






upload
ABSTRACT
by 28 February 2020

CALL
for **PAPERS**
& **POSTERS**
Industry & Science

late abstracts are not eligible for oral presentation

GRID SERVICE
MARKET SYMPOSIUM
GSM 2020

Lucerne, Switzerland, 1-2 July
special VPP panels with   PACE 

GRID
FLEXIBILITY & BUSINESS

featuring:

1. Developments in Grid Service Markets
2. International Collaboration
3. Advanced Technologies Providing Flexibility
4. Grid Service Operation & Enabling Technologies
5. Impact of Trends & Developments
on Grid Service Markets & Operations
6. Case Studies & Demonstrations

www.GridServiceMarket.com

GSM 2020

1 – 2 July Lucerne
Switzerland

Grid Service Market Symposium
featuring: Grid Flexibility & Business

with special
VPP Panels

CALL
for **PAPERS**
& **POSTERS**
Industry & Science

SCOPE

www.GridServiceMarket.com/Scope

The **integration** of a large amount of new **renewable energy** sources poses great challenges for the European **electricity grids & markets**. Network reinforcement, market harmonisation and integration are both solutions and challenges for the various players in the electricity industry. The integration of new technologies and methods to provide **grid services** and optimise the use of existing infrastructure is changing the face of the electricity industry in the long term.

GSM 2020 - 4th Grid Service Markets symposium - aims to outline recent developments in the European grid service markets, to highlight advancements and challenges in international cooperation and to reflect the technological progress.

The two-day symposium will feature parallel sessions with invited and contributed talks and posters. The **International Advisory Board (IAB)** ensures that all presentations are of high quality. The **technical program** will include: Development in GSM, international collaboration, enabling & advanced technologies to grid service operation and impacts of trends to real world case studies (see TOPICS on next page). In the field of Virtual Power Plant (VPP) special panels with high level keynotes and deepening discussions are planned.

GSM 2020 addresses grid and technology experts, scouts and managers from the electricity industry, administration bodies and researchers interested in the commercial aspects of grid services and new technologies.

The **international audience** will exchange on market logic, regulations and harmonization activities, future trends, operations, technology capabilities, and long term business plans and other business related aspects of European grid service markets. The symposium takes place in parallel to **EFCF 2020 - 24th Electrolyser & Fuel Cell Forum**, an international reference event with exhibition & tutorials in the emerging field of "Fuel Cells, Electrolysers & H₂ Processing" - www.EFCF.com.

CALL for PAPERS & POSTERS

www.GridServiceMarket.com/AuthorCenter

The 4th **GSM 2020** symposium welcomes **oral & poster contributions** to the described aims and provided **TOPICS** below. The specially formed International Advisory Board IAB, consisting of recognized international experts, will evaluate and range the abstracts for the set-up of the program. This guarantees a high standard and that the interest of all participants and levels are met. All grid service market stakeholders, from provider to client, from academy and industry to GO and NGO are now kindly invited to **submit abstracts**.

Submission procedure:

1. www.GridServiceMarket.com/Download Abstract template, instructions & samples
2. www.GridServiceMarket.com/Upload ½ -1 page abstract due **by 28 February 2020**
Late abstracts cannot be considered for oral presentation.
3. **Acceptance** notification will arrive via email to main author by 15 April 2020
4. www.GridServiceMarket.com/Upload **Paper** (3-10 pages) issued 8 June 2020
PowerPoint presentation issued 19 June 2020

Publication policy:

All presentations are published in electronic proceedings distributed to the participants. Finally the cleaned proceedings will be published as open access on-line publication with the **ISBN 978-3-905592-81-8** in the "**GSMlibrary**" and with a **DOI** in "**Lucerne Open Repository LORY**". Authors who do not wish to be included in the publications, e.g. due to publication elsewhere, can opt out and **keep their full copyright** (see www.GridServiceMarket.com/Library).

1. DEVELOPMENTS IN GRID SERVICE MARKETS

- 1.1 Regulations, country reports, market rules & regional developments
- 1.2 Business models & commercial analysis
- 1.3 TSO, DSO, P2P markets: Balancing services, capacity markets, redispatching, local energy communities, aggregation, demand response, black start,...
- 1.4 Grid service trading
- 1.5 TSO/DSO collaboration

2. INTERNATIONAL COLLABORATION

- 2.1 International developments
- 2.2 Capacity allocation & market coupling: Forward CA, physical long term CA, NTC, FBMC, day-ahead coupling, XBID, Capacity Calculation Regions (CCRs), ...
- 2.3 System Operations Regions (SORs), ...
- 2.4 Harmonization (GLEB,...)
- 2.5 Bidding zone review & new interconnectors (TYNDP, MAF)
- 2.6 Adequacy seasonal outlook & risk assessment

3. ADVANCED TECHNOLOGIES PROVIDING FLEXIBILITY

- 3.1 Storage technologies
- 3.2 Load management
- 3.3 Hydrogen technology
- 3.4 Power-to-heat, heat-to-power
- 3.5 Grid-to-vehicle, vehicle-to-grid
- 3.6 Sector coupling / multi-energy (CHP, district heating, power to X, ...)

