

## Scientific contribution

Contributors shall send a 1 page abstract containing:

- the sub-topic, what it is made for (indicate if it is in the frame of TRR 154)
- the intended type of presentation (oral, poster)
- the authors (presenting author underlined with his Email address)
- the title and a short description of the results

After the acceptance of your abstract, your full paper (4-8 pages) will be reviewed by the program committee. The proceedings of the iSEnEC 2021 containing all final accepted scientific papers will be published by Cuvillier Verlag.

Together with the submission of the abstract the main author has to agree also for his co-authors that the full version of his contribution can be published by Cuvillier. Please note, that all pictures and graphics will be printed in b&w. The abstract has to follow the formal requirements given here: [www.faps-ipc.de/isenec/call-for-papers](http://www.faps-ipc.de/isenec/call-for-papers)

## Poster presentations

iSEnEC 2021 will be completed by a comprehensive poster presentation. Research institutes, companies and other organizations will be offered the opportunity to present scientific posters to all participants.

For any further questions regarding iSEnEC poster presentation please contact the conference organizer.

## Important dates

Submission of abstracts:	30.04.2021
Notification of acceptance of abstracts:	16.05.2021
Early registration ends:	31.05.2021
Submission of full papers:	31.05.2021
Review of full papers:	15.08.2021
Submission of final full papers:	16.09.2021

## Registration

To register please use this Link:

[www.faps-ipc.de/Seminare/seminar\\_anmeldung/?ISE-NEC2021](http://www.faps-ipc.de/Seminare/seminar_anmeldung/?ISE-NEC2021)

## Venue and accomodation

**Ludwig Erhard Center**, Ludwig-Erhard-Straße 6  
90762 Fürth (adjacent to Nuremberg)

### Recommended Hotels

NH Hotel Fürth, Königstr. 140, 90762 Fürth  
The niu Hotel, Gebhardtstr. 8a, 90762 Fürth  
Hotel Schwarzes Kreuz, Königstraße 81, 90762 Fürth

## Conference Fee

Category	Participation fee until 31 <sup>st</sup> of May 2021*
Participant	690 EUR
Speaker/Presenter	430 EUR

\*Participants who register after 31<sup>st</sup> May 2021 will be charged a surcharge of 200 EUR.  
Scientific employees of the universities receive a discount of 10 % Conference Fee, VAT not included.

The Conference Fee includes:

- 2-Day-Scientific-Conference
- more than 35 presentations
- Get-together with 150 scientific experts
- Printed conference proceedings
- free access to Ludwig Erhard Center
- Full board (6 coffee breaks, 2 lunches, evening reception)

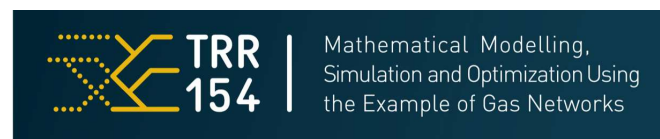
Accommodation is not included.

## Conference organizer

FAPS-IPC GmbH  
Flößaustr. 22a  
90763 Fürth  
Phone: +49 911 235 8854-0 Fax: +49 911 235 8854-99

## Contact conference organizer

Mrs. Sigrun Holzinger  
Phone: +49 911 235 8854-40  
Mail: [sigrun.holzinger@faps-ipc.de](mailto:sigrun.holzinger@faps-ipc.de)



# iSEnEC 2021

## Integration of Sustainable Energy

### CONFERENCE

**13<sup>th</sup> and 14<sup>th</sup> October 2021**  
**Ludwig Erhard Center - Fürth, Germany**

## Structure and abstracts of iSEnEC 2021

The iSEnEC 2021 continues the successful events of Ise-nec 2016 and 2018 conferences, but is more focused and has two general topics as “systems” and “storages” (see below). Each lecture or poster should demonstrate the contribution to an energy system, the motto of this conference.

The conference is planned with on-site-attendance. If this cannot be realized, we will switch to a virtual conference. Participants are informed early enough.

The Program committee will rank the abstracts and will put together an oral and a poster program in two parallel sessions.

