

ETH zürich



**University of
Zurich**^{UZH}

Seminar for Applied Mathematics

I·Math Institute of Mathematics

Zürich Summer School

Organizers: R. Hiptmair, Ch. Schwab (ETH Zürich), S. Sauter (Universität Zürich)

18. - 22.8.2014

Advanced Numerical Methods for Non-local Operators

$$\mathbf{K}[\mathbf{u}](\mathbf{x}) = \int_{\Gamma} \mathbf{k}(\mathbf{x}, \mathbf{y}) \mathbf{u}(\mathbf{y}) d\mathbf{y}$$



Topics:

- Boundary element methods
- Time-domain boundary integral equations
- H - and H^2 -matrices and preconditioners
- A posteriori error estimation
- Adaptive mesh-refinement and optimal convergence
- Fast multipole method
- Butterfly algorithm
- Generalized Radon transforms

Lecturers:

T. Abboud (École Polytechnique, France)
S. Börm (CAU Kiel, Germany)
L. Demanet (MIT, USA)
R. Hiptmair (ETH Zürich, Switzerland)
D. Praetorius (TU Wien, Austria)
S. Sauter (Universität Zürich, Switzerland)

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Information and online registration:

www.sam.math.ethz.ch/zss/zss2014

Registration deadline: 30.06.2014