4. GRID SERVICE OPERATION / ENABLING TECHNOLOGIES

- 4.1 Advanced diagnostics & modeling
- 4.2 Qualification, testing, operation & field reports
- 4.3 Centralized & decentralized - virtual power plants (special VPP panels, joint with "PACE" FCH JU project)
- 4.4 Digital technologies and telecommunications (blockchain/smart contracts, IoT, 5G, LoRa,...)
- 4.5 Data security & data transparency
- 4.6 Optimized management
- 4.7 Control, tools & simulation
- 4.8 Adequacy

5. IMPACT OF TRENDS & DEVELOPMENTS ON GRID SERVICE MARKETS & OPERATIONS

- 5.1 Digitalization, smart metering, battery/hydrogen mobility & energy systems, behavior, ...
- 5.2 Others

6. CASE STUDIES AND DEMONSTRATIONS**SYMPOSIUM****Events** www.GridServiceMarket.com/Events

1 July morning	Possibility to - join the EFCF opening & overview sessions (to be booked separately), - visit EFCF exhibition & poster hall, to have business & project meetings (get support)
from 12:00	GSM registration , welcome coffee, possibility to view posters and network
13:00 - 18:00	Official opening & overview session with keynotes , followed by oral & poster sessions
18:30	"GSM networking Dinner" with folklore and culture
2 July 09:00 - 18:00	Keynotes , oral & poster sessions, summary & symposium outlook , possibility to join EFCF sessions
19:30 - 23.30	"Dinner on the Lake" : Unique networking pleasure boat tour with music in dreamlike scenery

Venue www.GridServiceMarket.com/Venue-Lucerne

The GSM Symposium is held at the **Uni Lucerne (UniLU)** and **Culture & Convention Centre Lucerne (KKL)** on the picturesque waterfront of the lake Lucerne in the middle of Switzerland. The venue is easy to reach by car, plane & train, because it is close to car parks & railway station, within a short distance from charming hotels & the historical town centre.

Fees www.GridServiceMarket.com/Fee


• Students, trainees & unemployed persons etc. with valid identification	300 CHF incl. 7.7% VAT where applicable
• Regular registration	700 CHF incl. 7.7% VAT where applicable
• Late charge for registrations from 1 April/1 Juni/On-Site	100/200/350 CHF incl. 7.7% VAT where applicable

One Swiss Franc (CHF) is valued at about: 0.88 EURO, 1.01 US Dollar, 113 YEN, 6.87 CNY (Dez 2019).
The fees include access to: **Complete GSM symposium** (sessions/posters/networking); **EFCF 2020 exhibition & poster hall**; **2 July 2020 EFCF sessions** (keynotes, oral, poster); **Conference proceedings, conference bag, business lunch, refreshments** and the **"GSM networking Dinner"** on Wednesday 1 July; **Post symposium access** to all allowed presentations, impressions and available proceedings published with ISBN on "GSMlibrary" and with DOI on "Lucerne Open Repository" (HSLU-LORY).

Optional: EFCF 2020 opening & overview sessions on We 1 July (on request), **"Dinner on the Lake"** on Th 2 July (EFCF supported tickets: 120 CHF pp).

Virtual Power Plant (special VPP Panel)

www.GridServiceMarket.com/VPP

Joint with the FCH JU project  PACE a VPP panel is organised. The aim is to explore the potential of Fuel Cell micro-Cogeneration, also in conjunction with other new technologies, to balance the grid and avoid extensions when the units are deployed as a Virtual Power Plant (VPP). Demand response services will be provided, i.e. flexibility via the load profiles are offered to the power markets and local distribution system operators. This allows alternative business models & economic benefits by OPEX reduction.

Interested? YES - Upload an abstract!

CHAIR of the GSM symposium

Prof. Christoph Imboden

Lucerne University of Applied Sciences www.HSLU.ch
Institute for Innovation and Technology Management
Competence Center for Power Economy

Christoph is professor for product innovation at the Lucerne University of Applied Sciences HSLU and Head of Research at the Institute for Innovation and Technology Management. He is engaged in several research projects focusing on power economy.

He studied electrical engineering at the ETH Zurich, received his doctorate in 1995 and an executive MBA at the University of Zurich in 2006. He looks back to more than twenty years of industrial experience in different application areas of the energy, communication and information technologies.



International Advisory Board (IAB)

www.GridServiceMarket.com/IAB

Davor Bošnjak	HEP, Croatia	Prof. Carlo Alberto Nucci	Uni Bologna, Italy
Prof. K. Andreas Friedrich	DLR, Germany	Dr. Bastian Schwark	Swissgrid AG, Switzerland
Prof. Nikos Hatziaargyriou	NTUA, Greece	Andreas Svendstrup-Bjerre	Vestas Wind Systems A/S
Prof. Christoph Imboden	HSLU, Switzerland	Sebastian Ziegler	50 Hertz, Germany
Thomas Kudela	Ørsted A/S, Denmark		

PARTNERS



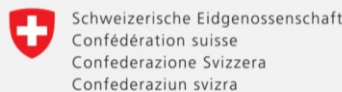
PACE-energy.eu
FCH JU project
Pathway to a Competitive
European Fuel Cell micro-
Cogeneration Market



QualyGridS.eu
FCH JU project
Standardized qualifying
tests of electrolyzers
for grid services



CogenEurope.eu
The European
Association for the
Promotion of
Cogeneration



State Secretariat for Education,
Research and Innovation SERI

SERI
Swiss State
Secretariat for
Education, Research
and Innovation

Organised by

European Fuel Cell Forum
Obgardihalde 2
CH-6043 Lucerne-Adligenswil
www.EFCF.com

UAS HSLU, Power Economy
Innovation & Tech. Mgt,
Technikumstrasse 21
CH- 6048 Horw
www.HSLU.ch

CONTACT

+41 44 586 56 44
Info@GridServiceMarket.com



GSMVPP Panel has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 700339. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme.



GSM 2020

Grid Service Market Symposium
featuring: Grid Flexibility & Business

1-2 July Lucerne, Switzerland