

# MAFELAP 2013 PROGRAMME – Mon 10 – Fri 14 June 2013 –

MON: 1800–2130 Buffet in the Newton and Darwin Rooms in the Hamilton Centre

Chair: **John Whiteman**

MON 2000–2045 in H001

The Emergence of Predictive Computational Science: Validation and Verification  
of Computational Models of Complex Physical Systems

**J. Tinsley Oden**

MON 1900–2300, Cash bar in the Hamilton Centre

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TUE 0845–0930: Registration in the foyer of the Howell building

TUE 0930–0940 in H001: Opening: Vice Chancellor, **Julia Buckingham**

Chair: **Matthias Maischak**

TUE 0945–1030 in H001

Time Domain Integral Equations for Computational Electromagnetism

**Peter Monk**

TUE 1030–1100: COFFEE in H002 and H004 (Howell building)

TUE 1100–1145 in H001

Double complexes and local bounded cochain projections

**Ragnar Winther**

TUE 1145–1230 in H001

Advances in reducing the mesh burden in computational mechanics applications to  
fracture and surgical simulation

**Stéphane P.A. Bordas**

TUE 1230–1400: LUNCH in the Newton and Darwin Rooms in the Hamilton Centre

Time	A: LC061 Parabolic Equations  <b>Wihler</b>  See page 12 for details.	B: LC062 High order fem  <b>Gopalakrishnan and Schöberl</b>  See page 12 for details.	C: LC063 A posteriori error  <b>Ainsworth, Ern and Vohralik</b>  See page 12 for details.	D: LC064	E: LC065 Non-Standard ...  <b>Klawonn and Starke</b>  See page 13 for details.
TU 1400	Parabolic Equations <b>Georgoulis</b>	High order fem <b>Melenk</b>	A posteriori error <b>Praetorius</b>		Non-Standard ... <b>Sander</b>
TU 1425	Parabolic Equations <b>Janssen</b>	High order fem <b>Bufa</b>	A posteriori error <b>Rankin</b>	Multiphysics Probs <b>Meddahi</b>	Non-Standard ... <b>Gippert</b>
TU 1450	Parabolic Equations <b>Kyza</b>	High order fem <b>Nigam</b>	A posteriori error <b>Repin</b>	Multiphysics Probs <b>Neilan</b>	Non-Standard ... <b>Rheinbach</b>
TU 1515	Parabolic Equations <b>Lakkis</b>	High order fem <b>Chernov</b>	A posteriori error <b>Siebert</b>	Multiphysics Probs <b>Oyarzúa</b>	Non-Standard ... <b>Klawonn</b>

Time	F: LC066 Modeling in biology  <b>Banks</b>  See page 13 for details.	G: LC067 Elliptic Eigenvalue  <b>Giani, Grubisic and Ovall</b>  See page 13 for details.	H: LC068 Fluid-structure  <b>Richter and Wick</b>  See page 13 for details.	I: H001 Low Rank Tensor  <b>Grasedyck, Khoromskij and Savostyanov</b>  See page 13 for details.
TU 1400	Modeling in biology <b>Mehta</b>	Elliptic Eigenvalue <b>Gallistl</b>	Fluid-structure <b>Richter</b>	Low Rank Tensor <b>Ballani</b>
TU 1425	Modeling in biology <b>Kruse</b>	Elliptic Eigenvalue <b>Gedicke</b>	Fluid-structure <b>Wick</b>	Low Rank Tensor <b>Bachmayr</b>
TU 1450	Modeling in biology <b>Kenz</b>	Elliptic Eigenvalue <b>Liu</b>	Fluid-structure <b>Wollner</b>	Low Rank Tensor <b>Savostyanov</b>
TU 1515	Modeling in biology <b>Gerecht</b>	Elliptic Eigenvalue <b>Grubišić</b>		Low Rank Tensor <b>Dolgov</b>

TUE 1540–1610: TEA in H002 and H004 (Howell building)

Time	A: LC061 Parabolic Equations  <b>Wihler</b>  See page 13 for details.	B: LC062 High order fem  <b>Gopalakrishnan and Schöberl</b>  See page 14 for details.	C: LC063 A posteriori error  <b>Ainsworth, Ern and Vohralik</b>  See page 14 for details.	D: LC064 Multiphysics Probs  <b>Heuer and Meddahi</b>  See page 14 for details.	E: LC065 Non-Standard ...  <b>Klawonn and Starke</b>  See page 14 for details.
TU 1610	Parabolic Equations <b>Li</b>	High order fem <b>Houston</b>	A posteriori error <b>Diening</b>	Multiphysics Probs <b>Tran</b>	Non-Standard ... <b>Simeon</b>
TU 1635	Parabolic Equations <b>Perugia</b>	High order fem <b>Hagstrom</b>	A posteriori error <b>Vejchodský</b>	Multiphysics Probs <b>Sayas</b>	Non-Standard ... <b>Müller</b>
TU 1700	Parabolic Equations <b>Makridakis</b>	High order fem <b>Nguyen</b>	A posteriori error <b>Vohralík</b>	Multiphysics Probs <b>Stephan</b>	Non-Standard ... <b>Schwarz</b>
TU 1725		High order fem <b>Gopalakrishnan</b>	A posteriori error <b>Lakkis</b>		Non-Standard ... <b>Starke</b>

Time	F: LC066 Innovative ... PDEs  <b>Cangiani and Manzini</b>  See page 14 for details.	G: LC067 Elliptic Eigenvalue  <b>Giani, Grubisic and Ovall</b>  See page 14 for details.	H: LC068 Parallel session  <b>Mikhailov</b>  See page 15 for details.	I: H001 Low Rank Tensor  <b>Grasedyck, Khoromskij and Savostyanov</b>  See page 15 for details.
TU 1610	Innovative ... PDEs <b>Valentin</b>	Elliptic Eigenvalue <b>Ovall</b>	Parallel session <b>Kučera</b>	Low Rank Tensor <b>Khoromskaia</b>
TU 1635	Innovative ... PDEs <b>Elfverson</b>	Elliptic Eigenvalue <b>Sauter</b>	Parallel session <b>Möller</b>	Low Rank Tensor <b>Khoromskij</b>
TU 1700	Innovative ... PDEs <b>Verani</b>		Parallel session <b>Niemeyer</b>	Low Rank Tensor <b>Kazeev</b>
TU 1725		Elliptic Eigenvalue <b>Engström</b>	Parallel session <b>Kumar</b>	

Chair: **Matthias Maischak**

Zienkiewicz lecture: TUE 1810–1900 in H001

Finite Element Methods in Coastal Ocean Modeling: Successes and Challenges

**Clint N Dawson**

TUE 1930, Buffet in the Newton and Darwin Rooms, Hamilton Centre

TUE 1900–2300, Cash bar in the Hamilton Centre

Time	A: LC061 Challenges DG  <b>Antonietti, Houston and Perugia</b>  See page 15 for details.	B: LC062 High order fem  <b>Gopalakrishnan and Schöberl</b>  See page 15 for details.	C: LC063 Singularities  <b>Bespalov and Nicaise</b>  See page 15 for details.	D: LC064 Contact and ...  <b>Chernov and Maischak</b>  See page 16 for details.	E: LC065 Large scale ...  <b>Rüde</b>  See page 16 for details.
WE 0835	Challenges DG <b>Ayuso de Dios</b>	High order fem <b>Demkowicz</b>	Singularities <b>Apel</b>	Contact and ... <b>Dostál</b>	Large scale ... <b>Ippisch</b>
WE 0900	Challenges DG <b>Chung</b>	High order fem <b>Muga</b>	Singularities <b>Kopteva</b>	Contact and ... <b>Beremlijski</b>	Large scale ... <b>Mueller</b>
WE 0925	Challenges DG <b>Dedner</b>	High order fem <b>Ainsworth</b>	Singularities <b>Xenophontos</b>	Contact and ... <b>Pospíšil</b>	Large scale ... <b>Neckel</b>
WE 0950	Challenges DG <b>Feng</b>	High order fem <b>Wang</b>	Singularities <b>Wihler</b>	Contact and ... <b>Krause</b>	Large scale ... <b>Berzins</b>
WE 1015	Challenges DG <b>Gudi</b>	High order fem <b>Li</b>	Singularities <b>Armentano</b>	Contact and ... <b>Youett</b>	Large scale ... <b>Stadler</b>

Time	F: LC066 PDEs on Surfaces  <b>Elliott</b>  See page 16 for details.	G: LC067 Elliptic Eigenvalue  <b>Giani, Grubisic and Oval</b>  See page 16 for details.	H: LC068 Flow ... reservoirs  <b>Elsheikh, Ganis and Wheeler</b>  See page 16 for details.	I: H001 Micromagnetics  <b>Praetorius and Schrefl</b>  See page 17 for details.
WE 0835	PDEs on Surfaces <b>Deckelnick</b>	Elliptic Eigenvalue <b>Mora</b>	Flow ... reservoirs <b>Arrarás</b>	Micromagnetics <b>Abert</b>
WE 0900	PDEs on Surfaces <b>Madhavan</b>	Elliptic Eigenvalue <b>Miedlar</b>	Flow ... reservoirs <b>Elsheikh</b>	Micromagnetics <b>Bruckner</b>
WE 0925	PDEs on Surfaces <b>Sokolov</b>	Elliptic Eigenvalue <b>Gerds</b>	Flow ... reservoirs <b>Engwer</b>	Micromagnetics <b>Hrkac</b>
WE 0950	PDEs on Surfaces <b>Styles</b>	Elliptic Eigenvalue <b>Ye</b>	Flow ... reservoirs <b>Farrell</b>	Micromagnetics <b>Praetorius</b>
WE 1015	PDEs on Surfaces <b>Madzvamuse</b>	Elliptic Eigenvalue <b>Dauge</b>	Flow ... reservoirs <b>Ganis</b>	Micromagnetics <b>Van Bockstal</b>

WED 1040–1110: COFFEE in H002 and H004 (Howell building)

Chair: **Leszek Demkowicz**

WED 1110–1155 in H001

Fields, control fields, and commuting diagrams in isogeometric analysis

**Annalisa Buffa**

WED 1155–1240 in H001

Finite element methods for surface PDEs

**Charles M. Elliott**

WED 1240–1400: LUNCH in the Newton and Darwin Rooms in the Hamilton Centre

Time	A: LC061 Challenges DG  <b>Antonietti, Houston and Perugia</b>  See page 17 for details.	B: LC062 High order fem  <b>Gopalakrishnan and Schöberl</b>  See page 17 for details.	C: LC063 Singularities  <b>Bespalov and Nicaise</b>  See page 17 for details.	D: LC064 Contact and ...  <b>Chernov and Maischak</b>  See page 17 for details.	E: LC065 Large scale ...  <b>Rüde</b>  See page 17 for details.
WE 1400	Challenges DG <b>Georgoulis</b>	High order fem <b>Patra</b>	Singularities <b>Hunsicker</b>	Contact and ... <b>Gwinner</b>	Large scale ... <b>Krause</b>
WE 1425	Challenges DG <b>Parsania</b>	High order fem <b>Rachowicz</b>	Singularities <b>Nistor</b>	Contact and ... <b>Chernov</b>	Large scale ... <b>Siebert</b>
WE 1450	Challenges DG <b>Rhebergen</b>	High order fem <b>Roberts</b>	Singularities <b>Ciarlet</b>	Contact and ... <b>Markopoulos</b>	Large scale ... <b>Burstedde</b>
WE 1515	Challenges DG <b>Riviere</b>	High order fem <b>Bui-Thanh</b>		Contact and ... <b>Čermák</b>	Large scale ... <b>Tomar</b>

