

CMAM 2022

9th International Conference on Computational Methods in Applied Mathematics

August 29 – September 2, 2022 – TU Wien

<https://www.asc.tuwien.ac.at/cmam2022/>

Venue

CMAM 2022 takes place at the *Campus Gußhaus* of TU Wien. All plenary talks, one of the five parallel sessions, all coffee breaks, registration, and wine reception take place in the building *Neues EI* (Gußhausstraße 27–29). Four parallel sessions take place in the building *Altes EI* (Gußhausstraße 25).

Conference dinner

The conference dinner takes place at the restaurant *Stöckl im Park* (Prinz Eugen-Straße 25, 1030 Vienna).

Lecture halls

code	full name	TU room number	address	floor
<i>EI7</i>	Hörsaal EI 7	CD EG 13	Gußhausstraße 27–29	ground floor
<i>EI1</i>	EI 1 Petritsch Hörsaal	CF 02 42	Gußhausstraße 25	second floor
<i>EI3A</i>	EI 3A Hörsaal	CF 02 13	Gußhausstraße 25	second floor
<i>EI4</i>	EI 4 Reithoffer Hörsaal	CF 02 45	Gußhausstraße 25	second floor
<i>EI5</i>	EI 5 Hochenegg Hörsaal	CF 02 29	Gußhausstraße 25	second floor

The floors are given in British English, i.e., the ground floor is the floor of a building which is level with the ground.

Internet access

TU Wien participates in the *eduroam* program, therefore CMAM participants can gain internet access connecting to the WLAN *eduroam* using the personal account from their home institution. Participants without access to *eduroam* can get login data for the WLAN *tunet* at the registration desk.

Conference program

List of thematic minisymposia [code, title and organizer(s)]

MS01: Adaptive finite element methods for variational inequalities

Andreas Schröder (Paris Lodron University of Salzburg, Austria), Gerhard Starke (University of Duisburg-Essen, Germany)

MS02: Algorithmic aspects of optimal control

Daniel Walter (Humboldt-Universität zu Berlin, Germany)

MS03: Approximating and discretizing with structure

Lars Diening (University of Bielefeld, Germany), Christian Kreuzer (TU Dortmund, Germany), Andreas Veeseer (University of Milan, Italy)

MS04: Artificial boundary conditions for wave problems in unbounded domains

Jason Kaye (Flatiron Institute, USA)

MS05: Computational PDE-constrained optimization

Irwin Yousept (University of Duisburg-Essen, Germany)

MS06: Computational stochastic PDEs

Francesca Bonizzoni (University of Augsburg, Germany), Michele Ruggeri (University of Strathclyde, UK)

MS07: Eigenvalue problems in applied mathematics

Fleurianne Bertrand (University of Twente, The Netherlands), Daniele Boffi (KAUST, Saudi Arabia)

MS09: Machine learning and computational micromagnetism

Lukas Exl (University of Vienna, Austria), Norbert J. Mauser (University of Vienna, Austria)

MS10: Numerical methods for kinetic transport equations

Matthias Schlottbom (University of Twente, The Netherlands)

MS11: Numerical methods for wave propagation problems

Ilaria Perugia (University of Vienna, Austria), Barbara Verfürth (Karlsruhe Institute of Technology, Germany)

MS13: Modeling and numerics of (relativistic) Schrödinger equations

Timon S. Gutleb (University of Oxford, UK), Norbert J. Mauser (University of Vienna, Austria), Hans Peter Stimming (University of Vienna, Austria)

MS14: Numerical solution of problems arising in modeling and optimization of complex fluid mechanics problems

Sergio González-Andrade (Escuela Politécnica Nacional, Ecuador), Timm Treskatis (TU Dortmund, Germany)

MS16: Recent developments in finite element methods for nonlinear problems

Neela Nataraj (Indian Institute of Technology Bombay, India)

