

Trends in Mathematical Sciences

ERLANGEN · JUNE 10 – 14, 2024

PROGRAM

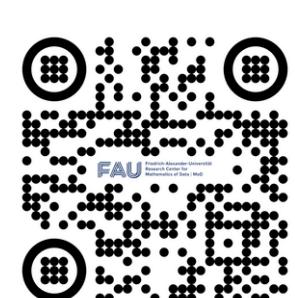
	MONDAY June 10	TUESDAY June 11	WEDNESDAY June 12	THURSDAY June 13	FRIDAY June 14
09:00 - 09:45	Registration	Thematic session	Thematic session	Thematic session	Thematic session
09:45 - 10:30	Registration	Thematic session	Thematic session	Thematic session	Thematic session
10:30 - 11:00	Welcome coffee				
11:00 - 12:00	Opening ceremony Joachim Hornegger On the role of Mathematics for AI at FAU	Round table: EU - Latin America FAU • SBM • BAYLAT	Poster session Room 2 (02301.00.021) Universitätsstraße 22		Thematic session
12:00 - 12:30	Enrique Zuazua Scientific Committee information	Round table: EU - Latin America FAU • SBM • BAYLAT	Poster session Room 2 (02301.00.021) Universitätsstraße 22		Thematic session
12:30 - 14:00	Free time for lunch	Free time for lunch	Free time for lunch	Free time for lunch	Free time for lunch
14:00 - 14:40	Alexander Martin Mixed Integer Optimization Problems on Networks with PDE Constraints	Marius Tucsnak A general theory of norm and time optimal control problems for linear PDE systems	Karsten Urban Model reduction of parametric PDEs -Advances, trends, and challenges KH.1016	Angela Stevens A view on the 'physics' of Covid-19 through data and invariants of kinetic equations	Everaldo M. Bonotto Impulsive evolution processes: abstract results and an application to a coupled wave equations
14:40 - 15:20	Yongcun Song Physics-informed neural networks for non-smooth PDE-constrained optimization problems	Hermann Schulz-Baldes Mathematics for topological materials	Ansgar Jüngel Memristor drift-diffusion systems for brain-inspired neuromorphic computing KH.1016	Matthias Hieber Analysis of geophysical flows	Maria Soledad Aronna Control of disease dynamics
15:20 - 15:50	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
15:50 - 16:30	Joachim Escher The Rayleigh–Taylor condition for the Muskat Problem	Yue Wang Networked Hyperbolic Systems: Modeling, Control and Efficient Simulation	Carlos Conca A multiscale inverse problem approached via homogenization: A numerical method	Jaqueline G. Mesquita Neutral functional differential equations with state-dependent delays and applications	Diego S. Rodrigues Accessing the Pharmacokinetics of Magnetic Nanoparticles in Cirrhosis-Associated Hepatocarcinogenesis by Ordinary Differential Equation Modeling and AC Biosusceptometry
16:30 - 17:10	Carlile Lavor Different Models for 3D Space in Molecular Geometry	Frauke Liers Trends in Optimization under Uncertainty	Jorge Zubelli Local Volatility Estimation in the Presence of Jumps	Juan Límaco Controllability of the N-dimensional Ladyzhenskaya–Boussinesq model	Fernanda Andrade da Silva Unifying stability theory for stochastic equations
17:10 - 17:50	Günter Leugering Domain decomposition for space-time fractional optimal control problems on metric graphs	Wladimir Neves The Hele-Shaw free boundary limit of Buckley-Leverett System	Juan Pablo Ortega A Structure-Preserving Kernel Method for Learning Hamiltonian Systems	Ludmil Katzarkov Atoms, electrons and birational invariants	Octavio Arizmendi E. Spectral Deconvolution of Random Matrices via Free Probability
					<i>Closing ceremony</i>

SCIENTIFIC COMMITTEE

- Enrique Zuazua. FAU (Germany)
- Jaqueline Godoy Mesquita. UnB | SBM (Brazil)
- Yue Wang. FAU (Germany)
- Everaldo de Mello Bonotto. USP (Brazil)

Round table EU - Latin America

FAU: **Patrick Stör**
SBM: **Jaqueline G. Mesquita**
BAYLAT: **Irma de Melo-Reiners • Ricardo Hagn**



#TrendsInMaths

www.mod.fau.eu/trends-in-mathematical-sciences

ORGANIZING COMMITTEE

- Sebastián Zamorano Aliaga. USACH (Chile)
- Duván Cardona. FWO (Belgium)
- Magaly Roldán Plumey. BAYLAT (Germany)
- Darlis Bracho Tudares. FAU (Germany)

WHERE

On-site / Online

On-site:

Universitätsstraße 15, 91054 Erlangen, Germany
KH 1.011 Senatssaal (Senate Hall) Kollegienhaus

Online: TBA



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Friedrich-Alexander-Universität
DYNAMICS, CONTROL,
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