Time	F: LC066 Innovative ... PDEs  <b>Cangiani and Manzini</b>  See page 18 for details.	G: LC067 Low regularity  <b>Demlow and Leykekhman</b>  See page 18 for details.	H: LC068 Flow ... reservoirs  <b>Elsheikh, Ganis and Wheeler</b>  See page 18 for details.	I: H001 Analysis ... bem  <b>Schanz and Steinbach</b>  See page 18 for details.
WE 1400	Innovative ... PDEs <b>Chatzipantelidis</b>	Low regularity <b>Demlow</b>	Flow ... reservoirs <b>Goll</b>	Analysis ... bem <b>Ganesh</b>
WE 1425	Innovative ... PDEs <b>Cangiani</b>	Low regularity <b>Gudi</b>	Flow ... reservoirs <b>Pencheva</b>	Analysis ... bem <b>Bugert</b>
WE 1450	Innovative ... PDEs <b>Beirão da Veiga</b>	Low regularity <b>Leykekhman</b>	Flow ... reservoirs <b>Raeini</b>	Analysis ... bem <b>Gimperlein</b>
WE 1515	Innovative ... PDEs <b>Moiola</b>	Low regularity <b>Neilan</b>	Flow ... reservoirs <b>Scialò</b>	Analysis ... bem <b>Unger</b>

WED 1540–1610: TEA in H002 and H004 (Howell building)

Time	A: LC061 Challenges DG  <b>Antonietti, Houston and Perugia</b>  See page 18 for details.	B: LC062 High order fem  <b>Gopalakrishnan and Schöberl</b>  See page 18 for details.	C: LC063 Time-Domain BIEs  <b>Banjai and Sauter</b>  See page 19 for details.	D: LC064 Contact and ...  <b>Chernov and Maischak</b>  See page 19 for details.	E: LC065 Parallel session  <b>Bahai</b>  See page 19 for details.
WE 1610	Challenges DG <b>Sharma</b>	High order fem <b>Heuer</b>	Time-Domain BIEs <b>Weile</b>	Contact and ... <b>Maischak</b>	Parallel session <b>Gardini</b>
WE 1635	Challenges DG <b>Wihler</b>	High order fem <b>Hakula</b>	Time-Domain BIEs <b>Davies</b>	Contact and ... <b>Schröder</b>	Parallel session <b>Ahmed</b>
WE 1700		High order fem <b>Qiu</b>	Time-Domain BIEs <b>Messner</b>	Contact and ... <b>Stephan</b>	Parallel session <b>Karakatsani</b>
WE 1725		High order fem <b>Zlotnik</b>	Time-Domain BIEs <b>Tausch</b>	Contact and ... <b>Drouet</b>	Parallel session <b>Šebestová</b>

Time	F: LC066 Parallel session  <b>Tobiska</b>  See page 19 for details.	G: LC067 Low regularity  <b>Demlow and Leykehman</b>  See page 19 for details.	H: LC068 Flow ... reservoirs  <b>Elsheikh, Ganis and Wheeler</b>  See page 19 for details.	I: H001
WE 1610	Parallel session <b>Artina</b>	Low regularity <b>Ovall</b>	Flow ... reservoirs <b>Wheeler</b>	
WE 1635	Parallel session <b>Köhler</b>	Low regularity <b>Tantardini</b>	Flow ... reservoirs <b>Yotov</b>	
WE 1700	Parallel session <b>Park</b>		Flow ... reservoirs <b>Mostaghimi</b>	
WE 1725	Parallel session <b>Schneider</b>			

Chair: **John Whiteman**

Babuška lecture: WED 1810–1900 in H001

Forty years of the Crouzeix-Raviart element

**Susanne C. Brenner**

WED 1930, Dinner in the Newton and Darwin Rooms, Hamilton Centre

WED 1900–2300, Cash bar in the Hamilton Centre

Time	A: LC061 Large scale ...  <b>Rüde</b>  See page 19 for details.	B: LC062 High order fem  <b>Gopalakrishnan and Schöberl</b>  See page 20 for details.	C: LC063 Optimal control  <b>Apel</b>  See page 20 for details.	D: LC064 Time-Domain BIEs  <b>Banjai and Sauter</b>  See page 20 for details.	E: LC065 Isogeometric analysis  <b>Beirão da Veiga and Buffa</b>  See page 20 for details.
TH 0835	Large scale ... <b>Geveler</b>	High order fem <b>Cecot</b>	Optimal control <b>Neitzel</b>	Time-Domain BIEs <b>Sayas</b>	Isogeometric analysis <b>Bercovier</b>
TH 0900	Large scale ... <b>Jimack</b>	High order fem <b>Ledger</b>	Optimal control <b>Meidner</b>	Time-Domain BIEs <b>Sauter</b>	Isogeometric analysis <b>Gahalaut</b>
TH 0925	Large scale ... <b>Neic</b>	High order fem <b>Niemi</b>	Optimal control <b>Leykehman</b>	Time-Domain BIEs <b>Banjai</b>	Isogeometric analysis <b>Tomar</b>
TH 0950	Large scale ... <b>Kanschat</b>	High order fem <b>Wang</b>	Optimal control <b>Mateos</b>	Time-Domain BIEs <b>Veit</b>	Isogeometric analysis <b>Vázquez</b>
TH 1015	Large scale ... <b>Schöberl</b>	High order fem <b>Zdunek</b>	Optimal control <b>Deckelnick</b>	Time-Domain BIEs <b>Maischak</b>	Isogeometric analysis <b>Evans</b>

Time	F: LC066 Reaction-Transport  <b>Ryan and Vermolen</b>  See page 20 for details.	G: LC067 Nonlinear Spaces  <b>Grohs and Sander</b>  See page 21 for details.	H: LC068 Convection-Dom  <b>John, Knobloch and Novo</b>  See page 21 for details.	I: H001 Analysis ... bem  <b>Schanz and Steinbach</b>  See page 21 for details.
TH 0835	Reaction-Transport <b>Javierre</b>	Nonlinear Spaces <b>Hardering</b>	Convection-Dom <b>Codina</b>	Analysis ... bem <b>Heuer</b>
TH 0900	Reaction-Transport <b>Koppenol</b>	Nonlinear Spaces <b>Grohs</b>	Convection-Dom <b>García-Archilla</b>	Analysis ... bem <b>Of</b>
TH 0925	Reaction-Transport <b>Schugart</b>	Nonlinear Spaces <b>Raisch</b>	Convection-Dom <b>Knobloch</b>	Analysis ... bem <b>Führer</b>
TH 0950	Reaction-Transport <b>Vermolen</b>	Nonlinear Spaces <b>Weinmann</b>	Convection-Dom <b>Franz</b>	Analysis ... bem <b>Melenk</b>
TH 1015	Reaction-Transport <b>Vignon- Clementel</b>	Nonlinear Spaces <b>Yu</b>	Convection-Dom <b>Ganesan</b>	Analysis ... bem <b>Betcke</b>

THU 1040–1110: COFFEE in H002 and H004 (Howell building)

Chair: **David Silvester**

THU 1110–1155 in H001

What is the Largest Finite Element System that can be Solved Today?

**Ulrich Ruede**

THU 1155–1240 in H001

A stochastic collocation approach to PDE-constrained optimization for random data identification problems

**Max Gunzburger**

THU 1240–1400: LUNCH in the Newton and Darwin Rooms in the Hamilton Centre

Time	A: LC061 DG, fluid flows  <b>Cesmelioglu and Rhebergen</b>  See page 21 for details.	B: LC062 High order fem  <b>Gopalakrishnan and Schöberl</b>  See page 21 for details.	C: LC063 Optimal control  <b>Apel</b>  See page 22 for details.	D: LC064 Time-Domain BIEs  <b>Banjai and Sauter</b>  See page 22 for details. and Parallel session talks	E: LC065 Isogeometric analysis  <b>Beirão da Veiga and Buffa</b>  See page 22 for details.
TH 1400	DG, fluid flows <b>Cesmelioglu</b>	High order fem <b>Warburton</b>	Optimal control <b>Beuchler</b>	Time-Domain BIEs <b>van 't Wout</b>	Isogeometric analysis <b>Abgrall</b>
TH 1425	DG, fluid flows <b>Tian</b>	High order fem <b>Schöberl</b>	Optimal control <b>Steinbach</b>	Parallel session <b>Duncan</b>	Isogeometric analysis <b>Collier</b>
TH 1450	DG, fluid flows <b>Kubatko</b>	High order fem <b>Park</b>	Optimal control <b>Flaig</b>	Parallel session <b>Howarth</b>	Isogeometric analysis <b>Mantzaflaris</b>
TH 1515	DG, fluid flows <b>Vassilev</b>	High order fem <b>Neumüller</b>	Optimal control <b>Chrysafinos</b>	Parallel session <b>Mahmood</b>	Isogeometric analysis <b>Simpson</b>

Time	F: LC066 Reaction-Transport  <b>Ryan and Vermolen</b>  See page 22 for details. and Superconvergence, DG  <b>Krivodonova and Ryan</b>	G: LC067 Fully nonlinear  <b>Brenner, Böhmer and Neilan</b>  See page 22 for details.	H: LC068 Convection-Dom  <b>John, Knobloch and Novo</b>  See page 23 for details.	I: H001
TH 1400	Reaction-Transport <b>Madzvamuse</b>	Fully nonlinear <b>Awanou</b>	Convection-Dom <b>Matthies</b>	
TH 1425	Superconvergence, DG <b>Mustapha</b>	Fully nonlinear <b>Davydov</b>	Convection-Dom <b>Dallmann</b>	
TH 1450	Superconvergence, DG <b>Izsák</b>	Fully nonlinear <b>Böhmer</b>	Convection-Dom <b>Schieweck</b>	
TH 1515	Superconvergence, DG <b>Ryan</b>	Fully nonlinear <b>Feng</b>	Convection-Dom <b>Lube</b>	



THU 1540–1610: TEA in H002 and H004 (Howell building)

Time	A: LC061 Superconvergence, DG  <b>Krivodonova and Ryan</b>  See page 23 for details.	B: LC062 Integrodifferential ...  <b>Kostin and Saurin</b>  See page 23 for details.	C: LC063 Stochastic FEs  <b>Gunzburger</b>  See page 23 for details.	D: LC064 Time-Harmonic  <b>Hannukainen and Nannen</b>  See page 23 for details.	E: LC065 Isogeometric analysis  <b>Beirão da Veiga and Buffa</b>  See page 23 for details.
TH 1610	Superconvergence, DG <b>Krivodonova</b>	Integrodifferential ... <b>Saurin</b>	Stochastic FEs <b>Ern</b>	Time-Harmonic <b>Pasciak</b>	Isogeometric analysis <b>Sangalli</b>
TH 1635	Superconvergence, DG <b>Qiu</b>	Integrodifferential ... <b>Kostin</b>	Stochastic FEs <b>Phipps</b>	Time-Harmonic <b>Liertzer</b>	Isogeometric analysis <b>Speleers</b>
TH 1700	Superconvergence, DG <b>Li</b>	Integrodifferential ... <b>Aschemann</b>	Stochastic FEs <b>Bespalov</b>	Time-Harmonic <b>Nannen</b>	Isogeometric analysis <b>Takacs</b>
TH 1725	Superconvergence, DG <b>Kirby</b>	Integrodifferential ... <b>Rauh</b>	Stochastic FEs <b>Charrier</b>	Time-Harmonic <b>Langdon</b>	Isogeometric analysis <b>Vuong</b>
TH 1750			Stochastic FEs <b>Kunoth</b>	Time-Harmonic <b>Hewett</b>	Isogeometric analysis <b>Manni</b>

