Universität Graz, Österreich
Dr. Peter Pechtl, VTU Energy GmbH, Grambach, Österreich
Dr. Gottfried Brandstetter, ANDRITZ AG, Raaba-Grambach, Österreich
- 12.30 pm **Lunch break**

Flexibility IV

Session Chair: Dr.-Ing. Sebastian Grahl, Technische Universität Dresden

- 01.30 pm **Flexibilisation of Reuter West due to the use of electric hot water generators**
Thomas Bartsch, Chris Lappee, Peter Kontny-Asmussen, Vattenfall Wärme Berlin AG
- 02.00 pm **Fossil-fueled power plants in the energy revolution - An example of environmentally and flexibly oriented conversion of the ZWSF boiler No. 2 at the Turow power plant**
Dipl.-Ing. Grzegorz Szastok, Sumitomo SHI FW Energia Polska Sp. z o.o., Sosnowiec, Polen
- 02.30 pm **Simulation of load-flexible steam generator operation based on a coupled mill-combustion chamber model**
Dipl.-Ing. Karsten Meyer, Dipl.-Ing. Torsten Kehr, Dr.-Ing. Sebastian Grahl, Prof. Dr.-Ing. Michael Beckmann, Technische Universität Dresden
- 03.00 pm **End of lecture**

Conference room 1

Steam turbines

Session Chair: Dr. Detlef Haje, Siemens AG, Görlitz

- 08.30 am** **Increased flexibility in the industrial combined heat and power by using integrated gas-steam process**
Dipl.-Ing. Thorsten Lutsch, Dr.-Ing. Guntram Buchheim, Prof. Dr.-Ing. Uwe Gampe, Technische Universität Dresden
- 09.00 am** **Experimental investigations of droplet laden flow around blade profiles ***
Prof. Dr.-Ing. Franz Joos, Helmut-Schmidt-Universität Hamburg
- 09.30 am** **Clever & simple: Combined cogeneration in biomass plants**
Carina Heimann, Dr. sc. techn. Matthias Schleer, Howden Turbo GmbH, Frankenthal
- 10.00 am** **Siemens advanced steam turbine technology for world record double-reheat steam power plant with highest steam parameters ***
Dr.-Ing. Benjamin Kloss-Grote, Dipl.-Ing. Michael Wechsung, Dr.-Ing. Rainer Quinkertz, Siemens AG, Mülheim an der Ruhr
- 10.30 am** **Coffee break**

Gas turbines

Session Chair: Dr.-Ing. E. h. Manfred Freimark, VGB PowerTech e.V., Essen

- 11.00 am** **Developments to increase the fuel flexibility of industrial gas turbines by innovative combustion systems**
Dr.-Ing. Nurettin Tekin, Kawasaki Gas Turbine Europe, Bad Homburg
- 11.30 am** **Retrofit and reverse engineering of a compressor rotor**
Dr.-Ing. Stephan Schwab, TST-Turbo Service & Trading GmbH, Moers
- 12.00 pm** **Operational results of the high-temperature material Alloy 617 in gas turbines**
Dr.-Ing. Wilfried Storch, TÜV Rheinland Werkstoffprüfung GmbH, Berlin
BA-Wirtschafts.-Ing. Martin Seidel, Vattenfall Wärme Berlin AG
Dipl.-Ing. (FH) Robert Kühberger, GE Power AG, Mannheim
- 12.30 pm** **Lunch break**

Biomass and alternative fuels

Session Chair: Professor Dr.-Ing. Reinhard Scholz, Technische Universität Clausthal

