

# Tuesday, 15th August

## Tuesday's Minisymposium sessions

Mini 7: Least Squares Problems (Lecture Theatre 1)

Mini 8: Numerical Methods for Quantum and Molecular Systems (Tun Razak Lecture Theatre)


Mini 9: Algorithmic Approaches in Numerical Analysis (Seminar Room 1)

Mini 10: Tools in Numerical Linear Algebra (Seminar Room 2)

Mini 11: Numerical Geometry and Shape Optimization (Seminar Room 3)

Mini 12: Early-career researchers II (Seminar Room 4)

Tuesday	Mini 7	Mini 8	Mini 9	Mini 10	Mini 11	Mini 12
3:45	Scott	Hassan	Derevianko	Damle	Paganini	Yu
4:10	Widdershoven	Ukena	Serkh	Montanelli	Zavalani	Trujillo
4:35	Meier	Mikkelsen	Zerbinati	Stoll	Baier-Reinio	Daužickaitė
5:00	-	Bellotti	Singh	Fink Shustin	Linß	-



# Tuesday, 15th August

## Minisymposium 7: Least Squares Problems

**Location: Lecture Theatre 1**

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- 3:45-4:05 Jennifer Scott  
Solving large linear least squares problems with equality constraints
- 4:10-4:30 Raphaël Widdershoven  
Tensor-based methods for the solution of overdetermined systems of polynomial equations
- 4:35-4:55 Maike Meier  
Are sketch-and-precondition least squares solvers numerically stable?
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**Tuesday, 15th August**

**Minisymposium 8: Numerical Methods for Quantum and Molecular Systems**

**Location: Tun Razak Lecture Theatre**

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- 3:45-4:05 Muhammad Hassan  
On the Numerical Analysis of the Coupled Cluster Method in Quantum Computational Chemistry
- 4:10-4:30 Riko Ukena  
Pseudospectra of generalized Schrödinger operators
- 4:35-4:55 Carl Christian Kjelgaard Mikkelsen  
Accuracy and stability in molecular dynamics with constraints
- 5:00-5:20 Thomas Bellotti  
Finite Difference formulation of any lattice Boltzmann scheme: consistency, stability and convergence
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# Tuesday, 15th August

## Minisymposium 9: Algorithmic Approaches in Numerical Analysis

**Location: Seminar Room 1**

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- 3:45-4:05 Nadiia Derevianko  
ESPIRA for recovery of exponential sums and its application
- 4:10-4:30 Kirill Serkh  
An algorithm for the efficient evaluation of the Epstein zeta function on finite lattices
- 4:35-4:55 Umberto Zerbinati  
When rational function meets virtual elements: “The lightning Virtual Element Method”
- 5:00-5:20 Pranav Singh  
Uniform and unitary rational approximations of the matrix exponential
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# Tuesday, 15th August

## Minisymposium 10: Tools in Numerical Linear Algebra

**Location: Seminar Room 2**

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- 3:45-4:05 Anil Damle  
Fine-grained Theory and Hybrid Algorithms for Randomized Numerical Linear Algebra
  - 4:10-4:30 Hadrien Montanelli  
The linear sampling method for random sources
  - 4:35-4:55 Martin Stoll  
Efficient numerical linear algebra for Gaussian processes
  - 5:00-5:20 Paz Fink Shustin  
Semi-Infinite Linear Regression and Its Applications
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**Tuesday, 15th August**

**Minisymposium 11: Numerical Geometry and Shape Optimization**

**Location: Seminar Room 3**

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- 3:45-4:05 Alberto Paganini  
Numerical Shape Optimization with B-Spline Wavelets
- 4:10-4:30 Gentian Zavalani  
High-Order-Integration for Regular Closed Surfaces
- 4:35-4:55 Aaron Baier-Reinio  
High-Order Finite Element Schemes for the  
Stokes–Onsager–Stefan–Maxwell Equations
- 5:00-5:20 Torsten Linß  
Uniform convergence of an arbitrary order balanced FEM  
applied to a singularly perturbed shell problem
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# Tuesday, 15th August

## Minisymposium 12: Early-career researchers II

**Location: Seminar Room 4**

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- 3:45-4:05 Annan Yu  
Leveraging the AAA algorithm and the Hankel norm approximation in reduced-order modeling
- 4:10-4:30 Andrés Miniguano Trujillo  
Parameter identification for the SIRD model using PDE-constrained optimisation
- 4:35-4:55 Ieva Daužickaitė  
Mixed precision least-squares iterative refinement with randomized preconditioning
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