

# FEMTEC 2006: Program

## Monday, December 11:

7:30	Departure from Camino Real
7:45	Breakfast (Union Building)
8:45	Opening of the conference
9:00 - 10:00	Ivo Babuska: <i>Reliability of Computational Science. A Particular Problem</i>
10:00 - 11:00	Rafi Muhanna: <i>Interval Finite Element Methods: An Overview and Latest Development</i>
11:00 - 11:30	Coffee break
11:30 - 12:00	Thomas Paez: <i>A Stochastic Approach to Validation of Finite Element Models</i>
12:00 - 12:30	Mitsuhiro Nakao: <i>Constructive Error Estimates in the Finite Element Methods with Applications to Verification of Solutions for Nonlinear PDEs</i>
12:30 - 14:00	Lunch (Union Building)
14:00 - 14:30	Mladen Mestrovic: <i>Variability Response Function for Stochastic Transient Heat Conduction with Random Conductivity</i>
14:30 - 15:00	Peter Moore: <i>Solving Regularly and Singularly Perturbed Reaction-Diffusion Equations in Three Space Dimensions</i>
15:00 - 15:30	Petr Svacek: <i>Numerical Approximation of Non-Newtonian Fluid Flow by the Higher-Order Finite Element Method</i>
15:30 - 16:00	Coffee break + snacks
16:00 - 16:30	Mark Taylor: <i>A Continuous Galerkin Spectral Element Method for Triangular Elements</i>
16:30 - 17:00	Lenka Dubcova: <i>On hp-FEM Based on Generalized Eigenfunctions</i>
17:00 - 17:30	Jose Avila: <i>Finite Element Analysis of a Convection-Diffusion Equation</i>
18:00 - 21:00	Welcome party (Reading Room in Geology Building)
21:15	Departure from Campus

## Tuesday, December 12:

7:30	Departure from Camino Real
7:45	Breakfast (Union Building)
9:00 - 10:00	George Karniadakis: <i>Multi-Element Polynomial Chaos: Algorithms and Applications</i>
10:00 - 11:00	Ted Belytschko: <i>On Finite Element Methods for Crack Propagation and Dislocations</i>
11:00 - 11:30	Coffee break
11:30 - 12:00	Slimane Adjerid: <i>Advances in A Posteriori Error Estimation for Discontinuous Galerkin Methods</i>
12:00 - 12:30	Guido Kanschat: <i>Higher-Order Divergence-Free Discontinuous Galerkin Approximations to the Navier-Stokes Equations</i>
12:30 - 14:00	Lunch (Union Building)
14:00 - 14:30	Shuyu Sun: <i>Multiscale Discontinuous Galerkin Methods for Modeling Flow and Transport in Porous Media</i>
14:30 - 15:00	Saurabh Srivastava: <i>Discontinuous Galerkin Deforming Grid(DGDG) Method for Large Deformation Viscoelastodynamics</i>
15:00 - 15:30	Lubomir Banas: <i>Adaptive Finite Element Methods for Cahn-Hilliard Equations</i>
15:30 - 16:00	Coffee break
16:00 - 16:30	Alexander Idesman: <i>A New High-Order Accurate Method for Transient Dynamics Problems</i>
16:30 - 17:00	Roland Klose: <i>Pole Condition: A Numerical Method for Helmholtz-Type Scattering Problems with Inhomogeneous Exterior Domain</i>
17:00 - 17:30	Dmitri Kuzmin: <i>On the Design of High-Resolution Finite Element Schemes Satisfying the Discrete Maximum Principle</i>
18:00 - 19:00	Classical guitar concert by Armin Harrison, Chair of Music Department at El Paso Community College (Fox Fine Arts recital hall). See flyer with program.
19:30	Departure from Campus

**Wednesday, December 13:**

- 7:30 Departure from Camino Real
- 7:45 Breakfast (Union Building)
- 9:00 - 10:00 Pavel Bochev
- 10:00 - 11:00 Ronald Cools
- 11:15 - 12:30 Lunch (Union Building)
- 12:30 Departure to White Sands Missile Range and La Vina Winery. (Expected arrival at Camino Real is 21:00)

**Thursday, December 14:**

- 7:30 Departure from Camino Real
- 7:45 Breakfast (Union Building)
- 9:00 - 10:00 Arnold Neumaier: *Certified Error Bounds for Uncertain Elliptic Equations*
- 10:00 - 10:30 Vladik Kreinovich: *Towards Combining Interval and Probabilistic Uncertainty in Finite Element Methods*
- 10:30 - 11:00 Andrzej Pownuk: *Numerical Solution of FEM Equations with Uncertain Functional Parameters*
- 11:00 - 11:30 Coffee break
- 11:30 - 12:00 Barna Bede: *Numerical Solutions of Fuzzy Differential Equations*
- 12:00 - 12:30 Nicolae Tarfulea: *Approximate Dirichlet Boundary Conditions in the Generalized Finite Element Method*
- 12:30 - 14:00 Lunch (Union Building)
- 14:00 - 14:25 Prof. Babuska receives the Rockwell Medal
- 14:25 - 14:30 Presentation of Best Poster Award
- 14:30 - 15:00 Jakub Cerveny: *hp-FEM for Coupled Problems – First Steps*
- 15:00 - 15:30 Robert Kirby: *Program Generation for Polynomial Transforms in Unstructured Finite Element Computation*
- 15:30 - 16:00 Coffee break
- 16:00 - 16:30 Mehdi Modares: *Finite-Element Dynamic Analysis of Transportation Systems with Interval Uncertainty*
- 16:30 - 17:00 Bart Zalewski: *Local Discretization Errors for Boundary Element Analysis*
- 17:00 - 17:30 Oscar Garcia-Otero: *Structural Assessment Under Uncertain Parameters Via Interval Analysis*
- 18:00 Departure from Campus

**Friday, December 15:**

- 7:30 Departure from Camino Real
- 7:45 Breakfast (Union Building)
- 9:00 - 9:30 Jack Chessa: *An Enriched Finite Element Method for Modeling Phase Growth*
- 9:30 - 10:00 Ratnam Paskaramoorthy: *A Hybrid Finite Element Method for Stress Concentration in Composites under Dynamic Loads*
- 10:00 - 10:30 Dalibor Frydrych: *The Verification of Coupled Heat and Moisture Transfer FEM Model*
- 10:30 - 11:00 Yuu Miyagawa: *FEM for Schrödinger Equation with Rashba Effect*
- 11:00 - 11:30 Coffee break
- 11:30 - 12:00 Nicolas Leconte: *Toward a Hybrid-Trefftz Finite Element with a Hole for Elastoplasticity*
- 12:00 - 12:30 Jafarali Parol: *Error Analysis in Finite Element Elastodynamic Problems using Function Space Approach*
- 12:30 Closing of the conference  
Lunch (Union Building)