Time	F: LC066 Parallel session  <b>Dostal</b>  See page 24 for details.	G: LC067 Fully nonlinear  <b>Brenner, Böhmer and Neilan</b>  See page 24 for details. and Multiphysics Probs  <b>Heuer and Meddahi</b>	H: LC068 Convection-Dom  <b>John, Knobloch and Novo</b>  See page 24 for details.	I: H001
TH 1610	Parallel session <b>Devloo</b>	Fully nonlinear <b>Jensen</b>	Convection-Dom <b>Barrenechea</b>	
TH 1635	Parallel session <b>Abdul-Rahman</b>	Fully nonlinear <b>Neilan</b>	Convection-Dom <b>Bause</b>	
TH 1700	Parallel session <b>Segeth</b>	Fully nonlinear <b>Pryer</b>	Convection-Dom <b>Si</b>	
TH 1725	Parallel session <b>Selgas</b>	Multiphysics Probs <b>Bürger</b>	Convection-Dom <b>Novo</b>	
TH 1750	Parallel session <b>Valdman</b>		Convection-Dom <b>Frutos</b>	

THU 1900: Pre-Dinner Drinks, Mead and Cavendish rooms

THU 1930: Conference dinner

THU 1900–2300, Cash bar in the Hamilton Centre

Time	A: LC061 Optimal control  <b>Apel</b>  See page 24 for details.	B: LC062 Analysis ... bem  <b>Schanz and Steinbach</b>  See page 24 for details.	C: LC063 Stochastic FEs  <b>Gunzburger</b>  See page 24 for details.	D: LC064 Time-Harmonic  <b>Hannukainen and Nannen</b>  See page 25 for details.	E: LC065 Adaptive modelling  <b>Bauman and van der Zee</b>  See page 25 for details.
FR 0835	Optimal control <b>Sung</b>	Analysis ... bem <b>Rjasanow</b>	Stochastic FEs <b>Larsson</b>	Time-Harmonic <b>Groth</b>	Adaptive modelling <b>Bai</b>
FR 0900	Optimal control <b>Nicaise</b>	Analysis ... bem <b>Sellier</b>	Stochastic FEs <b>Schillings</b>	Time-Harmonic <b>Spence</b>	Adaptive modelling <b>Bauman</b>
FR 0925	Optimal control <b>Nataraj</b>	Analysis ... bem <b>Zapletal</b>	Stochastic FEs <b>Teckentrup</b>	Time-Harmonic <b>Lahaye</b>	Adaptive modelling <b>Carey</b>
FR 0950	Optimal control <b>Wollner</b>	Analysis ... bem <b>Faustmann</b>		Time-Harmonic <b>Hannukainen</b>	Adaptive modelling <b>Ern</b>

Time	F: LC066 DG, fluid flows  <b>Cesmelioglu and Rhebergen</b>  See page 25 for details.	G: LC067 Innovative ... PDEs  <b>Cangiani and Manzini</b>  See page 25 for details.	H: LC068 Convection-Dom  <b>John, Knobloch and Novo</b>  See page 25 for details.	I: H001 Boundary-Domain IEs  <b>Mikhailov</b>  See page 25 for details.
FR 0835	DG, fluid flows <b>Rhebergen</b>	Innovative ... PDEs <b>Manzini</b>	Convection-Dom <b>Tobiska</b>	Boundary-Domain IEs <b>Natroshevili</b>
FR 0900	DG, fluid flows <b>Medvedeva</b>	Innovative ... PDEs <b>Svyatskiy</b>	Convection-Dom <b>Burman</b>	Boundary-Domain IEs <b>Chkadua</b>
FR 0925	DG, fluid flows <b>Qiu</b>	Innovative ... PDEs <b>Russo</b>	Convection-Dom <b>John</b>	Boundary-Domain IEs <b>Grzhibovskis</b>
FR 0950			Convection-Dom <b>Arndt</b>	Boundary-Domain IEs <b>Mikhailov</b>

FRI 1015–1045: COFFEE in H002 and H004 (Howell building)

Chair: **Ernst Stephan**

FRI 1045–1130 in H001

The inf-sup constant of the divergence

**Martin Costabel**

Time	A: LC061 Optimal control  <b>Apel</b>  See page 26 for details.	B: LC062 Analysis ... bem  <b>Schanz and Steinbach</b>  See page 26 for details.	C: LC063	D: LC064	E: LC065 Adaptive modelling  <b>Bauman and van der Zee</b>  See page 26 for details.
FR 1140	Optimal control <b>Vexler</b>	Analysis ... bem <b>Lukáš</b>			Adaptive modelling <b>Veesser</b>
FR 1205	Optimal control <b>Rösch</b>	Analysis ... bem <b>Karkulik</b>			Adaptive modelling <b>van der Zee</b>
FR 1230		Analysis ... bem <b>Feischl</b>			

Time	F: LC066	G: LC067	H: LC068 Convection-Dom  <b>John, Knobloch and Novo</b>  See page 26 for details.	I: H001
FR 1140			Convection-Dom <b>Linke</b>	
FR 1205				
FR 1230				

FRI 1255–1400: LUNCH in the Newton and Darwin Rooms in the Hamilton Centre

# Titles of talks in each session

## Titles of invited talks

M02000,H001 J. Tinsley Oden. The Emergence of Predictive Computational Science: Validation and Verification of Computational Models of Complex Physical Systems.  
TU0945,H001 Peter Monk. Time Domain Integral Equations for Computational Electromagnetism.  
TU1100,H001 Ragnar Winther. Double complexes and local bounded cochain projections.  
TU1145,H001 Stéphane P.A. Bordas. Advances in reducing the mesh burden in computational mechanics applications to fracture and surgical simulation.  
TU1810,H001 Clint N Dawson. Finite Element Methods in Coastal Ocean Modeling: Successes and Challenges.  
WE1110,H001 Annalisa Buffa. Fields, control fields, and commuting diagrams in isogeometric analysis.  
WE1155,H001 Charles M. Elliott. Finite element methods for surface PDEs.  
WE1810,H001 Susanne C. Brenner. Forty years of the Crouzeix-Raviart element.  
TH1110,H001 Ulrich Ruede. What is the Largest Finite Element System that can be Solved Today?.  
TH1155,H001 Max Gunzburger. A stochastic collocation approach to PDE-constrained optimization for random data identification problems.  
FR1045,H001 Martin Costabel. The inf-sup constant of the divergence.

## Tu1400–1540, LC061: Mini-symp: Numerical Methods for Parabolic Equations

Tu1400 Emmanuil H. Georgoulis. On adaptive discontinuous Galerkin methods for parabolic problems.  
Tu1425 Bärbel Janssen. The  $hp$ -adaptive Galerkin time stepping method for nonlinear differential equations with finite time blow up.  
Tu1450 Irene Kyza. A posteriori error analysis for dG in time ALE formulations.  
Tu1515 Omar Lakkis. Maximum-norm strong approximation rates for noisy reaction-diffusion equations.

## Tu1400–1540, LC062: Mini-symp: High order finite element methods: A mini symposium celebrating Leszek Demkowicz's contributions

Tu1400 Jens Markus Melenk.  $hp$ -FEM for singular perturbations with multiple scales.  
Tu1425 Annalisa Buffa. Commuting Quasi interpolants for T-Spline Spaces.  
Tu1450 Nilima Nigam. Pyramidal finite elements.  
Tu1515 Alexey Chernov. Improved stability estimates for the  $hp$ -Raviart-Thomas projection operator on quadrilaterals.

## Tu1400–1540, LC063: Mini-symp: New advances in a posteriori error estimation

Tu1400 Dirk Praetorius. Quasi-optimal AFEM for non-symmetric operators.  
Tu1425 Richard Rankin. Computable error bounds for finite element approximation on non-polygonal domains.  
Tu1450 Sergey Repin. On Mathematical Methods Generating Fully Reliable A Posteriori Estimates for Nonlinear Boundary Value Problems.  
Tu1515 Kunibert G. Siebert. Adaptive finite elements for PDE constrained optimal control problems.

## Tu1425–1605, LC064: Mini-symp: Finite Element Methods for Multiphysics Problems

Tu1425 Salim Meddahi. A decoupled preconditioning technique for a mixed Stokes-Darcy model.  
Tu1450 Michael Neilan. Conforming and divergence-free Stokes elements.  
Tu1515 Ricardo Oyarzúa. An exactly divergence-free finite element method for a generalized Boussinesq problem.

## **Tu1400–1540, LC065: Mini-symp: Non-Standard Finite Elements and Solvers in Solid Mechanics**

Tu1400 Oliver Sander. Geodesic Finite Elements.

Tu1425 Sabrina Gippert. A new coarse space for FETI-DP in the context of almost incompressible elasticity.

Tu1450 Oliver Rheinbach. An Approach to Adaptive Coarse Spaces in FETI-DP Methods.

Tu1515 Axel Klawonn. Nonlinear FETI-DP and BDDC Methods.

## **Tu1400–1540, LC066: Mini-symp: Mathematical and statistical modeling in biology**

Tu1400 Dwij Mehta. Acoustic Localisation of Coronary Artery Stenosis: Wave Propagation in Soft Tissue Mimicking Gel.

Tu1425 Carola Kruse. High Order Space-Time Finite Element Schemes for the Dynamics of Viscoelastic Soft Tissue.

Tu1450 Zackary Kenz. Modeling and inverse problem considerations for a viscoelastic tissue model.

Tu1515 Daniel Gerecht. Efficient numerical methods for coupled PDE-ODE systems: An application in intercellular signaling.

## **Tu1400–1540, LC067: Mini-symp: Elliptic Eigenvalue Problems: Recent Developments in Theory and Computation**

Tu1400 Dietmar Gallistl. Adaptive nonconforming Crouzeix-Raviart FEM for eigenvalue problems.

Tu1425 Joscha Gedicke. Guaranteed lower bounds for eigenvalues.

Tu1450 Xuefeng Liu. High precision verified eigenvalue estimation for elliptic differential operator over polygonal domain of arbitrary shape.

Tu1515 Luka Grubišić. Kato's square root theorem as a basis for relative estimation theory of eigenvalue approximations.

## **Tu1400–1540, LC068: Mini-symp: Sensitivity analysis and optimization for fluid-structure interaction problems**

Tu1400 Thomas Richter. Towards optimal control of large deformation FSI problems including contact and topology change .

Tu1425 Thomas Wick. Parameter Estimation in Fluid-Structure Interaction and Subsurface Flows.

Tu1450 Winnifried Wollner. Calculation of sensitivities for fluid-structure interactions.

## **Tu1400–1540, H001: Mini-symp: Low Rank Tensor Based Numerical Methods**

Tu1400 Jonas Ballani. Black Box Approximation Strategies in the Hierarchical Tensor Format.