MS18: Reliable modeling of nonlinear problems

Johannes Kraus (University of Duisburg-Essen, Germany), Sergey Repin (Steklov Mathematical Institute, Russia & University of Jyväskylä, Finland)

MS19: Space-time solvers for evolutionary PDEs

Gregor Gantner (TU Wien, Austria), Rob Stevenson (University of Amsterdam, The Netherlands)

MS20: Virtual element methods for PDEs

Rekha Khot (Indian Institute of Technology Bombay, India)

MS21: Multiscale methods for materials and molecules

Huajie Chen (Beijing Normal University, China), Christoph Ortner (University of British Columbia, Canada), Lei Zhang (Shanghai Jiao Tong University, China)

CT: Contributed talks

Program overview

Mon, Aug 29		Tue, Aug 30		Wed, Aug 31		Thu, Sep 1		Fri, Sep 2	
08:30–09:30	Registration								
09:30–09:45	Opening	09:00–09:45	D. Boffi	09:00–09:45	N. Nataraj	09:00–09:45	S. Margenov	10:00–11:30	MS04, MS14, MS18
09:45–10:30	C. Carstensen	09:45–10:30	C. Ortner	09:45–10:30	A. Veesser	09:45–10:30	P. Grohs		
10:30–11:00	Coffee break	10:30–11:00	Coffee break	10:30–11:00	Coffee break	10:30–11:00	Coffee break	11:30–12:00	Coffee break
11:00–12:30	MS06, MS10, MS11, MS13, MS21	11:00–12:30	MS01, MS02, MS07, MS13, MS21	11:00–12:30	MS03, MS05, MS07, MS16, MS21	11:00–12:30	MS04, MS14, MS18, MS19, CT	12:00–12:45	R. Stevenson
								12:45–13:30	M. Melenk
								13:30–13:45	Closing
12:30–14:30	Lunch break	12:30–14:30	Lunch break	12:30–14:30	Lunch break	12:30–14:30	Lunch break		
14:30–15:15	T. Wihler	14:30–15:15	D. Lukas	14:30–16:00	MS03, MS05, MS09, MS16, CT	14:30–15:15	S. Pereverzyev		
15:15–16:00	E.-J. Park	15:15–16:00	T. Führer			15:15–16:00	B. Kaltenbacher		
16:00–16:30	Coffee break	16:00–16:30	Coffee break	16:00–16:30	Coffee break	16:00–16:30	Coffee break		
16:30–18:00	MS02, MS06, MS10, MS11, MS13	16:30–18:00	MS02, MS03, MS07, MS11, CT	16:30–18:00	MS03, MS09, MS14, MS20, CT	16:30–18:00	MS14, MS18, MS19, MS20, CT		
18:00	Wine reception	18:00	CMAM editorial board meeting			19:30	Conference dinner		