## Conference chairman

**Prof. Dr. Wolfgang Arlt**,  
University of Erlangen-Nuremberg (GER)

## iSEnEC 2021- main topics

### 1. Design of Energy Systems

#### ■ Sustainable Energy Networks: Electricity and Gas

The session deals with research and developments aspects of resilient energy grids and provides attendees with practical solution-oriented topics for network planning, operation and control. Major areas to be addressed are transmission, distribution and microgrids. Furthermore, the session topics are dedicated to the integration of renewable energy systems and storages including sector coupling concepts.

#### ■ Future Energy Markets

The shift towards an energy system based on renewable sources not only poses technological challenges, but also raises market design issues. This session will focus on innovative contributions that analyze technology choice, investment, production and consumption decisions in future energy markets and also take adjustments to the current framework conditions into account. Important topics include, but are not limited to decentralized smart energy markets and the consideration of sector coupling.

■ Modelling and optimization of electricity and gas network (including TRR 154) Methods for Simulation and Optimization are still one of the pillars in computational engineering bridging the gap between theory and practice.

In this session we focus on new developments in this field, among them are the coupling of integer programming with nonlinear or PDE optimization, respectively, where uncertainties may play an additional role. Special attention will be given to the discussion on data-driven versus model-driven methods.

■ Photovoltaics: emerging trends in technology, application development and systems integration. The future energy supply will be based to a large extent on renewable electricity from photovoltaics and wind. Photovoltaics is already making visible contributions to the worldwide energy supply, but lacks significant volume compared to conventional fossil fuels. The central challenge for the next decade are the development of measures that can significantly accelerate the expansion of photovoltaics. This requires further technological advances - such as the current innovation push in the area of perovskite PV, new application developments - such as the integration of PV in facades or for energy-autonomous transport, as well as new market models for the combined expansion of photovoltaics, storage and distribution.

## iSEnEC 2021 - main topics

### 2. Chemical and electrochemical storages

On the way towards an energy system based on the spatially and temporally inhomogeneously produced renewable energy it is mandatory to find suitable energy storage solutions. In this track we will concentrate on latest developments in chemical energy storage. The scope encompasses Power-to-X scenarios such as hydrogen-based systems including fuel cells and water electrolysis e. g. using liquid organic hydrogen carrier systems, CO<sub>2</sub> reduction, but also synthetic fuels and advanced batteries.

### 3. Start-ups

The conference will - as usual - have a workshop for founders of start-ups. All participants are invited to attend, oral contributions are by invitation.

In the field of sustainable energy production new firms with innovative technologies as well as business models are emerging. In this session we will discuss with the entrepreneurs, experience their strategies, innovations and business models. Although most of the start-up firms work on their own, they can also be considered as partners for cooperations with established firms.

### Venue

**iSEnEC 2021** will take place in Ludwig Erhard Center, Fürth. The Ludwig Erhard Center is an exhibition, documentation, meeting and research center for Ludwig Erhard (former German Chancellor) and his concept of the social market economy in Fürth, Erhard's birthplace, that is unique in Germany.

#### Directions:

By metro: (line U1) stop "Rathaus"

By bus: Stop "Rathaus"

By car: Parking in City Center/Fürth Stadtmitte

## Publication chairman

Prof. Dr. Jörg Franke,  
University of Erlangen-Nuremberg (GER)

## Program committee

Prof. Dr. Christoph Brabec,  
University of Erlangen-Nuremberg (GER)

Dr. Claudia Buerhop-Lutz,  
The Helmholtz Institute Erlangen-Nuremberg for Renewable Energy (HI ERN)

Prof. Dr. Jörg Franke,  
University of Erlangen-Nuremberg (GER)

Prof. Dr. Veronika Grimm,  
University of Erlangen-Nuremberg (GER)

Prof. Dr. Matthias Luther,  
University of Erlangen-Nuremberg (GER)

Prof. Dr. Alexander Martin,  
University of Erlangen-Nuremberg (GER)

Dr. Daniel Teichmann,  
CEO/Founder Hydrogenious LOHC Technologies GmbH

Prof. Dr. Simon Thiele,  
University of Erlangen-Nuremberg (GER), The Helmholtz Institute Erlangen-Nuremberg for Renewable Energy (HI ERN)

Prof. Dr. Kai-Ingo Voigt,  
University of Erlangen-Nuremberg (GER)

Prof. Dr. Peter Wasserscheid,  
University of Erlangen-Nuremberg (GER), The Helmholtz Institute Erlangen-Nürnberg for Renewable Energy (HI ERN)

