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**GRID SERVICE
MARKET SYMPOSIUM**
GSM²⁰²²
KKL, Lucerne 4 – 5 July
SWITZERLAND

**GRID
FLEXIBILITY & BUSINESS**

Featuring

1. **Future of Grid Service Markets**
2. **International Collaboration**
3. **Advanced Technologies providing Flexibility**
4. **Grid Service Operation
Enabling Technologies**
5. **Case Studies, Demonstrations & others**

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GSM 2022

KKL Lucerne, 4 - 5 July
Switzerland

6th Grid Service Market symposium
featuring: Grid Flexibility & Business

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PAPERS & POSTERS
Physical & Virtual Participation
Industry & Science **NO Risk**

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 2022 - 6th 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: Future of GSM, international collaboration, advanced technologies providing flexibility, grid service operation & enabling technologies as well as real world case studies & demonstrations (see TOPICS). In all fields high level keynotes and deepening discussions are planned.

GSM 2022 addresses for the 6th time 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 2022 - 26th European 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 6th **GSM 2022** symposium welcomes **oral & poster contributions** to the described aims and proposed **TOPICS** below. The specially formed International Advisory Board IAB, consisting of recognized international experts, will evaluate the abstracts and set-up the program. All grid service market stakeholders, from provider to client, from academy and industry to GO and NGO are 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** is due to several requests now **due by 14 March 2022**
Note: As the evaluation starts then, late abstracts will have more and more difficulties to be considered for an oral presentation. Preserve your chances and upload on-time. You will have the opportunity to make improvements in the paper and presentation.
3. **Acceptance** notification via email to the main author by 1 April 2022, (evt. delay due to late uploads) the final announcement with oral & poster program by 30 April 2022.
4. www.GridServiceMarket.com/Upload **Paper** (3*-10 pages) issued **10 June 2022**
Note: A paper is mandatory. *Shorter versions are acceptable for contributions from industry, that are not intended for publication. Find the template in the download area.
PowerPoint presentation issued **24 June 2022** (no template is provided)

Publication policy:

All papers 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 978-3-905592-82-5** 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. FUTURE OF GRID SERVICE MARKETS, with

- 1.1 Decentralized Flexibility
- 1.2 Regulations, country reports, market rules & regional developments
- 1.3 Business models & commercial analysis
- 1.4 TSO, DSO, P2P markets:
Landscape, local energy communities, aggregation, demand response, flexibility & capacity markets, balancing services, redispatching, black start,...
- 1.5 Grid service trading
- 1.6 TSO/DSO collaboration
- 1.7 Optimized system architecture & market rules for future scenarios

2. INTERNATIONAL COLLABORATION, with

- 2.1 European common energy market
- 2.2 International developments: GLEB, harmonization, ...
- 2.3 Capacity allocation & market coupling:
Forward CBC, physical long-term CBC, NTC, Flow based Market Coupling FBMC, Single Day-Ahead Coupling SDAC, Single Intraday Coupling SIDC, Capacity Calculation Regions CCRs, ...
- 2.4 Coordinated redispatching & countertrading
- 2.5 Bidding zone review & new interconnectors: TYNDP, MAF
- 2.6 Hybrid solutions:
Offshore bidding zones, home market solutions
- 2.7 Adequacy, seasonal outlook, risk & opportunity assessment:
Metrology, hydrology, impacts from the EU's "Fit for 55" package, fossil fuel phase-out, revision of effort sharing regulation, energy taxation directive ETD, energy efficiency directive, alternative fuels infrastructure directive, renewable energy directive

3. ADVANCED TECHNOLOGIES PROVIDING FLEXIBILITY, with

- 3.1 Power electronics: FACTS, ...
- 3.2 SmartX: Grids, buildings, cities, ...
- 3.3 Storage technologies
- 3.4 Load management
- 3.5 Sector coupling / multi-energy:
CHP, district heating, P2X: power to gas, power to heat, ... , X2P, smart waste management, ...
- 3.5 Grid-to-vehicle & vehicle-to-grid
- 3.6 Renewables delivering grid services

4. GRID SERVICE OPERATION / ENABLING TECHNOLOGIES, with

- 4.1 Advanced diagnostics & modeling
- 4.2 Qualification, testing, operation & field reports
- 4.3 Managing centralized & decentralized flexibilities
- 4.4 Virtual power plants VPP
- 4.5 Digital technologies and telecommunications: IoT, 5G, LoRa, ...
- 4.6 Distributed ledger technology: Blockchain, ...
- 4.7 Data security & data transparency
- 4.8 Optimization & control
- 4.9 Tools & simulation
- 4.10 Unmanned aerial vehicles & satellite technology
- 4.11 Joint defense & energy collaboration

5. CASE STUDIES, DEMONSTRATIONS & others**SYMPOSIUM****Events**www.GridServiceMarket.com/Events

- 4 July 09:00 - 18:00** Opening & overview session with **keynotes**, followed by oral & poster sessions
19:30 "GSM networking Dinner" in a classic, traditional hotel of Lucerne with swissness & ambience
- 5 July 09:00 - 17:00** **Keynotes**, oral & poster **sessions**, awards, symposium **summary & outlook**
17:00 - 19:00 **Grid Apéro** followed by invitation to EFCF Welcome Reception in the exhibition area
19:30 optional: GSM+EFCF Joint Networking Dinner (to be booked in advance, tickets for 90.- CHF pp)
- 6 - 8 July** optional: Join **EFCF** opening & overview sessions or all www.EFCF.com (rebates for GSM participants)

Venuewww.GridServiceMarket.com/Lucerne

The GSM Symposium is held at the **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. It is close to car parks & railway station with good connection to the airport and within short distance from charming hotels & the historical centre.

Feeswww.GridServiceMarket.com/Fee

- Students 26 or younger, trainees & unemployed persons with valid identification 300 CHF
 - Regular registration* 700 CHF
 - Late charge for registrations from 15 April/1 June/On-Site 100/200/300 CHF
- The **Virtual Fees** are published when the health rules are clear (≈April). **Register with NO Risk for physical participation:** Refund or switch to virtual attendance & access to the GSM community are guaranteed.

The **fees include:** access to **complete GSM Symposium** (sessions/posters/networking events); **Conference Proceedings**, **Conference Bag**, **Business Lunch**, **Refreshments** and the **"GSM Networking Dinner"** on Monday 4 July (supported by EFCF & HSLU, guest tickets for 120.- CHF); **GSM Grid Apéro & EFCF Welcome Reception** on 5 July; **EFCF 2022 Exhibition & Poster Hall**; Attractive rebates to join **EFCF Sessions** and **FCH Tutorials** (online & onsite); **Post symposium access** to all allowed presentations, live streams impressions and available proceedings with ISBN on "GSMlibrary" and DOI on "Lucerne Open Repository" (HSLU-LORY).

* Incl. 150 CHF donation for student support. Ask Info@GridServiceMarket.com for group rebate. All fees include the 7.7% VAT, where applicable. Currency exchange rates www.oanda.com: One Swiss Franc ("CHF") is valued at about 0.96 EURO, 1.09 US Dollar, 0.82 GBP (Dez 2021)

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Christoph is professor for product innovation at the Lucerne University of Applied Sciences and Arts HSLU and Head of Research at the Institute for Innovation & 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. After working in different positions in the industry, he started working for HSLU in 2012. Christoph has been the chair of GSM since 2017. He looks back to more than twenty years of industrial experience in different application areas of the energy, communication and information technologies.



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GSM 2022

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4-5 July, KKL Lucerne, Switzerland