Detailed program

Monday, August 29, 2022 – Morning

08:30–09:30	<i>Foyer on the ground floor (Neues EI building):</i> Registration									
	<i>EI7 – Chair: D. Praetorius</i>									
09:30–09:45	D. Praetorius		Opening							
09:45–10:30	C. Carstensen		Lower eigenvalue bounds for the harmonic and bi-harmonic operator							
10:30–11:00	<i>Foyer on the ground floor (Neues EI building):</i> Coffee break									
	<i>EI7</i>	<i>Chair: B. Verfürth</i>	<i>EI4</i>	<i>Chair: M. Ruggeri</i>	<i>EI1</i>	<i>Chair: C. Ortner</i>	<i>EI5</i>	<i>Chair: M. Schlottbom</i>	<i>EI3A</i>	<i>Chair: H. P. Stimming</i>
11:00–11:30	A. Rieder	MS11	H. Harbrecht	MS06	P. Lin	MS21	V. Bosboom	MS10	J. Möller	MS13
	Wavenumber-explicit FEM-BEM coupling for the Helmholtz equation	<i>hp</i> -quadrature for the Helmholtz equation	Isogeometric quadrature for forward and inverse random acoustic scattering	multilevel forward and random acoustic scattering	A temporal multiscale method for a system of differential equations with fractional derivatives (online)		Structure-preserving methods for the radiative transfer equation		The semiclassical limit of the self-consistent Pauli equation	
11:30–12:00	T. Chaumont-Frelet	MS11	I. Voulis	MS06	M. Buze	MS21	D. Lathouwers	MS10	T. S. Gutleb	MS13
	A Galerkin method based on coherent state for high-frequency Helmholtz problems		Optimality of adaptive Galerkin methods for random elliptic PDEs		Mathematical modelling of atomistic near-crack-tip plasticity under anti-plane shear kinematics		A space-angle dgFEM for solving the linear Boltzmann equation in the presence of a magnetic field using an angular multigrid preconditioner		Splitting methods for the Pauli equation and the Pauli-Poiswell system	
12:00–12:30	V. Nikolic	MS11	M. Eigel	MS06	J. Thomas	MS21	M. Schlottbom	MS10	P. Allmer	MS13
	Mixed finite element formulations for the Kuznetsov equation		Adaptive Galerkin FEM for non-affine linear parametric PDEs		Body-ordered approximations of atomic properties		On robustly convergent and efficient iterative methods for anisotropic radiative transfer		A time splitting spectral method for the Klein–Gordon Maxwell system	
12:30–14:30	Lunch break									

Monday, August 29, 2022 – Afternoon

<i>E17 – Chair: C. Carstensen</i>										
14:30–15:15	T. Wihler	Variational adaptivity								
15:15–16:00	E.-J. Park	Polygonal staggered discontinuous Galerkin methods								
16:00–16:30 <i>Foyer on the ground floor (Neues EI building): Coffee break</i>										
<i>E17</i>	<i>Chair: B. Verfürth</i>	<i>E14</i>	<i>Chair: F. Bonizzoni</i>	<i>E11</i>	<i>Chair: M. Schlottbom</i>	<i>E15</i>	<i>Chair: D. Walter</i>	<i>E13A</i>	<i>Chair: N. J. Mauser</i>	
16:30–17:00	G. Maierhofer	MS11	R. Merkle	MS06	J. Kusch	MS10	J. Milz	MS02	S. Descombes	MS13
	A structure preserving low-regularity integrator for the Korteweg–De Vries equation	Subordinated random fields and elliptic PDEs	Dynamical low-rank approximation for radiation transport	Consistency of Monte Carlo estimators for risk-neutral PDE-constrained optimization	Building energy preserving methods for nonlinear Schrödinger equations					
17:00–17:30	H. Kleikamp	MS11	A. Scaglioni	MS06	R. Bardin	MS10	K. Bredies	MS02	P. Singh	MS13
	Nonlinear model order reduction for parametrized hyperbolic conservation laws in a space-time domain	Convergence of adaptive stochastic collocation with finite elements	A low-rank tensor product framework for radiative transfer in slab geometry	A generalized conditional gradient method for dynamic inverse problems with optimal transport regularization	Convergence of Magnus based methods for Schrödinger equations					
17:30–18:00	N. Rouxelin	MS11	A. Bepalov	MS06	H. Egger	MS10	J. A. Iglesias	MS02	M. Tennyson	MS13
	A HDG framework for connected wave equations: Applications in helioseismology	Adaptive multilevel stochastic collocation FEM for parametric PDEs	A model reduction approach for RTE-based fluorescence optical tomography	Extremal points of total generalized variation balls in 1D	Rational Krylov methods for Schrödinger equations					
18:00– <i>Foyer on the ground floor (Neues EI building): Wine reception</i>										