- 01.30 pm** **Energy wood from the acre: A sustainable instrument for the long-term hedge of biomass fuels**
Dr. Jan Grundmann, Energy Crops GmbH, Hamburg
- 02.00 pm** **Planning, construction and commissioning of a 100 MW wood dust firing system at a hot water generator**
Dr.-Ing. Ronald Wilhelm, Dipl.-Ing. Thomas Mahnke, SAACKE GmbH, Bremen
Jouni Valtatie, M.Sc. (Eng.), Valmet Technologies Oy, Raisio, Finland
- 02.30 pm** **Evaluation of ash behavior of biomass for co-firing in coal boilers**
Dr. rer. nat. Markus Reinmöller, Steve Hädicke, Dr. rer. nat. Marcus Schreiner,
Dr.-Ing. Stefan Guhl, Prof. Dr.-Ing. Bernd Meyer, TU Bergakademie Freiberg
Dr. rer. nat. Markus Neuroth, RWE Power AG, Bergheim
- 03.00 pm** **End of lecture**

Conference room 2/3

System integration II

Session Chair: Dr.-Ing. habil. Rutger Kretschmer, DREWAG-Stadtwerke Dresden GmbH

- 08.30 am** **Power-to-heat integrated boiler systems - A technology for the parallel use of excess electricity and conventional fuels**
Dr. Jürgen Peterseim, Dipl.-Ing. Hagen Sagasser, ERK Eckrohrkessel GmbH, Berlin
- 09.00 am** **Cogeneration or Power-to-Heat - grid-connected heat supply with increasing shares of renewable energies**
Prof. Dr. Ilja Tuschy, Cynthia Boysen, M.Eng., Cord Kaldemeyer, M.Eng., Catharina Kapp, B.Eng., Zentrum für nachhaltige Energiesysteme, Hochschule Flensburg
- 09.30 am** **Power-to-Heat in high-temperature solid-state heat storages: Investigation of flexibility options in the joint project "Energy Lab 2.0"**
Dr.-Ing. Volker Dreißigacker, Sergej Belik, M.Eng., Dr.-Ing. Stefan Zunft, Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart
- 10.00 am** **Integral parameters for measuring the role of the conventional power plant parks in the energy revolution**
Dipl.-Ing. Annika Herzhoff, Prof. Dr.-Ing. Roland Scharf, Leibniz Universität Hannover
- 10.30 am** **Coffee break**

Exhaust gas cleaning I

Session Chair: Professor Dr.-Ing. Rudi Karpf, etc.a Ingenieurgesellschaft für Energie- und Umweltengineering & Beratung mbH, Lich

- 11.00 am** **Similar boilers, different locations - Comparison of several SNCR applications at lignite blocks larger than 300 MW_{el}**
Dipl.-Ing. Zoltan Teuber, ERC Technik GmbH, Buchholz
- 11.30 am** **Combining different SNCR technologies as a cost-effective answer to stricter NO_x emission limits for coal-fired power plants in the EU**
Dipl.-Ing. Bernd von der Heide, Mehldau & Steinfath Umwelttechnik GmbH, Essen
- 12.00 pm** **Integration of multi-dimensional temperature measurement as into boiler operation and DeNO_x plant ***
Alois Kokovnik, HSE Invest d.o.o., Sostanj, Slowenien
Michael Gerads, Florian Binder, EUtech Scientific Engineering GmbH, Aachen
- 12.30 am** **Lunch break**

Exhaust gas cleaning II

Session Chair: Dr.-Ing. Andrea Ohle, Technische Universität Dresden

- 01.30 pm** **Low-low emission from electrostatic precipitators ***
Mads Larsen, B.Sc., FLSmidth, Kopenhagen, Dänemark
Dipl.-Ing. Michael Brocks, FLS Moller, Hamburg
- 02.00 pm** **Energy use potential of waste gas purification systems behind sewage sludge combustion**
Dipl.-Ing. Yannick Conrad, Prof. Dr.-Ing. Rudi Karpf, etc.a Ingenieurgesellschaft für Energie- und Umweltengineering & Beratung mbH, Lich
Dipl.-Ing. Jürgen Petroll, e.quadrat GmbH & Co. KG, Mannheim
- 02.30 pm** **Use of tray technology in existing dual-circuit flue gas desulphurisation plants to reduce pressure loss**
Dr.-Ing. Stefan Binkowski, Dipl.-Ing. Uwe Schadow, Dr.-Ing. Axel Thielmann, Dr.-Ing. Dorian Rasche, Steinmüller Engineering GmbH, Gummersbach
- 03.00 pm** **End of lecture**