Tu1425 Markus Bachmayr. Adaptive methods based on tensor representations of coefficient sequences and their complexity analysis.

Tu1450 Dmitry V. Savostyanov. Alternating minimal energy methods for linear systems in higher dimensions. Part I: SPD systems.

Tu1515 Sergey V. Dolgov. Alternating minimal energy methods for linear systems in higher dimensions. Part II: Faster algorithm and application to nonsymmetric systems.

## **Tu1610–1750, LC061: Mini-symp: Numerical Methods for Parabolic Equations**

Tu1610 Buyang Li. A new approach to error analysis of fully discrete finite element methods for nonlinear parabolic equations.

Tu1635 Ilaria Perugia. Discontinuous Galerkin Approximation of porous Fisher-Kolmogorov Equations.

Tu1700 Charalambos Makridakis. Energy conservative/dissipative approximations of nonlinear evolution problems.

## **Tu1610–1750, LC062: Mini-symp: High order finite element methods: A mini symposium celebrating Leszek Demkowicz’s contributions**

Tu1610 Paul Houston. Two-Grid  $hp$ -Adaptive Discontinuous Galerkin Finite Element Methods for Second-Order Quasilinear Elliptic PDEs.

Tu1635 Thomas Hagstrom. Adaptive and hybridized Hermite methods for initial-boundary value problems.

Tu1700 Hieu Nguyen.  $hp$  Adaptive Finite Element Methods Based on Derivatives Recovery and Superconvergence.

Tu1725 Jay Gopalakrishnan. *A posteriori* error control for DPG methods.

## **Tu1610–1750, LC063: Mini-symp: New advances in a posteriori error estimation**

Tu1610 Lars Diening. Instance optimality for the maximum strategy.

Tu1635 Tomáš Vejchodský. Guaranteed and robust error bounds for singularly perturbed problems in arbitrary dimension.

Tu1700 Martin Vohralík. A framework for robust a posteriori error control in unsteady nonlinear advection-diffusion problems.

Tu1725 Omar Lakkis. A posteriori error estimates for the wave equation.

## **Tu1610–1750, LC064: Mini-symp: Finite Element Methods for Multiphysics Problems**

Tu1610 Thanh Tran. A linear finite element scheme for the stochastic Landau–Lifshitz–Gilbert equation.

Tu1635 Francisco-Javier Sayas. Double layer potential boundary conditions for the Hybridizable Discontinuous Galerkin method.

Tu1700 Ernst P. Stephan.  $hp$ -Time-Discontinuous Galerkin for Pricing American Put Options.

## **Tu1610–1750, LC065: Mini-symp: Non-Standard Finite Elements and Solvers in Solid Mechanics**

Tu1610 Bernd Simeon. On isogeometric finite elements in solid mechanics and vibrational analysis.

Tu1635 Benjamin Müller. LSFEM for geometrically and physically nonlinear elasticity problems.

Tu1700 Alexander Schwarz. Aspects on mixed least-squares finite elements for hyperelastic problems.

Tu1725 Gerhard Starke. Momentum Balance in First-Order System Finite Element Methods for Elasticity.

## **Tu1610–1750, LC066: Mini-symp: Innovative compatible and mimetic discretizations for partial differential equations**

Tu1610 Frédéric Valentin. MHM Method for Advective-Reactive Dominated Models.

Tu1635 Daniel Elfverson. Convection dominated discontinuous Galerkin multiscale method.

Tu1700 Marco Verani. A Two-Level Method for Mimetic Finite Difference Discretizations of Elliptic Problems.

## **Tu1610–1750, LC067: Mini-symp: Elliptic Eigenvalue Problems: Recent Developments in Theory and Computation**

Tu1610 Jeffrey S Owall. Auxiliary subspace error estimation for high-order finite element eigenvalue approximations.

Tu1635 Stefan A. Sauter. Finite Elements for Elliptic Eigenvalue Problems in the Preasymptotic Regime.

Tu1725 Christian Engström. Finite element analysis of a non-self-adjoint quadratic eigenvalue problem.

## **Tu1610–1750, LC068: Parallel session**

Tu1610 Václav Kučera. Error estimates for nonlinear convective and singularly perturbed problems in finite element methods.

Tu1635 Matthias Möller. On the numerical treatment of essential boundary conditions within positivity-preserving finite element methods for convection-dominated transport problems.

Tu1700 Julia Niemeyer. Algebraic Flux Correction in a Partial Differential-Algebraic Framework.

Tu1725 B. V. Rathish Kumar. A uniform convergence analysis of three-step Taylor Galerkin finite element monotone iterative domain-decomposition scheme for singularly perturbed problems.

## **Tu1610–1750, H001: Mini-symp: Low Rank Tensor Based Numerical Methods**

Tu1610 Venera Khoromskaia. Hartree-Fock eigenvalue solver using tensor-structured two-electron integrals .

Tu1635 Boris Khoromskij. Super-fast solvers for PDEs discretized in the quantized tensor spaces.

Tu1700 Vladimir Kazeev. *hp*-DG time stepping for high-dimensional evolution problems with low-rank tensor structure.

## **We0835–1040, LC061: Mini-symp: Computational challenges in Discontinuous Galerkin methods**

We0835 Blanca Ayuso de Dios. Energy stability for discontinuous Galerkin approximation of a problem in elastodynamics.

We0900 Eric Chung. Staggered discontinuous Galerkin methods for Maxwell's equations.

We0925 Andreas Dedner. Efficient Discontinuous Galerkin method for meteorological applications.

We0950 Xiaobing Feng. Discontinuous Galerkin Methods for Phase Field Models of Moving Interface Problems.

We1015 Thirupathi Gudi. On the convergence of adaptive discontinuous Galerkin methods.

## **We0835–1040, LC062: Mini-symp: High order finite element methods: A mini symposium celebrating Leszek Demkowicz's contributions**

We0835 Leszek Demkowicz. DPG Method for Wave Propagation Problems, A Better Understanding.

We0900 Ignacio Muga. Dispersive and Dissipative Errors in the DPG Method with Scaled Norms for Helmholtz Equation.

We0925 Mark Ainsworth. High Order FEM for Wave Propagation: Like it or lump it.

We0950 Hongrui Wang. B-spline FEM approximation of wave equation.

We1015 Jichun Li. Recent advances in finite element simulation of electromagnetic wave propagation in metamaterials.

## **We0835–1040, LC063: Mini-symp: Finite elements for problems with singularities**

We0835 Thomas Apel. Anisotropic mesh refinement in polyhedral domains: error estimates with data in  $L^2(\Omega)$ .

We0900 Natalia Kopteva. Linear Finite Elements may be only First-Order Pointwise Accurate on Anisotropic Triangulations.

We0925 Christos Xenophontos. *hp* finite element methods for singularly perturbed transmission problems.

We0950 Thomas P. Wihler. *hp*-Adaptive FEM Based on Continuous Sobolev Embeddings.

We1015 María Gabriela Armentano. Eigenvalue problems in a non-Lipschitz domain.

## **We0835–1040, LC064: Mini-symp: Numerical methods for contact and other geometrically non-linear problems**

We0835 Zdeněk Dostál. Scalable algorithms and conditioning of constraints arising from variationally consistent discretization of contact problems.

We0900 P. Beremlijski. Parallel solution of contact shape optimization problems with Coulomb friction based on domain decomposition.

We0925 Lukáš Pospíšil. Optimal active-set and spectral algorithms for the solution of 3D contact problems with anisotropic friction.

We0950 Rolf Krause. Parallel Level Set Methods for Large Deformation Contact Problems.

We1015 Jonathan Youett. A discretization for dynamic large deformation contact problems of nonlinear hyperelastic continua.

## **We0835–1040, LC065: Mini-symp: Large scale computing with applications**

We0835 Olaf Ippisch. Massive parallel simulation of water and solute transport in porous media.

We0900 Eike Mueller. Fast and Scalable Elliptic Solvers for Anisotropic Problems in Geophysical Modelling.

We0925 Tobias Neckel. Parallel Incompressible Flow Simulations using Divergence-Free Finite Elements.

We0950 Martin Berzins. Adaptive Asynchronous Parallel Calculations at Petascale using Uintah.

We1015 Georg Stadler. Scalable solvers for elliptic problems discretized by adaptive high-order finite elements.

## **We0835–1040, LC066: Mini-symp: PDEs on Surfaces**

We0835 Klaus Deckelnick. Unfitted finite element methods using bulk meshes for surface partial differential equations.

We0900 Pravin Madhavan. Discontinuous Galerkin methods for surface PDEs.

We0925 Andriy Sokolov. Numerical Simulations of Chemotaxis-Driven PDEs on surfaces.

We0950 Vanessa Styles. An ALE ESFEM for solving PDEs on evolving surfaces.

We1015 Anotida Madzvamuse. Pattern formation in morphogenesis on evolving biological surfaces: Theory, numerics and applications.

## **We0835–1040, LC067: Mini-symp: Elliptic Eigenvalue Problems: Recent Developments in Theory and Computation**

We0835 David Mora. Spectral analysis for a mixed finite element formulation of the elasticity equations.

We0900 Agnieszka Miedlar. Adaptive path-following method for nonlinear PDE eigenvalue problems.

We0925 Peter Gerds. Solving an elliptic eigenvalue problem via automated multi-level sub-structuring and hierarchical matrices.

We0950 Qiang Ye. Accurate Computations of Matrix Eigenvalues with Applications to Differential Operators.

We1015 Monique Dauge. Computation of ground states of Schrödinger operator with large magnetic fields.

## **We0835–1040, LC068: Mini-symp: Numerical modeling of flow in subsurface reservoirs**

We0835 Andrés Arrarás. Multipoint flux domain decomposition time-splitting methods on general grids.

We0900 Ahmed H. Elsheikh. Efficient Bayesian uncertainty quantification of subsurface flow models using nested sampling and sparse polynomial chaos surrogates.

We0925 Christian Engwer. High-order cut-cell techniques for numerical upscaling in porous media.

We0950 Patrick E. Farrell. Adjoints of finite element models.

We1015 Benjamin Ganis. A global Jacobian method for mortar discretizations of nonlinear porous media flows.



## **We0835–1040, H001: Mini-symp: Computational Micromagnetics**

We0835 Claas Abert. magnum.fe: A micromagnetic finite-element code based on FEniCS.

We0900 Florian Bruckner. Multiscale simulation of magnetic nanostructures.

We0925 Gino Hrkac. Finite element and boundary element method in magnetic spin transport and magnetic hybrid structures.

We0950 Dirk Praetorius. Coupling and numerical integration of LLG.

We1015 Karel Van Bockstal. A nonlocal parabolic and hyperbolic model for type-I superconductors.

## **We1400–1540, LC061: Mini-symp: Computational challenges in Discontinuous Galerkin methods**

We1400 Emmanuil H. Georgoulis. Discontinuous Galerkin methods for non-linear interface problems.

We1425 Asieh Parsania. Generalized DG-Methods for highly indefinite Helmholtz problems.

We1450 Sander Rhebergen. HP-Multigrid as Smoother algorithm for higher order discontinuous Galerkin discretizations of advection-dominated flows.

We1515 Beatrice Riviere. Convergence of High Order Methods for the Miscible Displacement Problem.