Tuesday, August 30, 2022 – Morning

<i>E17 – Chair: T. Wihler</i>										
09:00–09:45	D. Boffi	Approximation of parameter dependent eigenvalue problems								
09:45–10:30	C. Ortner	Interatomic potentials from first principles: Approximation and parameterisation of equivariant set functions								
10:30–11:00 <i>Foyer on the ground floor (Neues EI building): Coffee break</i>										
<i>E17</i>	<i>Chair: A. Schröder</i>	<i>E14</i>	<i>Chair: D. Boffi</i>	<i>E11</i>	<i>Chair: C. Ortner</i>	<i>E15</i>	<i>Chair: D. Walter</i>	<i>E13A</i>	<i>Chair: T. S. Gutleb</i>	
11:00–11:30	P. Bammer	MS01	F. Bertrand	MS07	X. Xu	MS21	M. Hashemi	MS02	N. J. Mauser	MS13
	A posteriori error estimate for hp -FEM in elastoplasticity		Least-squares methods for the approximation of a fluid-structure interaction spectral problem		Multiscale analysis for two-phase flow with moving contact lines (online)		Optimal control of the Kirchhoff equation		Absorbing boundary conditions for nonlinear Schrödinger equations	
11:30–12:00	H. Schneider	MS01	G. Manzini	MS07	J. Chen	MS21	B. Vexler	MS02	H. P. Stimming	MS13
	Space-time ansatz for plasticity		An eXtended virtual element method for elliptic problems		On the multiscale Landau–Lifshitz–Gilbert equation: Two-scale convergence and stability analysis (online)		Numerical analysis of optimal control problem governed by transient Stokes equations with state constraints pointwise in time		Numerical models for quasi-1d Bose condensates: Generalized hydrodynamics with transverse excitations	
12:00–12:30	J. Ferzly	CT	F. Bonizzoni	MS07	S. Dai	MS21	C. Clason	MS02		
	Adaptive inexact smoothing Newton methods for a nonconforming discretization of a variational inequality		A greedy MOR method for the tracking of eigensolutions to parametric PDEs		Multiscale modeling and simulations of defects in crystals (online)		Optimal control of non-smooth partial differential equations			
12:30–14:30 Lunch break										

Tuesday, August 30, 2022 – Afternoon

<i>EI7 – Chair: U. Langer</i>										
14:30–15:15	D. Lukas	Parallel boundary element methods in space and time accelerated on GPUs								
15:15–16:00	T. Führer	Multilevel decompositions in negative order Sobolev spaces and applications								
16:00–16:30 <i>Foyer on the ground floor (Neues EI building): Coffee break</i>										
<i>EI7</i>	<i>Chair: A. Veerer</i>	<i>EI4</i>	<i>Chair: F. Bertrand</i>	<i>EI1</i>	<i>Chair: B. Verfürth</i>	<i>EI5</i>	<i>Chair: D. Walter</i>	<i>EI3A</i>	<i>Chair: G. Gantner</i>	
16:30–17:00	P. Zanotti	MS03	V. Olkhovskiy	MS07	C. Döding	MS11	B. Jensen	MS02	S. Beuter	CT
	Quasi-optimal and pressure robust discretizations of the Stokes equations		Computational lower bounds of the Maxwell eigenvalues		Energy-preserving time integration of nonlinear Schrödinger equations		First-order primal-dual methods for nonsmooth nonconvex optimisation		Efficient implementation of a d -dimensional adaptive P1-FEM in Matlab and Julia	
17:00–17:30	M. Rott	MS03	Ö. Türk	MS07	P. Freese	MS11	F. Mannel	MS02	M. Zank	CT
	Pressure robust a posteriori bounds with error-dominated oscillation		Approximation of the Maxwell eigenvalue problem by a residual-based stabilized finite element method		Super-localized orthogonal decomposition for high-frequency Helmholtz problems		A globalization framework for semismooth Newton methods		Direct space-time finite element solvers for the wave equation	
17:30–18:00	V. Kempf	MS03			B. Verfürth	MS11	B. Azmi	MS02	J. Hauser	CT
	Anisotropic and pressure-robust finite element discretizations for the Stokes equations				Numerical wave propagation in spatial and temporal metamaterials		Stabilization of time-varying parabolic equations by a single moving actuator		Space-time FEM for the vectorial wave equation under consideration of Ohm's law	
18:00–	<i>EI7: CMAM editorial board meeting</i>									

