

## PROGRAMME of TREFFTZ/MFS 2017

### Tuesday, July 4

18.00-20.00 Registration and welcome reception

### Wednesday, July 5

9.00-9.30 Opening ceremony

9.30-10.15 Plenary lecture 1 (Aula Magna, CW-4)

Chair: A. Karageorghis

**J.A. Kołodziej**, *Many names of the Trefftz method*

10.15-11.30 Coffee break (053-BT)

10.45-11.30 Plenary lecture 2 (Aula Magna, CW-4)

Chair: C. Gáspár

**C.S. Chen**, *Use of the MFS in locating points inside or outside of an arbitrary simple-connected domain in 3D*

11.40-13.20 Regular session 1 (CW-2)

Chair: R. Piltner, A. Maciąg

**R. Schaback**, *An approximation theorist's view on Trefftz, MFS, MPS and DRM*

**M. Potier-Ferry**, *Trefftz method and Taylor series*

**M. Borkowski**, *Application of conformal mappings and the analysis of conditioning of the matrices in Trefftz method for some boundary value problems*

**L. Li**, *Utilizing discretized Cauchy integrals for the biharmonic equation and two-dimensional data interpolation*

**I.D. Moldovan**, *FreeHyTE: a hybrid-Trefftz finite element platform*

13.30-15.00 Lunch (053-BT)

15.00-16.40 Regular session 2 (CW-2)

Chair: C.J.S. Alves, K. Grysa

**A. Karageorghis**, *The MFS for the identification of an interior acoustic scatterer*

**C. Gáspár**, *A multi-level technique for the method of fundamental solutions without regularization and desingularization*

**P.R.S. Antunes**, *Reducing the ill conditioning in the method of fundamental solutions*

**C.-M. Fan**, *A localized scheme for the method of fundamental solution for two-dimensional boundary value problems*

**F. Wang**, *Transient heat conduction analysis in thin coatings by the time-space singular boundary method*

16.40-17.10 Coffee break (053-BT)

17.10-18.10 Regular session 3 (CW-2)

Chair: R. Schaback, I.D. Moldovan

**W. Fujisaki**, *Correct stress gradient of notched plate using the method of fundamental solutions*

**Q. Liu**, *Method of fundamental solutions for plastic problems*

**J.-W. Lee**, *Indirect boundary element method combining the CHIEF and the self-regularization technique for solving 2D exterior Helmholtz equations with fictitious frequencies*

18.45 Walk to the city center + dinner

### Thursday, July 6

9.00-9.45 Plenary lecture 3 (CW-2)

Chair: C.C. Tsai

**R. Piltner**, *Some remarks on 2D and 3D applications of the Trefftz method and the use of complex valued functions*

9.50-11.30 Regular session 4 (CW-2)

Chair: C.-M. Fan, M. Potier-Ferry

**J. Piwnik**, *Comparison of stresses in semi-trailer frame for various kinds of study*

**M.J.Q.R. Duarte**, *Complex solutions on embedded cracks with filler and dislocations*

**A. Fraska**, *Shear modulus of the bar of square cross-section with longitudinal circular hollows*

**A. Pawińska**, *The solution of nonlinear problem for beam using the Trefftz functions*

**Z. Fu**, *A parallel meshless solver for multi-term time fractional diffusion-wave equation via collocation Trefftz method*

11.30-12.00 Coffee break (053-BT)

12.00-13.40 Regular session 5 (CW-2)

Chair: C.-S. Huang, A. Uściłowska

**K. Grysa**, *Trefftz method in solving the direct and inverse problems of heat in biological tissue using the coupled Pennes' and hyperbolic heat transfer equation*

**A. Maciąg**, *Identification of the heat transfer coefficient by means of Trefftz method*

**L. Hożejowski**, *Trefftz method in an inverse problem of two-phase flow boiling in a minichannel*

**B. Szczucka-Lasota**, *Implementation of the method of fundamental solutions for correction of parameters of thermal HM spraying process*

**T. Węgrzyn**, *Validation of parameters selection of welding with micro-jet cooling by using method of fundamental solutions*

13.30-15.00 Lunch (053-BT)

15.00-15.45 Plenary lecture 4 (CW-2)

Chair: C.S. Chen

**C.J.S. Alves**, *Extensions of the method of fundamental solutions to non homogeneous acoustic and elastic wave propagation*

15.45-16.20 Coffee break (053-BT)

16.20-17.20 Regular session 7 (CW-2)

Chair: W. Fujisaki, T. Węgrzyn

**C.-S. Huang**, *On interpolation with increasingly flat hybrid radial basis functions*

**C.C. Tsai**, *Using a meshless numerical method to study wave-induced seabed instability around a buried pipeline in a poroelastic seabed*

**M.A. Jankowska**, *The meshless methods and the successive-approximation iteration process used for solving the elastic-plastic problem*

20.00 Banquet (053-BT)

### **Friday, July 7**

8.30-14.00 Conference tour

14.00-15.00 Lunch (053-BT)

15.00-16.40 Regular session 8 (CW-7)

Chair: J.A. Kołodziej, J. Piwnik

**J.K. Grabski**, *On the sources placement in the method of fundamental solutions for time-dependent heat conduction problems*

**M. Chudzicka-Adamczak**, *Using the Method of Fundamental Solutions and Infrared Thermography for prediction the temperature distribution for the balcony slab*

**M. Mierzwiak**, *Heat transfer for the generalized Newtonian fluid flow through a fibrous porous media*

**W. Matysiak**, *Analysis of the stamping process supported by Method of Fundamental Solutions*

**D. Bartkowski**, *Computer simulation of Flowdrill process by Method of Fundamental Solutions*

16.40-16.50 Closing ceremony (CW-7)

16.50-17.30 Coffee break (053-BT)