Conference room 4/5

Deposition, Corrosion, Ash removal I

Session Chair: **Bhaumik Patel, M.Sc. (Mech. Eng.), Clyde Bergemann GmbH, Wesel**

- 08.30 am KORRISTENT - Basic research and technological approaches for the low-slagging operation of lignite-fired boilers from LEAG**
Dr.-Ing. Stefan Guhl, Dr.-Ing. Mathias Klinger, Dr.-Ing. Ronny Schimpke, Caroline Hommel, M.Sc., Dr. rer. nat. Daniela Vogt, Dr.-Ing. Patrick Gehre, Prof. Dr.-Ing. Bernd Meyer, TU Bergakademie Freiberg
Dr.-Ing. Thomas Brunne, Lausitz Energie Kraftwerke AG, Cottbus
- 09.00 am Investigation of the combustion mechanisms and deposition mechanisms of biomass in dust fired processes**
Dipl.-Ing. Yunus Poyraz, Prof. Dr.-Ing. Roman Weber, Technische Universität Clausthal
- 09.30 am Efficiency increase due to integration of thermochemical process parameters**
Dipl.-Ing. (FH) Marie Kaiser, Dipl.-Ing. (FH) Joos Brell, Dipl.-Ing. (FH) Dominik Molitor, Dipl.-Ing. (FH) Dominik Schneider, CheMin GmbH, Augsburg
- 10.00 am Application of radiometric online coal measurement techniques for real-time determination of boiler-relevant coal constituents in the Rhenish lignite district**
Dr. rer. nat. Michael Schüngel, Dr. rer. nat. Markus Neuroth, Frank Fiedler, RWE Power AG, Bergheim
- 10.30 am Coffee break**

Deposition, Corrosion, Removal II

Session Chair: **Dr. rer. nat. Wolfgang Spiegel, CheMin GmbH, Augsburg**

- 11.00 am Dry ash removal 4.0 – An advancement from the perspective of optimized post-combustion and plant availability**
Andre Engelmann, M.Sc., Bhaumik Patel, M.Sc. (Mech. Eng.), Clyde Bergemann GmbH, Wesel
- 11.30 am Reduction of combustion residues in fired steam generators, by means of a wet-to-dry conversion of the bottom ash handling process - Case studies showing combustion improvement and efficiency increase ***
Octavian Mitroi, B.Eng., Complexul Energetic Oltenia, Isalnita, Rumänien
Fulvio Bassetti, B.Eng., Lorenzo Lepore, B.Eng., Magaldi Power, Salerno, Italien
- 12.00 pm The influence of the aggressive environments on the Inconel 686 coating in high temperature corrosion experiments ***
Damian Koclega, M.Sc./Eng., Dr. Agnieszka Radziszewska, AGH University, Krakau, Polen
Dr. rer. nat. Axel Kranzmann, Bundesanstalt für Materialforschung und -prüfung, Berlin
- 12.30 pm Lunch break**

Model and Pilot projects

Session Chair: **Professor Dr.-Ing. Bernd Neukirchen, Essen**

- 01.30 pm Physical modeling of a hard-coal mill**
Jan Claas Scheffler, M.Sc., Prof. Dr.-Ing. Alfons Kather, Technische Universität Hamburg
- 02.00 pm Oxyfuel fluidized bed combustion: From laboratory to pilot scale ***
Jan Hrdlička, Pavel Skopec, Matěj Vodička, František Hrdlička, Czech Technical University in Prague, Tschechische Republik
- 02.30 pm Camera-based process control during load reduction using torrefied biomass in coal-fired power plants**
Dr.-Ing. Hans-Joachim Gehrmann, PD Dr.-Ing. Jörg Matthes, Prof. Dr.-Ing. Dieter Stapf, Manuela Hauser, Dr.-Ing. Patrick Waibel, Dipl.-Ing. Markus Vogelbacher, Dr. Hanns-Rudolf Paur, Dr.-Ing. Hubert Keller, Karlsruher Institut für Technologie, Eggenstein-Leopoldshafen
- 03.00 pm End of lecture**