Wednesday, August 31, 2022 – Morning

E17 – Chair: E.-J. Park										
09:00–09:45	N. Nataraj	Lowest-order equivalent nonstandard finite element methods for fourth-order plates								
09:45–10:30	A. Veeseer	Accurate error bounds and equivalence of seminorms								
10:30–11:00 Foyer on the ground floor (Neues EI building): Coffee break										
E17	Chair: C. Kreuzer	E14	Chair: D. Boffi	E11	Chair: C. Ortner	E15	Chair: I. Yousept	E13A	Chair: N. Nataraj	
11:00–11:30	L. Diening	MS03	P. Lederer	MS07	X. Dai	MS21	A. Laurain	MS05	S. Bajpai	MS16
	Fortin operator for the 3D Taylor–Hood element		Notes on asymptotically exact a posteriori error estimates for mixed Laplace eigenvalue problems		Convergent orthogonality preserving approximations of the Kohn-Sham orbitals (online)		Optimal control of volume-preserving mean curvature flow		Finite element analysis for a three-step two-level approximations of the Boussinesq system of equations	
11:30–12:00	G. Barrenechea	MS03	A. Hannukainen	MS07	H. Chen	MS21	H. Meinlschmidt	MS05	A. K. Dond	MS16
	Divergence-free finite element methods for an inviscid fluid model		Distributed solution of Laplacian eigenvalue problems		Convergence of the planewave approximations for quantum incommensurate systems (online)		Optimal control of irregular drift in a Fokker-Planck equation		A posteriori error analysis for a distributed optimal control problem governed by the von Kármán equation	
12:00–12:30	N. Kopteva	MS03	X. Liu	MS07	Y. Wang	MS21	L. Ammann	MS05	R. R. Maity	MS16
	A posteriori error control in the maximum norm for convection-dominated convection-diffusion equations		Rigorous eigenvalue estimation for the Stokes differential operators		A framework for a generalisation analysis of machine-learned interatomic potentials (online)		Acoustic full-waveform inversion via optimal control		Parameter dependent finite element analysis for ferronematics solutions	
12:30–14:30 Lunch break										

