

## Recent invited talks at International Conferences

### 2022

#### **DPG Autumn Meeting of Condensed Matter Section**

Regensburg, 04.-09.09.2021

E. Schöll: Modeling tumor disease and sepsis by networks of adaptively coupled phase oscillators (Division of Socioeconomic physics)

#### **Dynamics Days Europe 2022**

Aberdeen, 22.-26.08.2022

E. Schöll, Member of International Advisory Board

#### **International Summer Institute on Network Physiology (ISINP-3)**

Lake Como School of Advanced Studies

Como, Italy, 24.-29.07.2022 (Director: Plamen Ivanov)

E. Schöll (invited): Functional modelling of tumor disease and sepsis by adaptive multilayer networks

#### **27<sup>th</sup> International Conference of Difference Equations and Applications ICDEA 2022**

Paris, France, 18.-22.07.2022

E. Schöll (invited Plenary Talk): Synchronization patterns and chimera states in networks of coupled maps

#### **ENOC 2022**

Lyon, France, 17.-22.07.2022

E. Schöll (invited Keynote Lecture): Partial synchronization patterns in complex networks - interplay of dynamics, time delay, and network topology

#### **Workshop on "Chimera States: From Theory and Experiments to Technology and Living Systems"**

(Org. Davidson, Maistrenko, Showalter) MPI-PKS Dresden, 16.-20.5.2022

E. Schöll (invited Colloquium): "Chimeras in Physics and Biology: Synchronization and Desynchronization of Rhythms"

#### **Workshop on Complexity Approaches to Power Grids**

School of Mathematical Sciences, University of Nottingham, UK, 13.01.2022 (Oliver Smith)

Eckehard Schöll (invited): What Adaptive Neuronal Networks Teach us About Power Grids

### 2021

**13th Conference on Nonlinear Systems and Dynamics (CNSD)**, Centre for Nonlinear Science & Engineering, SASTRA Deemed University, Thanjavur, India, 17.-22.12.2021

E. Schöll (invited Plenary Talk): Partial Synchronization Scenarios in Complex Multilayer Networks

**10th International Conference on Complex Networks & Their Applications**

Madrid, Spain, 30.11.-02.12.2021

E. Schöll: Modeling tumor disease and sepsis by networks of adaptively coupled phase oscillators

**SICC International Tutorial Workshop TOPICS IN NONLINEAR DYNAMICS,**

Italian Society for Chaos and Complexity (SICC), 13.10.2021

Eckehard Schöll (invited): What Adaptive Neuronal Networks Teach us About Power Grids

**10th International Conference on Physics and Control PhysCon 2021**

(online) <http://physcon2021.org/>

Shanghai, China 04.-08.10.2021

Member of Advisory Board

Organizer of Minisymposium „Control of Power Grids” (together with Jürgen Kurths)

Eckehard Schöll: What Adaptive Neuronal Networks Teach us About Power Grids

**DPG Meeting Section of Condensed Matter**

Berlin, 26.09-01.10.2021

Focus Session “Synchronization patterns in complex dynamical networks” (DY/SOE)

In Honour of Eckehard Schöll's 70<sup>th</sup> birthday

**VI Int. Symp. on Nonlinear Wave Physics** Nizhny Novgorod, Russia 19.-22.9.2021

<https://nwp2021.ipfran.ru/>

NWP-1 Nonlinear Dynamics of Oscillatory Systems (V. Nekorkin, S. Boccaletti)

E. Schöll (invited talk, member of Program Committee): Partial synchronization patterns in the brain: epilepsy and unihemispheric sleep

J. Sawicki (invited talk): Effect of topology upon relay synchronization in 3-layer networks

R. Berner (invited talk): Adaptivity induced synchronization patterns in complex dynamical networks

**Volga Neuroscience Meeting,** Nizhny Novgorod, Russia 24.-27.08.2021

<http://conf.neuro.unn.ru/vnm-2021/>

E. Schöll (invited talk): FitzHugh–Nagumo oscillators on complex networks mimic epileptic-seizure-related synchronization phenomena

**Dynamics Days Europe,** Nice, France, 23.-27.08.2021

Member of International Advisory Board

Organizer of Minisymposium on "Networks of coupled oscillators and maps: Chimera states and beyond" (R. Andrzejak, E. Schöll)

**Workshop in Honour of Tassos Bountis' 70th birthday (Summer School Complex Systems and Complexity)** <http://cosa.inn.demokritos.gr/27th-summer-school-dynamical-systems-and-complexity/>

Athens, Greece, 23.-24.07.2021

E. Schöll (invited talk): What Adaptive Neuronal Networks Teach us About Power Grids

**11th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies (ENERGY 2021)**

Valencia, Spain, 30.05-03.06.2021

Special Track on **Modelling Dynamics of Power Grids (MoDyPoG)** (Org. Eckehard Schöll)

Eckehard Schöll (inv.): Control of synchronization patterns in complex dynamical networks