## **We1400–1540, LC062: Mini-symp: High order finite element methods: A mini symposium celebrating Leszek Demkowicz's contributions**

We1400 A. K. Patra. Godunov SPH Methods for Simulating Complex Flows with Free Surfaces Over Rapidly Changing Natural Terrains.

We1425 Waldemar Rachowicz. Application of the adaptive finite element method to numerical simulations of arteries.

We1450 Nathan V. Roberts. Discontinuous Petrov-Galerkin Methods for Incompressible Flow: Stokes and Navier-Stokes.

We1515 Tan Bui-Thanh. A PDE-constrained optimization approach to the discontinuous Petrov-Galerkin method with a trust region inexact Newton-CG solver.

## **We1400–1540, LC063: Mini-symp: Finite elements for problems with singularities**

We1400 Eugenie Hunsicker. Mapping and regularity results for Schroedinger operators with inverse square potentials.

We1425 Victor Nistor. Finite Element Method for Schroedinger operators with inverse square potentials.

We1450 Patrick Ciarlet. Strong convergence for Gauss' law with edge elements.

## **We1400–1540, LC064: Mini-symp: Numerical methods for contact and other geometrically non-linear problems**

We1400 Joachim Gwinner. BE/FE Approximation of higher order for nonsmooth problems, effective quadrature, and time discretization by implicit Runge-Kutta methods.

We1425 Alexey Chernov. Convergence analysis for multilevel variance estimators in Multilevel Monte Carlo Methods and application for random obstacle problems.

We1450 Alexandros Markopoulos. Parallel solution of contact problems based on TFETI.

We1515 Martin Čermák. Parallel solution of elasto-plastic problems.

## **We1400–1540, LC065: Mini-symp: Large scale computing with applications**

We1400 Rolf Krause. Patching Adaptivity for Large Scale Problems - A New Lightweight Adaptive Scheme and its Application in Computational Electrocardiology.

We1425 Kunibert G. Siebert. Analysis of adaptive space-time finite elements for parabolic problems.

We1450 Carsten Burstedde. Accelerator-friendly parallel adaptive mesh refinement.

We1515 Satyendra Tomar. Algebraic multilevel preconditioning in  $H(\text{curl})$  and  $H(\text{div})$  space.

## **We1400–1540, LC066: Mini-symp: Innovative compatible and mimetic discretizations for partial differential equations**

We1400 Panagiotis Chatzipantelidis. Nonsmooth initial data error estimates for the finite volume element method for a parabolic problem.

We1425 Andrea Cangiani. Basic Principles of Virtual Element Methods.

We1450 L. Beirão da Veiga. A Virtual Element Method with high regularity.

We1515 Andrea Moiola. Trefftz-DG methods for wave propagation: *hp*-version and exponential convergence.

## **We1400–1540, LC067: Mini-symp: Global and local error estimates for problems with singularities or low regularity**

We1400 Alan Demlow. Optimality of an adaptive FEM for controlling local energy errors.

We1425 Thirupathi Gudi. Error analysis of discontinuous Galerkin methods for the Stokes problem under minimal regularity.

We1450 Dmitriy Leykekhman. Optimal error estimates for the parabolic problem in  $L^\infty(\Omega; L^2([0, T]))$  norm.

We1515 Michael Neilan. Localized pointwise estimates for the fully nonlinear Monge-Ampère equation.

## **We1400–1540, LC068: Mini-symp: Numerical modeling of flow in subsurface reservoirs**

We1400 Christian Goll. Pressure jump interface law for the Stokes-Darcy coupling: Confirmation by direct numerical simulations.

We1425 Gergina Pencheva. Modeling flow with nonplanar fractures.

We1450 Ali Q Raeini. Direct numerical simulation of two-phase flow at the pore scale.

We1515 Stefano Scialò. An optimization approach to large scale simulations of fluid flows in fractured media with finite elements on nonconforming grids.

## **We1400–1540, H001: Mini-symp: Analysis and applications of boundary element methods**

We1400 M. Ganesh. A reduced basis boundary element method for a class of parameterized electromagnetic scattering model.

We1425 Beatrice Bugert. A recursive integral equations approach for electromagnetic scattering by bi-periodic multilayer gratings.

We1450 Heiko Gimperlein. Retarded potential boundary integral equations for sound radiation in a half-space.

We1515 Gerhard Unger. Boundary Element Methods for Acoustic Resonance Problems.

## **We1610–1750, LC061: Mini-symp: Computational challenges in Discontinuous Galerkin methods**

We1610 Natasha Sharma. A cochain complex for interior penalty methods: error estimates and multigrid through differential relations.

We1635 Thomas P. Wihler. Mixed *hp*-DGFEM for Linear Elasticity in 3D.

## **We1610–1750, LC062: Mini-symp: High order finite element methods: A mini symposium celebrating Leszek Demkowicz's contributions**

We1610 Norbert Heuer. Discontinuous Galerkin *hp*-BEM with quasi-uniform meshes.

We1635 Harri Hakula. On *hp*-Boundary Layer Sequences.

We1700 Weifeng Qiu. and some applications .

We1725 Alexander Zlotnik. FEM with discrete transparent boundary conditions for the Cauchy problem for the Schrödinger equation on the whole axis.

## **We1610–1750, LC063: Mini-symp: Time-Domain Boundary Integral Equations**

- We1610 Daniel S. Weile. A hybrid approach to the time marching solution of Maxwell's equations.  
We1635 Penny J Davies. Convolution-in-time approximations of TDBIEs.  
We1700 Michael Messner. Solving the heat equation with a fast multipole Galerkin boundary element method.  
We1725 Johannes Tausch. BEM for Parabolic Phase Change Problems with Moving Interfaces.

## **We1610–1750, LC064: Mini-symp: Numerical methods for contact and other geometrically non-linear problems**

- We1610 Matthias Maischak. Error estimators for a partially clamped plate problem with boundary elements.  
We1635 Andreas Schröder. *hp*-adaptive FEM with biorthogonal basis functions for elliptic obstacle problems.  
We1700 Ernst P. Stephan. High order BEM for frictional contact problems.  
We1725 Guillaume Drouet. Local averaging of contact with non matching meshes.

## **We1610–1750, LC065: Parallel session**

- We1610 Francesca Gardini. Local mass conservation of Stokes finite elements.  
We1635 Naveed Ahmed. Discontinuous Galerkin time stepping schemes combined with local projection stabilization methods applied to transient Stokes problems: stability and convergence.  
We1700 Fotini Karakatsani. A posteriori error analysis for time-dependent Stokes equations.  
We1725 Ivana Šebestová. Estimation of discretization and algebraic error via quasi-equilibrated fluxes for discontinuous Galerkin methods.

## **We1610–1750, LC066: Parallel session**

- We1610 Marco Artina. Anisotropic mesh adaptation for the Ambrosio-Tortorelli model: application to quasi-static crack propagation .  
We1635 Karoline Köhler. Non-Conforming Finite Element Methods for the Obstacle Problem.  
We1700 Eun-Hee Park. A domain decomposition method with an optimized penalty parameter.  
We1725 René Schneider. With a hierarchical error indicator toward anisotropic mesh refinement.

## **We1610–1750, LC067: Mini-symp: Global and local error estimates for problems with singularities or low regularity**

- We1610 Jeffrey S Ovall. A posteriori estimation of hierarchical type for a Schrödinger operator with inverse square potential.  
We1635 Francesca Tantardini. Robust Localization of the Best Error with Finite Elements in the Reaction-Diffusion Norm.

## **We1610–1750, LC068: Mini-symp: Numerical modeling of flow in subsurface reservoirs**

- We1610 Mary F. Wheeler. Computational Environments for Energy and Environmental Modeling in Porous Media.  
We1635 Ivan Yotov. Multiscale domain decomposition methods for porous media flow coupled with geomechanics.  
We1700 Peyman Mostaghimi. Multiphase flow through porous media: An adaptive control volume finite element method.

## **Th0835–1040, LC061: Mini-symp: Large scale computing with applications**

- Th0835 Markus Geveler. Total efficiency of core components in Finite Element frameworks.  
Th0900 Peter K. Jimack. Scalable Parallel Multilevel Solution of Elliptic Problems.  
Th0925 Aurel Neic. On Large-Scale Mechanics Simulations with the Parallel Toolbox.  
Th0950 Guido Kanschat. Thoughts on general purpose finite element libraries and hybrid programming.  
Th1015 Joachim Schöberl. Recent Developments in NGSolve for Distributed and Many-Core Parallel Computing.

## **Th0835–1040, LC062: Mini-symp: High order finite element methods: A mini symposium celebrating Leszek Demkowicz’s contributions**

Th0835 Witold Cecot. Application of the fully automatic *hp*-FEM to elastic-plastic problems.

Th0900 P.D. Ledger. Application of *hp* Finite Elements to the Accurate Computation of Polarisation Tensors for the Eddy Current Problem.

Th0925 Antti H. Niemi. Comparison of different finite element models and methods for the Girkmann Shell-Ring Problem.

Th0950 Jilu Wang. A new error analysis for Crank-Nicolson Galerkin FEMs for a generalized nonlinear Schrödinger equation.

Th1015 Adam Zdunek. A novel formulation for nearly inextensible and nearly incompressible finite hyperelasticity.

## **Th0835–1040, LC063: Mini-symp: A priori finite element error estimates in optimal control**

Th0835 Ira Neitzel. On discretized nonconvex elliptic optimal control problems with pointwise state constraints.

Th0900 Dominik Meidner. Optimal error estimates for finite element discretization of elliptic optimal control problems with finitely many pointwise state constraints.

Th0925 Dmitriy Leykekhman. A priori error estimates for parabolic optimal control problems with point controls.

Th0950 Mariano Mateos. Error estimates for Dirichlet control problems in polygonal domains.

Th1015 Klaus Deckelnick. Convergence and error analysis of a numerical method for the identification of matrix parameters in elliptic PDEs.

## **Th0835–1040, LC064: Mini-symp: Time-Domain Boundary Integral Equations**

Th0835 Francisco-Javier Sayas. A fully discrete Kirchhoff formula based on CQ and Galerkin BEM.

Th0900 Stefan A. Sauter. A Generalized Convolution Quadrature with Variable Time Stepping.

Th0925 Lehel Banjai. Time-domain FEM/BEM coupling.

Th0950 Alexander Veit. Adaptive methods for retarded boundary integral equations.

Th1015 Matthias Maischak. Quadrature Schemes and Adaptivity for 2D Time Domain Boundary Element Methods (TD-BEM).

## **Th0835–1040, LC065: Mini-symp: Foundations of isogeometric analysis**

Th0835 Michel Bercovier. Isogeometric Analysis and Non-matching Domain Decomposition Methods.

Th0900 Krishan Gahalaut. Algebraic Multilevel Preconditioning in Isogeometric Analysis.

Th0925 Satyendra Tomar. Guaranteed and sharp a-posteriori error estimates in isogeometric analysis.

Th0950 Rafael Vázquez. Implementation of high order impedance boundary conditions in isogeometric methods.

Th1015 John A. Evans. Mixed Isogeometric Collocation Methods for the Stokes Equations.

## **Th0835–1040, LC066: Mini-symp: Numerical Methods for Reaction-Transport Equations with Applications in Medicine**

Th0835 Etelvina Javierre. Finite element analysis of the mechano-chemical regulation of wound contraction in surgical wounds.