Conference room 6

Nuclear Energy Symposium I

Session Chair: Prof. Dr.-Ing. habil. Antonio Hurtado, Technische Universität Dresden

- 08.30 am **High-precision radiotherapy - OncoRay**
Dr. Christian Richter, Technische Universität Dresden
- 09.00 am **Radionuclide production: Present and future development**
Dr. Leila Jaafar, Prof. Dr. Gustav von Schulthess, Swiss Nuclides GmbH, Schweiz
- 09.30 am **Neutrons imaging**
Dr. Uwe Filges, Paul-Scherrer-Institut (PSI), Villigen, Schweiz
- 10.00 am **The training reactor AKR-2 in research: Possibilities and limits**
Dr. Carsten Lange, Technische Universität Dresden

10.30 am **Coffee break**

Nuclear Energy Symposium II

Session Chair: Prof. Dr.-Ing. habil. Antonio Hurtado, Prof. Dr.-Ing. habil. Uwe Hampel
Technische Universität Dresden

- 11.00 am **Material flow management during disposal and decommissioning of nuclear plants**
Dr. Anton Anthofer, VPC GmbH, Dresden
- 11.30 am **Laser applications for decontamination**
Dipl.-Ing. Georg Greifzu, Technische Universität Dresden
- 12.00 pm **Legislative framework for decommissioning of nuclear plants**
Prof. Dr. Andrea Verstejl, avr – Andrea Verstejl Rechtsanwälte Partnerschaftsgesellschaft mbB, Berlin

12.30 pm **Lunch break**

Nuclear Energy Symposium III

Session Chair: Prof. Dr.-Ing. habil. Uwe Hampel, Technische Universität Dresden

- 01:30 pm **Methods for the non-invasive monitoring of dry storage containers with spent fuel elements in the interim storage facility**
Prof. Dr.-Ing. Alexander Kratzsch, Hochschule Zittau/Görlitz, Zittau
- 02:00 pm **Molecular geochemistry for nuclear repositories**
Dr. Moritz Schmidt, Helmholtz-Zentrum Dresden-Rossendorf

02.30 pm **Final discussion and summary**

03:00 pm **End of Lecture**

Conference room 7

Sewage sludge treatment – Processes and procedures I

Session chair: Dr.-Ing. Simon Unz, Technische Universität Dresden

- 08.30 am **Sewage sludge disposal in Germany - A current overview**
Dipl.-Ing. (FH) Patric Heidecke, M.Sc., Umweltbundesamt, Dessau-Roßlau
- 09.00 am **Thermal sewage sludge treatment and P recycling - Technical processes and practical example**
Dipl.-Ing. Jörn Franck, Dr. Born - Dr. Ermel GmbH, Achim
- 09.30 am **Planning, tendering and realization of sewage sludge mono-combustion plants**
Prof. Dr.-Ing. Hans-Dieter Huber, Dr.-Ing. Margit Löschau, TBF + Partner AG, Böblingen
- 10.00 am **Intercommunal cooperation in sewage sludge treatment on the practical example of Klärschlamm-Kooperation Mecklenburg-Vorpommern GmbH**
Dipl.-Ing. Ulrich Jacobs, Klärschlamm-Kooperation Mecklenburg-Vorpommern GmbH, Rostock