**SIAM Conference on Applied Dynamical Systems (online)**

Portland, Oregon, USA, 23.-27.05.2021

Minisymposium "Adaptivity in networks and nonlinear systems" (Org. Simona Olmi, Serhiy Yanchuk, Rico Berner)

Eckehard Schöll (invited talk): What adaptive neural networks teach us about power grids

**2020**

**G-RISC International Student Conference Science and Progress 2020 (online)**

St. Petersburg State University, Russia, 10.-12.11.2020

E. Schöll (invited keynote plenary talk): Physics and Control - interplay of nonlinear dynamics, complex network topology, and time delay

**G-RISC Seminar on Nonlinear Dynamics and Control (online)**

St. Petersburg, Russia, 21.10.2020

Organizers: Eckehard Schöll and Alexander Fradkov

Eckehard Schöll (invited talk): Introduction to Nonlinear Dynamics and Control

**Dynamics Days Digital (online)**

24.-28.08.2020

Member of International Advisory Board

Organizer of Minisymposium on Dynamics of Complex Networks: from nature to technology (R. Andrzejak, E. Schöll)

**Institute for Basic Science, Research Center Daejeon, South Korea (online)**

21.07.2020 E. Schöll (invited talk): Partial synchronization patterns in brain networks - interplay of dynamics, delay, and network topology

**6th Dynamics Days Central Asia (online)**

Online conference, Nur-Sultan, Kazakhstan, 2.-5.6.2020 ,

E. Schöll (invited talk): Partial synchronization patterns in brain networks

**BCCN Berlin**

PhD Lecture Series, 3.6.2020

E. Schöll (invited talk): Synchronization patterns in neuronal networks - interplay of dynamics, time delay, and network topology

**Oberseminar "Nonlinear Dynamics"**

WIAS Berlin, 26.05.2020

E. Schöll (invited talk): Partial synchronization patterns in the brain

### **European Control Conference (ECC 2020)**

Saint Petersburg, Russia (online), 12.-15.05.2020

E. Schöll: Control of relay synchronization in multiplex networks by time delay

### **DPG Dresden (online)**

16.-20.03.2020

Focus Session on "Partial Synchronization Patterns in Neuronal Networks" (SOE,DY,BP, Org. Iryna Omelchenko, Giulia Ruzzene)

E. Schöll (invited talk): Partial Synchronization Patterns in the Brain

## **2019**

### **International Conference 10 years of G-RISC and beyond**

18.-20.11.2019 FU Berlin

E. Schöll (invited talk): Controlling partial synchronization patterns in complex networks: Chimera states and beyond

### **Jahresversammlung der Akademie der Wissenschaften Leopoldina "Zeit in Natur und Kultur"** Halle 21./22.09.2019

E. Schöll (invited talk): Schimären in Physik und Biologie: Synchronisation und Desynchronisation von Rhythmen

### **9th International Conference on Physics and Control (PhysCon 2019)**

Innopolis/Kazan, Russia, 8.-11.09.2019

Member of Advisory Board

Eckehard Schöll (Plenary talk): Partial synchronization patterns in complex networks - interplay of dynamics, time delay, and network topology

### **Dynamics Days Europe**

Rostock, 2.-6.9.2019

Member of International Advisory Board, Organizer of Minisymposium "Structure and dynamics of future power grids" (S. Olmi, K. Schmietendorf, O. Kamps, E. Schöll)

E. Schöll (invited talk): Partial synchronization in complex networks

E. Schöll (invited talk): Delay-induced chimeras in neural networks with fractal topologies

E. Schöll (invited talk): Control of synchronization in two-layer power grids

### **50 Years of Excitable Media (80. Geb. Krinski)** (S.Luther, V.Zykov, A.Krekhov, Y.Mühe, U.Parlitz) Göttingen, 30.06.-02.07.2019

E. Schöll (invited talk): Coherence resonance chimeras in excitable systems

### **Engineering of Chemical Complexity ECC10**

Potsdam, 3.-6.6.2019

Organizer of Minisymposium "Control of self-organization" (S. Klapp, E. Schöll)

**Advanced School/Workshop “Patterns of Synchrony: Chimera States and Beyond”**

(Arkady Pikovsky, Sudeshna Sinha, and Yuri Maistrenko)

International Center for Theoretical Physics (Trieste, Italy), 6.-17.05.2019

E. Schöll (invited lecture): Controlling chimera states: interplay of dynamics, network topology, time delay, and noise

**DPG Regensburg**

31.03.-05.04.2019

Focus Session on "Multilayer networks" (SOE, DY, BP, Org. A. Zakharova, S. Jalan)

E. Schöll (invited talk): Delay controls chimera relay synchronization in multiplex networks

**Advances in Pattern Formation: New questions motivated by applications**

Workshop in Honor of Ehud Meron, Sede Boqer, Ben-Gurion U., Israel, 18.-22.02.2019

E. Schöll (invited talk): Partial synchronization patterns and chimera states in complex networks