

GRID **FLEXIBILITY** & **BUSINESS**

Featuring

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

www.GridServiceMarket.com

7th **Grid Service Market** symposium featuring Grid **Flexibility** & **Business**

CALL for R&D&D With PAPERS demanded EXTENSION

Separate CALL for INDUSTRY Contributions



SCOPE www.GridServiceMarket.com/Scope

The **integration** of a large amount of new **renewable energy** sources, the switch to electric vehicles, and the conversion of the power plant park 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 2024 - 7th **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 2024 will meet for the 7th time to bring together 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 be able to exchange on all aspects of European grid service markets. The symposium takes place in parallel to EFCF 2024 - 28th European Electrolyser & Fuel Cell Forum, an international reference event with an exhibition & tutorials in the emerging field of "Fuel Cells, Electrolysers & H₂ Processing." - www.EFCF.com.

CALL for R&D&D PAPERS, separate CALL for INDUSTRY Contributions www.GridServiceMarket.com/AuthorCenter

The 7th **GSM 2024** symposium welcomes papers for **oral** & **poster** contributions in the **Research** & **Development** & **Demonstration** field to the described aims & proposed **TOPICS**. There is a separate **CALL for INDUSTRY Contribution** to address product-related and market-oriented contributions (see www.GridServiceMarket.com/CIC). The specially formed International Advisory Board (IAB), consisting of recognized international experts, will evaluate the abstracts and support the set-up of the program. All grid service market stakeholders, from provider to client, from research & industry to GO & NGO are kindly invited to **submit abstracts**.

Submission procedure:

1. www.GridServiceMarket.com/Download Abstract template, instructions & samples

2. www.GridServiceMarket.com/Upload After demanded extension, ½-1 page abstract is due by 21 February 2024

Note: Preserve your chances for an oral presentation 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 until end of March 2024

Final Announcement with oral & poster program by 30 April 2024.

4. www.GridServiceMarket.com/Upload Paper (3*-10 pages) due by 31 May 2024

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 due by 24 June 2024 (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

- Decentralized flexibility, Regulations: Electricity Market Design, Cybersecurity Network Code, Network Code for Demand Response, Fit for 55, Net Zero Industry Act
- Country reports, Market rules & regional developments
- Business models & commercial analysis

- TSO, DSO, P2P markets: Aggregation, demand response, flexibility & capacity markets, balancing services, redispatching, black start
- Grid service trading
- TSO/DSO collaboration
- Optimized system architecture & market rules for future scenarios, ...

2. INTERNATIONAL COLLABORATION

- European common energy market
- International developments: GLEB, harmonization, ...
- 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, ...
- · Coordinated redispatching & countertrading

- Bidding zone review & new interconnectors: TYNDP, MAF
- Hybrid solutions: Offshore bidding zones, home market solutions
- Adequacy, seasonal outlook, risk & opportunity assessment:
 Metrology, hydrology, 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 & CURTAILMENT

- Power electronics: FACTS, ...
- SmartX: Grids, buildings, cities, ...
- Storage technologies
- Load management

- Sector coupling / multi-energy: CHP, district heating, P2X:
 Power to gas, power to heat, ..., X2P, smart waste management, ...
- Grid-to-vehicle & vehicle-to-grid
- Renewables delivering grid services, ...

4. GRID SERVICE OPERATION

- Qualification, testing, operation & field reports
- Managing centralized & decentralized flexibilities
- Data security & data transparency
- · Advanced diagnostics & modelling
- Optimization & control: HEMS
- Joint defense & energy collaboration, ...

5. ENABLING TECHNOLOGIES

- Virtual power plants VPP
- Unmanned aerial vehicles & satellite technology
- Digital technologies and telecommunications: IoT, 5G, LoRa, International Data Spaces
- Distributed ledger technology: Blockchain, ...
- Tools, simulation & Al

6. CASE STUDIES, DEMONSTRATIONS & others

SYMPOSIUM

<u>Events</u> <u>www.GridServiceMarket.com/Events</u>

1 July 11:00 - 18:00 **Opening** & **overview** session with **keynotes**, followed by oral & poster sessions 19:30 **"GSM networking Dinner"** in a traditional Lucerne hotel with Swissness & ambience

2 July 09:00 - 17:00 Keynotes, oral & poster **sessions**, awards, symposium **summary** & **outlook** 17:00 - 19:00 **Good bye coffee** or EFCF exhibition & 18.00 EFCF Welcome Reception

2 July 09:00 - 17:00 SSD 2024 Sustainable Shipping Days www.EFCF.com/SSD (rebates for GSM participants)
3 - 5 July

EFCF opening & overview sessions or all www.EFCF.com (rebates for GSM participants)

Venue

www.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.

Fees www.GridServiceMarket.com/Fee

Participation <u>Live in Lucerne</u>
Students 26 or younger, Trainees & Unemployed with valid identification

340 CHF
Regular Registration*

900 CHF
490 CHF

• Single Day 490 CHF I - - -

• Late charge, cumulative for registrations from 15 April/1 June (virtual)/On-Site +150 / +100 (+50) / +200 CHF

The fees include: access to complete GSM Symposium (sessions/posters/networking events); Conference Proceedings, Conference

In the tees include: access to complete GSM Symposium (sessions/posters/networking events); Conference Proceedings, Conference Bag, Business Lunchs, Refreshments, publication fees for paper authors and the "GSM Networking Dinner" on Monday 1 July (supported by EFCF & HSLU, guest tickets for 135.- CHF); GSM Grid Apéro & EFCF Welcome Reception on 2 July; EFCF 2024 Exhibition & Poster Hall; Attractive rebates to join EFCF Sessions, additional events and FCH Tutorials (online & onsite); Post symposium access to all available, live streams, impressions and proceedings with ISBN on "GSMlibrary" and DOI on "Lucerne Open Repository" (HSLU-LORY) of GSM 2024 and at least 5 year before.

Ask Info@GridServiceMarket.com for group rebate. All fees include the 8,1% VAT, where applicable. One Swiss Franc ("CHF") is valued at about 1.05 EURO, 1.14 US Dollar, 166 YEN, 8.3 CNY (Sept 2023, www.GridServiceMarket.com/Currency)

^{*}Includes 150 CHF donations for student support.

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*CHAIR of Intern. Advisoriy Board & GSM conference series

Prof. Christoph Imboden

Institute for Innovation & Technology Management, Lucerne University of Applied Sciences, <u>www.HSLU.ch</u>

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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1-2 July, Lucerne, Switzerland