

# Parallel Numerical Computing and Its Applications

Mathematical Institute, Department of Informatics  
Slovak Academy of Sciences, Bratislava, Slovakia

SMOLENICE, September 7-9, 2016

Workshop in honor of **Prof. Marián Vajteršic**

## PROGRAM

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### SEPTEMBER 7

8:00 - 14:00

Arrival of participants from Bratislava to Smolenice

13:00 - 15:00

Lunch

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Session 1 (chairman: Gabriel Okša)

16:00 - 16:30

**Selim Akl**, Queen's University, Kingston, Canada:  
On Computable Numbers, Nonuniversality, and the Genuine Power of Parallelism

16:30 - 17:00

**Peter Zinterhof**, University of Salzburg, Austria:  
Kernels, Sequences and Errors: Some Results in Approximation Theory and Numerics

17:00 - 17:30

**Elisa Francomano**, University of Palermo, Italy:  
On Some Kernel-Based Approximation Methods and Applications

19:00

Dinner

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### SEPTEMBER 8

7:30 - 8:45

Breakfast

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Session 2 (chairman: Martin Bečka)

9:00 - 9:30

**Vjeran Hari**, University of Zagreb, Croatia:  
On Jacobi Methods for the Positive Definite Generalized Eigenvalue Problem

9:30 - 10:00

**Stratis Gallopoulos**, University of Patras, Greece:  
Some Recent Interpretations and Implementations of Parallel Tridiagonal and Elliptic Solvers

10:00 - 10:30

**Xiaoye Sherry Li**, Lawrence Berkeley National Laboratory, Berkeley, United States:  
Hierarchically Low-Rank Structured Approximate Factorization Using Randomized Sampling

10:30 - 11:00

Coffee break

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Session 3 (chairman: Imrich Vrt'o)

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11:00 - 11:30

**Petter Bjørstad**, University of Bergen, Norway:  
On Multi-Scale Preconditioners for Elliptic Problems with Discontinuous Coefficients

11:30 - 12:00

**Bruno Apolloni**, University of Milan, Italy:  
A Possible Hamiltonian of Social Communities' Dynamics

12:30 - 13:30

Lunch

13:45 - 18:00

Trip to the Red Stone Castle (Červený kameň) and to the wine shop in Dolany

19:00

**Gala-Dinner**

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## SEPTEMBER 9

8:00 - 9:00

Breakfast

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Session 4 (chairman: Gabriel Okša)

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9:30 - 10:00

**Hans Zima**, Jet Propulsion Laboratory, Pasadena, United States:  
Language Support for Exascale Resilience

10:00 - 10:30

**Yusaku Yamamoto**, The University of Electro-Communications, Tokyo, Japan:  
Convergence Analysis of the Parallel Block Jacobi Method for the SVD with Dynamic Ordering

10:30 - 11:00

Coffee break

12:00 - 13:00

Lunch

Afternoon: departure to Bratislava