Wednesday, August 31, 2022 – Afternoon

	<i>E17</i>	<i>Chair: L. Diening</i>	<i>E14</i>	<i>Chair: L. Exl</i>	<i>E11</i>	<i>Chair: A. Rieder</i>	<i>E15</i>	<i>Chair: I. Yousept</i>	<i>E13A</i>	<i>Chair: N. Nataraj</i>
14:30–15:00	M. Faustmann	MS03	M. d’Aquino	MS09	M. Pasadas	CT	C. Christof	MS05	G. C. Remesan	MS16
	Weighted analytic regularity for the integral fractional Laplacian in polygons		Large-scale eigenmode computation of magnetization dynamics in micromagnetic systems		Numerical solution of 2D linear Fredholm integral equation systems of second kind by radial basis functions		Semismoothness for solution operators of obstacle-type variational inequalities with applications in optimal control		Convergence analysis of a numerical scheme for a tumour growth model (online)	
15:00–15:30	A. Kaltenbach	MS03	A. Kornell	MS09	J. Cao	CT	M. Hensel	MS05	N. S. Sharma	MS16
	Systematic, explicit and efficient error estimation for convex minimization problems		Description of collective magnetization processes with machine learning models		Computational analysis of tornado dynamics using a new immersed boundary lattice Boltzmann framework		Quasilinear obstacle problems in ferromagnetic shielding: Analysis and optimal control		Unconditional energy stability and solvability for a C^0 interior penalty method for a sixth-order equation modeling microemulsions (online)	
15:30–16:00	M. Feischl	MS03	A. Kovacs	MS09			H. Yücel	CT		
	Inf-sup stability implies quasi-orthogonality		Classification and optimization of a magnet’s microstructure				Solving optimal control problems containing uncertainty			
16:00–16:30	<i>Foyer on the ground floor (Neues EI building): Coffee break</i>									
	<i>E17</i>	<i>Chair: A. Veese</i>	<i>E14</i>	<i>Chair: N. J. Mauser</i>	<i>E11</i>	<i>Chair: M. Faustmann</i>	<i>E15</i>	<i>Chair: T. Treskatis</i>	<i>E13A</i>	<i>Chair: R. Khot</i>
16:30–17:00	J. Storn	MS03	S. Schaffer	MS09	N. Srivastava	CT	M. A. Afaq	MS14	R. Khot	MS20
	Interpolation operator on negative Sobolev spaces		Physics informed machine learning in micromagnetism		Novel compact difference scheme for fractional wave equation involving Caputo fractional derivative		Monolithic Newton-multigrid solver for multiphase flow problems		Nonconforming virtual elements for the biharmonic equation with Morley degrees of freedom on polygonal meshes	
17:00–17:30	T. Tscherpel	MS03	H. Özelt	MS09	Y. Saleh	CT	A. Fatima	MS14	J. Tushar	MS20
	Stability properties of the L^2 -projection mapping to finite element spaces		Machine learning as building block for macromagnetic simulations		Spectral learning for solving the Schrödinger equation for molecules		An adaptive discrete Newton method for regularization-free Bingham model in yield stress fluids		Virtual discretization of a control constrained Dirichlet boundary control problem governed by the diffusion problem	
17:30–18:00					K. Marynets	CT	P. E. Méndez	MS14	S. Gomez	MS20
					Approximation of solutions to the higher order fractional boundary value problems		A dual-mixed approximation for a Huber regularization of generalized p -Stokes viscoplastic flow problems		Space-time virtual element method for the heat equation	

Thursday, September 1, 2022 – Morning

<i>E17 – Chair: M. Ruggeri</i>										
09:00–09:45	S. Margenov		Robust numerical methods for fractional diffusion problems							
09:45–10:30	P. Grohs		Limitations and opportunities for deep learning based PDE solvers							
10:30–11:00 <i>Foyer on the ground floor (Neues EI building): Coffee break</i>										
<i>E17</i>	<i>Chair: S. Repin</i>	<i>E14</i>	<i>Chair: G. Gantner</i>	<i>E11</i>	<i>Chair: S. Pereverzyev</i>	<i>E15</i>	<i>Chair: R. Oyarzúa</i>	<i>E13A</i>	<i>Chair: J. Kaye</i>	
11:00–11:30	M. Ruggeri	MS18	O. Steinbach	MS19	S. Heydari	CT	J. A. Iglesias	MS14	J. Kaye	MS04
	Convergent structure-preserving finite element methods for nematic liquid crystals		Space-time finite element methods for parabolic evolution equations		AFC stabilization method for a cross-diffusion system modeling a cancer invasion		Rigid particles settling in yield stress fluids and nonsmooth optimization		A new solver for the time-dependent Schrödinger equation on unbounded domains	
11:30–12:00	M. Innerberger	MS18	U. Langer	MS19	L. Vacek	CT	S. López Ordóñez	MS14	G. Pang	MS04
	An optimal goal-oriented adaptive FEM with quadratic goal functional		Space-time finite element methods for parabolic optimal control problems		Numerical solution of traffic flow model on networks		Nonsmooth exact penalization second-order methods for incompressible bi-viscous fluids		A second-order absorbing boundary conditions for two-dimensional peridynamics (online)	
12:00–12:30	S. Repin	MS18	G. Of	MS19	H. von Wahl	CT	S. González-Andrade MS14			
	Error identities for nonlinear elliptic and parabolic problems		A time-adaptive fast multipole boundary element method for the heat equation		Eulerian approach to simplified fluid-structure interaction		A Huber computational approach to parameter identification in the Bingham viscoplastic flow			
12:30–14:30 Lunch break										