Th0900 D.C. Koppenol. Presentation of results of finite-element analyses on a two-dimensional mechanochemical model for dermal wound healing.

Th0925 Richard Schugart. Analyzing the Treatment of a Bacterial Infection in a Wound Using Oxygen Therapy.

Th0950 Fred J. Vermolen. A Semi-Stochastic Model for the Immune Response System.

Th1015 Irene Vignon-Clementel. Multiscale models of tumor cells: from in-vitro aggregates to in-vivo vascularized tumors.

## **Th0835–1040, LC067: Mini-symp: Finite Elements in Nonlinear Spaces**

Th0835 Hanne Hardering. Intrinsic discretization error bounds for geodesic finite element approximations of elliptic minimization problems.

Th0900 Philipp Grohs. B-Spline quasiinterpolation of manifold-valued data.

Th0925 Alexander Raisch. Simulation of Q-tensor fields with constant orientational order parameter in the theory of uniaxial nematic liquid crystals.

Th0950 Andreas Weinmann. On Potts and Blake-Zisserman functionals for manifold-valued data.

Th1015 Thomas Yu. Subdivision Method for the Canhan-Helfrich model.

## **Th0835–1040, LC068: Mini-symp: Finite Element Methods for Convection-Dominated Problems**

Th0835 Ramon Codina. A nonlinear dissipation to avoid local oscillations for the finite element approximation of the convection-diffusion equation.

Th0900 Bosco García-Archilla. Stabilization of convection-diffusion problems by Shishkin mesh simulation.

Th0925 Petr Knobloch. Investigations of a FEM-FCT scheme applied to a 1D model problem.

Th0950 Sebastian Franz. On Superconvergence for Higher-Order FEM in Convection-Diffusion Problems.

Th1015 Sashikumaar Ganesan. SUPG finite element method for PDEs in time-dependent domains.

## **Th0835–1040, H001: Mini-symp: Analysis and applications of boundary element methods**

Th0835 Norbert Heuer. Analysis of a non-symmetric coupling of Interior Penalty DG and BEM.

Th0900 Günther Of. On the Ellipticity of Coupled Finite Element and One-Equation Boundary Element Methods for Boundary Value Problems .

Th0925 Thomas Führer. One-equation FEM-BEM coupling for elasticity problems.

Th0950 Jens Markus Melenk. On the quasi-optimal convergence in FEM-BEM coupling .

Th1015 T. Betcke. The BEM++ boundary element library and applications.

## **Th1400–1540, LC061: Mini-symp: Discontinuous Galerkin methods in fluid flows**

Th1400 Aycil Cesmelioglu. Hybridizable Discontinuous Galerkin Methods for the incompressible Oseen and Navier-Stokes equations.

Th1425 Lulu Tian. A Local Discontinuous Galerkin Method for the Propagation of Phase Transition in Solids.

Th1450 Ethan Kubatko. Development and validation of a discontinuous Galerkin wave prediction model.

Th1515 Danail Vassilev. Coupling of Stokes and Darcy Flows using Discontinuous Galerkin and Mimetic Finite Difference Method.

## **Th1400–1540, LC062: Mini-symp: High order finite element methods: A mini symposium celebrating Leszek Demkowicz's contributions**

Th1400 T. Warburton. The Low-storage Curvilinear Discontinuous Galerkin Method.

Th1425 Joachim Schöberl. Preconditioning for high order Hybrid DG Methods.

Th1450 Eun-Jae Park. New Hybrid Discontinuous Galerkin Methods.

Th1515 Martin Neumüller. A space-time multigrid method for high order time discretizations.

### **Th1400–1540, LC063: Mini-symp: A priori finite element error estimates in optimal control**

Th1400 Sven Beuchler. Boundary concentrated FEM for optimal control problems.

Th1425 Olaf Steinbach. Optimal boundary control problems in energy spaces.

Th1450 Thomas G. Flaig. Crank-Nicolson and Störmer-Verlet discretization schemes for optimal control problems with parabolic partial differential equations.

Th1515 Konstantinos Chrysafinos. Error estimates for the velocity tracking problem using duality arguments.

### **Th1400–1540, LC064: Mini-symp: Time-Domain Boundary Integral Equations and mini-symp: Parallel**

Th1400 Elwin van 't Wout. Using space-time Galerkin stability theory to define a robust collocation method for time-domain boundary integral equations in electromagnetics.

Th1425 Dugald B Duncan. Condensing the spectral element method for time domain wave problems.

Th1450 C. J. Howarth. Enriching a Hankel Basis by Ray Tracing in the Ultra Weak Variational Formulation.

Th1515 M. Mahmood. The Partition of Unity Method for the 3D elastic wave problems in the high frequency domain .

### **Th1400–1540, LC065: Mini-symp: Foundations of isogeometric analysis**

Th1400 R. Abgrall. Towards isogeometric analysis for compressible flow problems and unstructured meshes.

Th1425 Nathan Collier. A Computational Cost Analysis of Isogeometric Analysis.

Th1450 Angelos Mantzaflaris. Efficient assembly method for isogeometric discretizations.

Th1515 Robert N. Simpson. Comparison of boundary element method discretisation technologies for acoustic analysis.

### **Th1400–1540, LC066: Mini-symp: Numerical Methods for Reaction-Transport Equations with Applications in Medicine and mini-symp: Superconvergence in DG: analysis and recovery**

Th1400 Anotida Madzvamuse. Mathematical modelling and numerical simulations of actin dynamics in the eukaryotic cell.

Th1425 Kassem Mustapha. Superconvergence of a HDG method for fractional diffusion problems.

Th1450 Ferenc Izsák. Energy norm error estimation for averaged discontinuous Galerkin methods in one space dimension.

Th1515 Jennifer K. Ryan. Post-processing discontinuous Galerkin solutions to Volterra integro-differential equations: Analysis and Simulations.

### **Th1400–1540, LC067: Mini-symp: Numerical methods for fully nonlinear elliptic equations**

Th1400 Gerard Awanou. Pseudo transient continuation and time marching methods for Monge-Ampère type Equations.

Th1425 Oleg Davydov. Numerical Solution of Monge-Ampère Equation on Domains Bounded by Piecewise Conics.

Th1450 Klaus Böhmer. General full discretizations for center manifolds, here for fully nonlinear equations and FEMs .

Th1515 Xiaobing Feng. Discontinuous Galerkin Finite Element Differential Calculus and Applications.

## **Th1400–1540, LC068: Mini-symp: Finite Element Methods for Convection-Dominated Problems**

Th1400 Gunar Matthies. A two-level local projection stabilisation on uniformly refined triangular meshes.

Th1425 Helene Dallmann. Anisotropic Local Projection Stabilization in Streamline and Crosswind Directions.

Th1450 Friedhelm Schieweck. A Flux-Corrected Transport method based on local projection stabilization for non-stationary transport problems.

Th1515 Gert Lube. A local projection stabilization method for finite element approximation of a magnetohydrodynamic model.

## **Th1610–1815, LC061: Mini-symp: Superconvergence in DG: analysis and recovery**

Th1610 Lilia Krivodonova. Error Estimation for the Discontinuous Galerkin Method Applied to Hyperbolic Conservation Laws.

Th1635 Jing-Mei Qiu. Galerkin Method with Superconvergence .

Th1700 Xiaozhou Li. Computationally Efficient Boundary Filtering Using Smoothness-Increasing Accuracy-Conserving (SIAC) Methods.

Th1725 Robert M. Kirby. Smoothness-Increasing Accuracy-Conserving (SIAC) Filtering: Practical Considerations When Applied to Visualization.

## **Th1610–1815, LC062: Mini-symp: Integrodifferential Relations in Direct and Inverse Problems of Mathematical Physics**

Th1610 Vasily Saurin. Integro-Differential Relations in Linear Elasticity: Static Case.

Th1635 Georgy Kostin. Variational Formulations of Inverse Dynamical Problems in Linear Elasticity.

Th1700 Harald Aschemann. Norm-Optimal Iterative Learning Control for a Heating Rod Based on the Method of Integro-Differential Relations.

Th1725 Andreas Rauh. Design and Experimental Validation of Control Strategies for a Spatially Two-Dimensional Heat Transfer Process Based on the Method of Integro-Differential Relations.

## **Th1610–1815, LC063: Mini-symp: Stochastic finite elements and PDEs**

Th1610 Alexandre Ern. Adaptive Anisotropic Spectral Stochastic Methods for Uncertain Scalar Conservation Laws.

Th1635 Eric Phipps. Exploring Emerging Manycore Architectures for Uncertainty Quantification Through Embedded Stochastic Galerkin Methods.

Th1700 Alex Bespalov. A posteriori error estimation for stochastic Galerkin FEMs.

Th1725 Julia Charrier. Weak truncation error estimates for elliptic PDEs with lognormal coefficients.

Th1750 Angela Kunoth. Sparse adaptive tensor Galerkin approximations of stochastic PDE-constrained control problems.

## **Th1610–1815, LC064: Mini-symp: Novel Methods for Time-Harmonic Wave Equations**

Th1610 Joseph E. Pasciak. Analysis of a Cartesian PML approximation to acoustic scattering problems in  $\mathbb{R}^n$ .

Th1635 Matthias Liertzer. Solving the steady-state ab-initio laser theory with FEM.

Th1700 Lothar Nannen. A domain decomposition preconditioner for mixed hybrid infinite elements .

Th1725 Stephen Langdon. A high frequency boundary element method for scattering by two-dimensional screens.

Th1750 David Hewett. A high frequency BEM for scattering by a class of nonconvex obstacles.

## **Th1610–1815, LC065: Mini-symp: Foundations of isogeometric analysis**

Th1610 Giancarlo Sangalli. Arbitrary-degree Analysis-suitable T-splines.

Th1635 Hendrik Speleers. Splines on triangulations in isogeometric analysis.

Th1700 Thomas Takacs. Approximation Properties of Singular Parametrizations in Isogeometric Analysis.

Th1725 Anh-Vu Vuong. Adaptive Hierarchical B-Splines for Local Refinement in Isogeometric Analysis.

Th1750 Carla Manni. Local refinements in IgA based on hierarchical generalized B-splines.

### **Th1610–1815, LC066: Parallel session**

Th1610 Philippe R B Devloo. On the numerical simulation of well stability.

Th1635 Razi Abdul-Rahman. Convergence of  $hp$ -FEM in Three Dimensional Computation of Thermoelectric Effects.

Th1700 Karel Segeth. Computational Aspects in Smooth Approximation of Data.

Th1725 Virginia Selgas. Approximation of eddy currents in an axisymmetric unbounded domain.

Th1750 Jan Valdman. Verification of functional a posteriori error estimates for obstacle problem.

### **Th1610–1815, LC067: Mini-symp: Numerical methods for fully nonlinear elliptic equations and mini-symp: Finite Element Methods for Multiphysics Problems**

Th1610 Max Jensen. A Finite Element Method for Hamilton-Jacobi-Bellman equations.

Th1635 Michael Neilan. Finite element methods for the Monge-Ampère equation.

Th1700 Tristan Pryer. Adaptivity and fully nonlinear problems.

Th1725 Raimund Bürger. A stabilized finite volume element formulation for sedimentation-consolidation processes .

### **Th1610–1815, LC068: Mini-symp: Finite Element Methods for Convection-Dominated Problems**

Th1610 Gabriel R. Barrenechea. A computable error bound for a 3-dimensional convection-diffusion-reaction equation.