10.30 am **Coffee break**

Sewage sludge treatment – Processes and procedures II

Session Chair: Jörn Franck, Dr. Born - Dr. Ermel GmbH, Achim

- 11.00 am** **PARFORCE process - a flexible way for phosphorus recovery from sewage sludge**
Dr. Peter Fröhlich, PARFORCE Engineering & Consulting GmbH, Freiberg
- 11.30 am** **Phosphorus recovery from sewage sludge ash with the REMONDIS TetraPhos® process**
Dr. Martin Lebek, Andreas Rak, M.Sc., Dipl. Ing. Patrick Herr, REMONDIS Aqua GmbH & Co. KG, Lünen
- 12.00 pm** **Integration of vapors and emission minimization in sewage sludge incineration**
Dr. Matthias Mann, Küttner Martin Technology GmbH, München
- 12.30 pm** **Lunch break**

Sewage sludge treatment – Processes and procedures III

Session Chair: Prof. Dr. – Ing. Frank Schulenburg, H.C. Starck Surface Technology and Ceramic Powders GmbH, München

- 01.30 pm** **Thermo-chemical sewage sludge treatment: Synergy with power plants - the EuPhoRe® process**
Siegfried Klose, Frank Zepke, EuPhoRe GmbH, Telgte
- 02.00 pm** **The PYREC process**
Helmut Gerber, PYREG GmbH, Dörth
- 14.30 Uhr** **Ash2Phos – Clean commercial phosphorus products from sewage sludge ash**
Yariv Cohen, EasyMining Sweden AB

Venue

Venue and Hotel recommendations

MARITIM Hotel & International Congress Center Dresden

Ostra-Ufer 2 | 01067 Dresden

Phone: +49(0)351-2160 | Fax: +49(0)351-2161000

Mail: info.dre@maritim.de

Arrival information: www.dresden-congresscenter.de

Conference office

The conference office is located on the terrace level (main entrance).

Opening hours:

23rd October 2018: 08.30 am – 06.00 pm

24th October 2018: 07.30 am – 03.00 pm

Phone: +49 (0)351 463-35308

hotel recommendations, registration forms and further information you can find at:
www.kraftwerkskolloquium.de

Terms and Conditions

Terms and Conditions

You can register for the conference via internet, mail, fax or by post until 5th October 2018. A later registration in the conference office is possible but without inclusion in the directory. You will find the registration form at: www.kraftwerkskolloquium.de

After the registration you will receive the invoice by mail. You will obtain the conference documents in the conference office before the beginning of the colloquium. The protection of your personal data is a very serious topic for us. Personal data (name, address, e-mail address, etc.) you provide for the conference will be treated in accordance with the data protection regulations. Your name, academic title, institution/company and location will be published in the directory. Furthermore, your data will not be published or handed out to third parties without authorization.

Program

Changes are reserved in the program.

Conference fee

790,00 € full paying adults

360,00 € university employees, public authorities, main authors of a poster and pensioners

All prices are exclusive VAT (value added tax). The price includes: Participation on October 23rd and 24th October

2018, drinks, cold and warm snacks in the breaks, conference documents (book and e-book with conference topics), the company fair and the poster presentation as well as the evening event on the first day. The main author of a lecture is exempted from the conference fee. The acceptance of credit cards and foreign currency is not possible.

Cancellation

Cancellations must be made in writing. From the **24th September 2018** we charge 50 % of the conference fee for cancellations (handling fee). Non attendance or cancellation from **15th October 2018** have to pay the full conference fee. In case you are prevented from coming the application can be transferred to a representative.

Photos and film recordings

During the event pictures and film recordings will be taken and will be published in various online and offline media. Our participants can be seen on these photos and films. The selection of persons is randomly. A representation of the pictures takes place on the homepage and in print media of the conference organizer and partners.

When you enter the venue, you agree to the publication of the photos and recordings in context of the publicity work described above. In addition, you agree to the unlimited storage and accessibility of the media. The personal rights are maintained in any case.