Thursday, September 1, 2022 – Afternoon

<i>E17 – Chair: S. Repin</i>										
14:30–15:15	S. Pereverzyev		Aggregation by the linear functional strategy in regularized domain adaptation							
15:15–16:00	B. Kaltenbacher		Reduced, all-at-once, and variational formulations of inverse problems and their iterative solution							
16:00–16:30 <i>Foyer on the ground floor (Neues EI building): Coffee break</i>										
<i>E17</i>	<i>Chair: S. Repin</i>	<i>E14</i>	<i>Chair: R. Stevenson</i>	<i>E11</i>	<i>Chair: M. Innerberger</i>	<i>E15</i>	<i>Chair: P. Vigneaux</i>	<i>E13A</i>	<i>Chair: R. Khot</i>	
16:30–17:00	D. Apushkinskaya	MS18	C. Wieners	MS19	N. Heuer	CT	T. Treskatis	MS14	L. Mascotto	MS20
	Biharmonic obstacle problem: Error bounds for approximate solutions		Space-time discontinuous Galerkin methods for waves		On the DPG method for shallow shells		A discontinuous Galerkin finite element approximation of elastoviscoplastic fluid flows governed by integral constitutive laws		Virtual elements, exact sequences, and magnetic problems	
17:00–17:30	I. Touloupoulos	MS18	T. Führer	MS19	B. Gräßle	CT	J. Camaño	MS14	A. Hodson	MS20
	Space-time finite element methods for a class of quasi-linear parabolic problems		Space-time finite elements for the optimal control of parabolic equations		Stabilization-free reliable and efficient a posteriori error control for HHO		Analysis of a conforming and mass-conservative mixed FEM for the Stokes problem		A framework for implementing general higher order virtual element spaces	
17:30–18:00			G. Gantner	MS19	L. Gehring	CT	F. Fernández Ayala	MS14		
			Applications of a space-time first-order system least-squares formulation for parabolic PDEs		Lower bounds for the constant in the closure estimate for adaptive mesh refinement		A semismooth Newton approach to model viscoplastic lava flow using the discontinuous Galerkin method			
19:30– <i>Restaurant Stöckl im Park (address: Prinz Eugen-Straße 25, 1030 Vienna): Conference dinner</i>										

Friday, September 2, 2022 – Morning

	<i>E17</i>	<i>Chair: M. Ruggeri</i>	<i>E14</i>	<i>Chair: J. Kaye</i>	<i>E15</i>	<i>Chair: J. A. Iglesias</i>
10:00–10:30	M. Wolfmayr	MS18	M. Residori	MS04	R. Oyarzúa	MS14
	A posteriori error estimation for the optimal control of time-periodic eddy current problems		A modified Strang splitting method for linear dispersive problems with transparent boundary conditions		Analysis of a new mixed FEM for stationary incompressible magneto-hydrodynamics	
10:30–11:00	M. Brunner	MS18	X. Zhao	MS04	P. Vigneaux	MS14
	Rate-optimal goal-oriented adaptive FEM for semilinear elliptic PDEs		Pseudospectral methods with PML for nonlinear Klein–Gordon equations (online)		Plugology of shallow Bingham avalanche flows	
11:00–11:30	B. Endtmayer	MS18			M. Serón	MS14
	Efficiency and reliability of goal oriented error estimation				A conforming FEM for the Navier–Stokes/Darcy/heat coupled system	
11:30–12:00	<i>Foyer on the ground floor (Neues EI building): Coffee break</i>					
	<i>E17 – Chair: T. Führer</i>					
12:00–12:45	R. Stevenson		Least squares solvers for conditionally stable ill-posed PDEs			
12:45–13:30	M. Melenk		<i>hp</i> -FEM for spectral fractional diffusion			
13:30–13:45	M. Feischl		Closing			