Th1635 Markus Bause. A posteriori error estimation in stabilized discretizations of stationary convection-diffusion-reaction problems.

Th1700 Hang Si. Towards Anisotropic Quality Tetrahedral Mesh Generation.

Th1725 Julia Novo. A robust SUPG norm a posteriori error estimator for stationary convection-diffusion equations.

Th1750 Javier de Frutos. An adaptive SUPG method for evolutionary convection-diffusion equations.

### **Fr0835–1015, LC061: Mini-symp: A priori finite element error estimates in optimal control**

Fr0835 Li-yeng Sung. Finite element methods for fourth order variational inequalities arising from elliptic optimal control problems.

Fr0900 Serge Nicaise. A priori error estimates for finite element methods for  $H^{(2,1)}$ -elliptic equations.

Fr0925 Neela Nataraj. An interior penalty method for distributed optimal control problems governed by the biharmonic operator.

Fr0950 Winnifried Wollner. Optimal Control of Biharmonic Operator.

### **Fr0835–1015, LC062: Mini-symp: Analysis and applications of boundary element methods**

Fr0835 Sergej Rjasanow. Radial Basis Functions with Applications to Elasticity.

Fr0900 A. Sellier. Stokes flow about a collection of slip solid particles.

Fr0925 Jan Zapletal. BEM Based Shape Optimization Using Shape Calculus and Multiresolution Analysis .

Fr0950 Markus Faustmann. Black-Box Preconditioning of FEM/BEM matrices by  $\mathcal{H}$ -matrix techniques.

### **Fr0835–1015, LC063: Mini-symp: Stochastic finite elements and PDEs**

Fr0835 Stig Larsson. Finite element approximation of the Cahn-Hilliard-Cook equation.

Fr0900 Claudia Schillings. Adaptive, Sparse Quadratures for Bayesian Inverse Problems .

Fr0925 Aretha Teckentrup. Multilevel Markov chain Monte Carlo algorithms for uncertainty quantification in subsurface flow.



## **Fr0835–1015, LC064: Mini-symp: Novel Methods for Time-Harmonic Wave Equations**

Fr0835 Samuel Groth. Hybrid numerical-asymptotic approximation for high frequency scattering by penetrable convex polygons.

Fr0900 E. A. Spence. How should one choose the shift for the shifted Laplacian to be a good preconditioner for the Helmholtz equation?.

Fr0925 D. Lahaye. Improving the Shifted Laplace Preconditioner by Multigrid Deflation .

Fr0950 Antti Hannukainen. Analysis of preconditioners for Helmholtz equation using Pseudospectrum.

## **Fr0835–1015, LC065: Mini-symp: Error Estimation and adaptive modelling**

Fr0835 Yun Bai. Reduced basis finite element heterogeneous multiscale method for quasilinear problems.

Fr0900 Paul T. Bauman. Error Estimation and Adaptive Modeling for Viscous Incompressible Flows.

Fr0925 Varis Carey. Goal-Oriented Error Estimation and Adaptivity for the Time-Dependent Low-Mach Navier-Stokes Equations.

Fr0950 Alexandre Ern. Adaptive inexact Newton methods with a posteriori stopping criteria for nonlinear diffusion PDEs.

## **Fr0835–1015, LC066: Mini-symp: Discontinuous Galerkin methods in fluid flows**

Fr0835 Sander Rhebergen. Space-time (H)DG methods for incompressible flows.

Fr0900 Tatyana Medvedeva. Local Discontinuous Galerkin Method for Inkjet Drop Formation and Motion.

Fr0925 Weifeng Qiu. Commuting diagrams for the TNT elements on cubes.

## **Fr0835–1015, LC067: Mini-symp: Innovative compatible and mimetic discretizations for partial differential equations**

Fr0835 Gianmarco Manzini. Mimetic discretizations of elliptic problems.

Fr0900 Daniil Svyatskiy. The discrete maximum principle in the family of mimetic finite difference discretizations.

Fr0925 Alessandro Russo. The Virtual Element Method for general second-order elliptic operators on polygonal and polyhedral meshes.

## **Fr0835–1015, LC068: Mini-symp: Finite Element Methods for Convection-Dominated Problems**

Fr0835 Lutz Tobiska. A Finite Element Method for a Noncoercive Elliptic Convection Diffusion Problem.

Fr0900 Erik Burman. Robust error estimates in weak norms with application to implicit large eddy simulation.

Fr0925 Volker John. Velocity-pressure reduced order models for the incompressible Navier–Stokes equations.

Fr0950 Daniel Arndt. Augmented Taylor-Hood Elements for Incompressible Flow.

## **Fr0835–1015, H001: Mini-symp: Boundary-Domain Integral Equations**

Fr0835 David Natroshvili. Acoustic scattering by inhomogeneous anisotropic obstacle: Boundary-domain integral equation approach.

Fr0900 Otar Chkadua. Localized boundary-domain integral equations approach for Dirichlet and Robin problems of the theory of piezo-elasticity for inhomogeneous solids.

Fr0925 Richards Grzhibovskis. Numerics and spectral properties of boundary domain integral and integro-differential operators in 3D.

Fr0950 Sergey E. Mikhailov. Spectral properties and perturbations of boundary-domain integral equations.

### **Fr1140–1255, LC061: Mini-symp: A priori finite element error estimates in optimal control**

Fr1140 Boris Vexler. Sparse Elliptic Control Problems in Measure Spaces: Regularity and FEM Discretization.  
Fr1205 Arnd Rösch. Verification of optimality conditions and discretization error estimates.

### **Fr1140–1255, LC062: Mini-symp: Analysis and applications of boundary element methods**

Fr1140 Dalibor Lukáš. Parallel BEM-Based Methods.  
Fr1205 Michael Karkulik. Adaptive nonconforming boundary element methods.  
Fr1230 Michael Feischl. An axiomatic approach to optimality of adaptive algorithms with applications to BEM.

### **Fr1140–1255, LC065: Mini-symp: Error Estimation and adaptive modelling**

Fr1140 Andreas Veeseer. Tree approximation versus AFEM.  
Fr1205 K.G. van der Zee. Contraction and Optimal Convergence of a Goal-Oriented Adaptive Finite Element Method.

### **Fr1140–1255, LC068: Mini-symp: Finite Element Methods for Convection-Dominated Problems**

Fr1140 Alexander Linke. On the Role of the Helmholtz Decomposition in Mixed Methods for Incompressible Flows and a New Variational Crime.

## Times and rooms of speakers

Th1635,LC066	Abdul-Rahman, Razi	Th1425,LC067	Davydov, Oleg
We0835,H001	Abert, Claas	TU1810,H001	Dawson, Clint N
Th1400,LC065	Abgrall, R.	Th1015,LC063	Deckelnick, Klaus
We1635,LC065	Ahmed, Naveed	We0835,LC066	Deckelnick, Klaus
We0925,LC062	Ainsworth, Mark	We0925,LC061	Dedner, Andreas
We0835,LC063	Apel, Thomas	We0835,LC062	Demkowicz, Leszek
We1015,LC063	Armentano, María Gabriela	We1400,LC067	Demlow, Alan
Fr0950,LC068	Arndt, Daniel	Th1610,LC066	Devloo, Philippe R B
We0835,LC068	Arrarás, Andrés	Tu1610,LC063	Diening, Lars
We1610,LC066	Artina, Marco	Tu1515,H001	Dolgov, Sergey V.
Th1700,LC062	Aschemann, Harald	We0835,LC064	Dostál, Zdeněk
Th1400,LC067	Awanou, Gerard	We1725,LC064	Drouet, Guillaume
We0835,LC061	Ayuso de Dios, Blanca	Th1425,LC064	Duncan, Dugald B
Tu1425,H001	Bachmayr, Markus	Tu1635,LC066	Elfverson, Daniel
Fr0835,LC065	Bai, Yun	WE1155,H001	Elliott, Charles M.
Tu1400,H001	Ballani, Jonas	We0900,LC068	Elsheikh, Ahmed H.
Th0925,LC064	Banjai, Lehel	Tu1725,LC067	Engström, Christian
Th1610,LC068	Barrenechea, Gabriel R.	We0925,LC068	Engwer, Christian
Fr0900,LC065	Bauman, Paul T.	Fr0950,LC065	Ern, Alexandre
Th1635,LC068	Bause, Markus	Th1610,LC063	Ern, Alexandre
We1450,LC066	Beirão da Veiga, L.	Th1015,LC065	Evans, John A.
Th0835,LC065	Bercovier, Michel	We0950,LC068	Farrell, Patrick E.
We0900,LC064	Beremlijski, P.	Fr0950,LC062	Faustmann, Markus
We0950,LC065	Berzins, Martin	Fr1230,LC062	Feischl, Michael
Th1700,LC063	Bespalov, Alex	Th1515,LC067	Feng, Xiaobing
Th1015,H001	Betcke, T.	We0950,LC061	Feng, Xiaobing
Th1400,LC063	Beuchler, Sven	Th1450,LC063	Flaig, Thomas G.
Th1450,LC067	Böhmer, Klaus	Th0950,LC068	Franz, Sebastian
TU1145,H001	Bordas, Stéphane P.A.	Th1750,LC068	Frutos, Javier de
WE1810,H001	Brenner, Susanne C.	Th0925,H001	Führer, Thomas
We0900,H001	Bruckner, Florian	Th0900,LC065	Gahalaut, Krishan
Tu1425,LC062	Buffa, Annalisa	Tu1400,LC067	Gallistl, Dietmar
WE1110,H001	Buffa, Annalisa	Th1015,LC068	Ganesan, Sashikumaar
We1425,H001	Bugert, Beatrice	We1400,H001	Ganesh, M.
We1515,LC062	Bui-Thanh, Tan	We1015,LC068	Ganis, Benjamin
Th1725,LC067	Bürger, Raimund	Th0900,LC068	García-Archilla, Bosco
Fr0900,LC068	Burman, Erik	We1610,LC065	Gardini, Francesca
We1450,LC065	Burstedde, Carsten	Tu1425,LC067	Gedicke, Joscha
We1425,LC066	Cangiani, Andrea	Tu1400,LC061	Georgoulis, Emmanuil H.
Fr0925,LC065	Carey, Varis	We1400,LC061	Georgoulis, Emmanuil H.
Th0835,LC062	Cecot, Witold	We0925,LC067	Gerds, Peter
We1515,LC064	Čermák, Martin	Tu1515,LC066	Gerecht, Daniel
Th1400,LC061	Cesmelioglu, Aycil	Th0835,LC061	Geveler, Markus
Th1725,LC063	Charrier, Julia	We1450,H001	Gimperlein, Heiko
We1400,LC066	Chatzipantelidis, Panagiotis	Tu1425,LC065	Gippert, Sabrina
Tu1515,LC062	Chernov, Alexey	We1400,LC068	Goll, Christian
We1425,LC064	Chernov, Alexey	Tu1725,LC062	Gopalakrishnan, Jay
Fr0900,H001	Chkadua, Otar	Th0900,LC067	Grohs, Philipp
Th1515,LC063	Chrysaftinos, Konstantinos	Fr0835,LC064	Groth, Samuel
We0900,LC061	Chung, Eric	Tu1515,LC067	Grubišić, Luka
We1450,LC063	Ciarlet, Patrick	Fr0925,H001	Grzhibovskis, Richards
Th0835,LC068	Codina, Ramon	We1015,LC061	Gudi, Thirupathi
Th1425,LC065	Collier, Nathan	We1425,LC067	Gudi, Thirupathi
FR1045,H001	Costabel, Martin	TH1155,H001	Gunzburger, Max
Th1425,LC068	Dallmann, Helene	We1400,LC064	Gwinner, Joachim
We1015,LC067	Dauge, Monique	Tu1635,LC062	Hagstrom, Thomas
We1635,LC063	Davies, Penny J	We1635,LC062	Hakula, Harri

Fr0950,LC064	Hannukainen, Antti	Th1015,LC064	Maischak, Matthias
Th0835,LC067	Hardering, Hanne	We1610,LC064	Maischak, Matthias
Th0835,H001	Heuer, Norbert	Tu1700,LC061	Makridakis, Charalambos
We1610,LC062	Heuer, Norbert	Th1750,LC065	Manni, Carla
Th1750,LC064	Hewett, David	Th1450,LC065	Mantzafllaris, Angelos
Tu1610,LC062	Houston, Paul	Fr0835,LC067	Manzini, Gianmarco
Th1450,LC064	Howarth, C. J.	We1450,LC064	Markopoulos, Alexandros
We0925,H001	Hrkac, Gino	Th0950,LC063	Mateos, Mariano
We1400,LC063	Hunsicker, Eugenie	Th1400,LC068	Matthies, Gunar
We0835,LC065	Ippisch, Olaf	Tu1425,LC064	Meddahi, Salim
Th1450,LC066	Izsák, Ferenc	Fr0900,LC066	Medvedeva, Tatyana
Tu1425,LC061	Janssen, Bärbel	Tu1400,LC066	Mehta, Dwij
Th0835,LC066	Javierre, Etelvina	Th0900,LC063	Meidner, Dominik
Th1610,LC067	Jensen, Max	Th0950,H001	Melenk, Jens Markus
Th0900,LC061	Jimack, Peter K.	Tu1400,LC062	Melenk, Jens Markus
Fr0925,LC068	John, Volker	We1700,LC063	Messner, Michael
Th0950,LC061	Kanschat, Guido	We0900,LC067	Miedlar, Agnieszka
We1700,LC065	Karakatsani, Fotini	Fr0950,H001	Mikhailov, Sergey E.
Fr1205,LC062	Karkulik, Michael	Tu1635,LC068	Möller, Matthias
Tu1700,H001	Kazeev, Vladimir	We1515,LC066	Moiola, Andrea
Tu1450,LC066	Kenz, Zackary	TU0945,H001	Monk, Peter
Tu1610,H001	Khoromskaia, Venera	We0835,LC067	Mora, David
Tu1635,H001	Khoromskij, Boris	We1700,LC068	Mostaghimi, Peyman
Th1725,LC061	Kirby, Robert M.	We0900,LC065	Mueller, Eike
Tu1515,LC065	Klawonn, Axel	Tu1635,LC065	Müller, Benjamin
Th0925,LC068	Knobloch, Petr	We0900,LC062	Muga, Ignacio
We1635,LC066	Köhler, Karoline	Th1425,LC066	Mustapha, Kassem
Th0900,LC066	Koppenol, D.C.	Th1700,LC064	Nannen, Lothar
We0900,LC063	Kopteva, Natalia	Fr0925,LC061	Nataraj, Neela
Th1635,LC062	Kostin, Georgy	Fr0835,H001	Natroshevili, David
We0950,LC064	Krause, Rolf	We0925,LC065	Neckel, Tobias
We1400,LC065	Krause, Rolf	Th0925,LC061	Neic, Aurel
Th1610,LC061	Krivodonova, Lilia	Th1635,LC067	Neilan, Michael
Tu1425,LC066	Kruse, Carola	Tu1450,LC064	Neilan, Michael
Th1450,LC061	Kubatko, Ethan	We1515,LC067	Neilan, Michael
Tu1610,LC068	Kučera, Václav	Th0835,LC063	Neitzel, Ira
Tu1725,LC068	Kumar, B. V. Rathish	Th1515,LC062	Neumüller, Martin
Th1750,LC063	Kunoth, Angela	Tu1700,LC062	Nguyen, Hieu
Tu1450,LC061	Kyza, Irene	Fr0900,LC061	Nicaise, Serge
Fr0925,LC064	Lahaye, D.	Tu1700,LC068	Niemeyer, Julia
Tu1515,LC061	Lakkis, Omar	Th0925,LC062	Niemi, Antti H.
Tu1725,LC063	Lakkis, Omar	Tu1450,LC062	Nigam, Nilima
Th1725,LC064	Langdon, Stephen	We1425,LC063	Nistor, Victor
Fr0835,LC063	Larsson, Stig	Th1725,LC068	Novo, Julia
Th0900,LC062	Ledger, P.D.	MO2000,H001	Oden, J. Tinsley
Th0925,LC063	Leykekhman, Dmitriy	Th0900,H001	Of, Günther
We1450,LC067	Leykekhman, Dmitriy	Tu1610,LC067	Ovall, Jeffrey S
Tu1610,LC061	Li, Buyang	We1610,LC067	Ovall, Jeffrey S
We1015,LC062	Li, Jichun	Tu1515,LC064	Oyarzúa, Ricardo
Th1700,LC061	Li, Xiaozhou	We1700,LC066	Park, Eun-Hee
Th1635,LC064	Liertzer, Matthias	Th1450,LC062	Park, Eun-Jae
Fr1140,LC068	Linke, Alexander	We1425,LC061	Parsania, Asieh
Tu1450,LC067	Liu, Xuefeng	Th1610,LC064	Pasciak, Joseph E.
Th1515,LC068	Lube, Gert	We1400,LC062	Patra, A. K.
Fr1140,LC062	Lukáš, Dalibor	We1425,LC068	Pencheva, Gergina
We0900,LC066	Madhavan, Pravin	Tu1635,LC061	Perugia, Ilaria
Th1400,LC066	Madzvamuse, Anotida	Th1635,LC063	Phipps, Eric
We1015,LC066	Madzvamuse, Anotida	We0925,LC064	Pospíšil, Lukáš
Th1515,LC064	Mahmood, M.	Tu1400,LC063	Praetorius, Dirk

We0950,H001	Praetorius, Dirk	Tu1725,LC065	Starke, Gerhard
Th1700,LC067	Pryer, Tristan	Th1425,LC063	Steinbach, Olaf
Th1635,LC061	Qiu, Jing-Mei	Tu1700,LC064	Stephan, Ernst P.
Fr0925,LC066	Qiu, Weifeng	We1700,LC064	Stephan, Ernst P.
We1700,LC062	Qiu, Weifeng	We0950,LC066	Styles, Vanessa
We1425,LC062	Rachowicz, Waldemar	Fr0835,LC061	Sung, Li-yeng
We1450,LC068	Raeini, Ali Q	Fr0900,LC067	Svyatskiy, Daniil
Th0925,LC067	Raisch, Alexander	Th1700,LC065	Takacs, Thomas
Tu1425,LC063	Rankin, Richard	We1635,LC067	Tantardini, Francesca
Th1725,LC062	Rauh, Andreas	We1725,LC063	Tausch, Johannes
Tu1450,LC063	Repin, Sergey	Fr0925,LC063	Teckentrup, Aretha
Fr0835,LC066	Rhebergen, Sander	Th1425,LC061	Tian, Lulu
We1450,LC061	Rhebergen, Sander	Fr0835,LC068	Tobiska, Lutz
Tu1450,LC065	Rheinbach, Oliver	Th0925,LC065	Tomar, Satyendra
Tu1400,LC068	Richter, Thomas	We1515,LC065	Tomar, Satyendra
We1515,LC061	Riviere, Beatrice	Tu1610,LC064	Tran, Thanh
Fr0835,LC062	Rjasanow, Sergej	We1515,H001	Unger, Gerhard
We1450,LC062	Roberts, Nathan V.	Th1750,LC066	Valdman, Jan
Fr1205,LC061	Rösch, Arnd	Tu1610,LC066	Valentin, Frédéric
TH1110,H001	Ruede, Ulrich	We1015,H001	Van Bockstal, Karel
Fr0925,LC067	Russo, Alessandro	Fr1205,LC065	van der Zee, K.G.
Th1515,LC066	Ryan, Jennifer K.	Th1400,LC064	van 't Wout, Elwin
Tu1400,LC065	Sander, Oliver	Th1515,LC061	Vassilev, Danail
Th1610,LC065	Sangalli, Giancarlo	Th0950,LC065	Vázquez, Rafael
Th1610,LC062	Saurin, Vasily	Fr1140,LC065	Veeser, Andreas
Th0900,LC064	Sauter, Stefan A.	Th0950,LC064	Veit, Alexander
Tu1635,LC067	Sauter, Stefan A.	Tu1635,LC063	Vejchodský, Tomáš
Tu1450,H001	Savostyanov, Dmitry V.	Tu1700,LC066	Verani, Marco
Th0835,LC064	Sayas, Francisco-Javier	Th0950,LC066	Vermolen, Fred J.
Tu1635,LC064	Sayas, Francisco-Javier	Fr1140,LC061	Vexler, Boris
Th1450,LC068	Schieweck, Friedhelm	Th1015,LC066	Vignon-Clementel, Irene
Fr0900,LC063	Schillings, Claudia	Tu1700,LC063	Vohralík, Martin
We1725,LC066	Schneider, René	Th1725,LC065	Vuong, Anh-Vu
Th1015,LC061	Schöberl, Joachim	We0950,LC062	Wang, Hongrui
Th1425,LC062	Schöberl, Joachim	Th0950,LC062	Wang, Jilu
We1635,LC064	Schröder, Andreas	Th1400,LC062	Warburton, T.
Th0925,LC066	Schugart, Richard	We1610,LC063	Weile, Daniel S.
Tu1700,LC065	Schwarz, Alexander	Th0950,LC067	Weinmann, Andreas
We1515,LC068	Scialò, Stefano	We1610,LC068	Wheeler, Mary F.
We1725,LC065	Šebestová, Ivana	Tu1425,LC068	Wick, Thomas
Th1700,LC066	Segeth, Karel	We0950,LC063	Wihler, Thomas P.
Th1725,LC066	Selgas, Virginia	We1635,LC061	Wihler, Thomas P.
Fr0900,LC062	Sellier, A.	TU1100,H001	Winther, Ragnar
We1610,LC061	Sharma, Natasha	Fr0950,LC061	Wollner, Winnifried
Th1700,LC068	Si, Hang	Tu1450,LC068	Wollner, Winnifried
Tu1515,LC063	Siebert, Kunibert G.	We0925,LC063	Xenophontos, Christos
We1425,LC065	Siebert, Kunibert G.	We0950,LC067	Ye, Qiang
Tu1610,LC065	Simeon, Bernd	We1635,LC068	Yotov, Ivan
Th1515,LC065	Simpson, Robert N.	We1015,LC064	Youett, Jonathan
We0925,LC066	Sokolov, Andriy	Th1015,LC067	Yu, Thomas
Th1635,LC065	Speleers, Hendrik	Fr0925,LC062	Zapletal, Jan
Fr0900,LC064	Spence, E. A.	Th1015,LC062	Zdunek, Adam
We1015,LC065	Stadler, Georg	We1725,LC062	Zlotnik, Alexander