

		Plenary Talks 9:15-10:15	Session 1 10:45-12:25	Session 2 14:00 - 14:50	Session 3 15:10 - 16:25	Session 4 16:45-18:00	Evening
Sunday July 23							Welcome Reception (17:00-20:00, House 6)
Monday July 24	Room SL	P. Huerre	Applied Aerodynamics	Applied Aerodynamics	Minisymposium Stynes, O’Riordan	Minisymposium Stynes,O’Riordan	Get Together Party (Old Town-hall, 19:00-20:30)
	Room MPI	(Room MPI)	Asymptotic Methods	Asymptotic Methods	Special Flows		
Tuesday July 25	Room SL	M. Stynes	Heat Transfer	Flows in Special Geometries	Minisymposium Hartmann, Houston	Minisymposium Hartmann, Houston	Public Talk Prof. Gersten Room SL (20:00-21:30)
	Room MPI	(Room MPI)	Minisymposium Maubach, Tselishcheva	Minisymposium Maubach, Tselishcheva	Numeric. Methods for Fluid Flows	Numerical Methods 1	
Wednesday July 26	Room SL	W. Wall	Numerical Methods 2	Open Discussion 1	Excursion Conference Dinner		
	Room MPI	(Room MPI)	Wall functions 1	Wall functions 2			
Thursday July 27	Room SL	P. Houston	Anisotropic Meshes 1	Round Tour (DLR, Math. Inst.)	Minisymposium Shishkin, Hemker	Minisymposium Shishkin, Hemker	
	Room MPI	(Room MPI)	Turbulence Modelling		Anisotropic Meshes 2	Open Discussion 2	
Friday July 28	Room SL	Minisymposium: Das,Sengupta (9:15-10:30, 11:00-12:15)		End of Conference			
	Room MPI						

	ROOM SCHOOL-LAB (SL)	ROOM MPI
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Sunday, 23 July

17:00 - 20:00	Welcome Reception
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Monday, 24 July

8:00 - 9:00	Registration	
9:00 - 9:15		Opening
9:15 - 10:15		<p><u>Plenary Talk:</u></p> <p>P. Huerre: <i>Dynamics of hot jets: a numerical and theoretical study.</i></p>
10:15 - 10:45	Coffee Break	
10:45 - 12:25	<p><u>Session: Applied Aerodynamics</u></p> <p>P. Svacek: Numerical Approximation of Flow Induced Airfoil Vibrations (10:45-11:10)</p> <p>A. Firooz, M. Gadami: Turbulence Flow for NACA 4412 in Unbounded Flow and Grow Effect with Different Turbulence Models and Two Ground Conditions: Fixed and Moving Ground Conditions (11:10-11:35)</p> <p>B. Eisfeld: Computation of complex compressible aerodynamic flows with Reynolds stress turbulence model (11:35-12:00)</p>	<p><u>Session: Asymptotic methods</u></p> <p>M. Hamouda, R. Temam: Boundary layers for the Navier-Stokes equations: asymptotic analysis (10:45-11:10)</p> <p>N.V. Tarasova: Full asymptotic analysis of the Navier-Stokes equations in the problems of gas flows over bodies with large Reynolds number (11:10-11:35)</p> <p>N. Neuss: Numerical approximation of boundary layers for rough boundaries (11:35-12:00)</p>

	ROOM SCHOOL-LAB (SL)	ROOM MPI
10:45 - 12:25	<u>Session: Applied Aerodynamics</u> A. Nastase: Qualitative Analysis of the Navier-Stokes Solutions on Vicinity of their Critical Lines (12:00-12:25)	<u>Session: Asymptotic methods</u> A.-M. Il'in, B.I. Suleimanov: The coefficients of inner asymptotic expansions for solutions of some singular boundary value problems (12:00-12:25)
12:30 - 14:00	Lunch Break	
14:00 - 14:50	<u>Session: Applied Aerodynamics</u> C.H. Tai, C.-Y. Chao, J.-C. Leong, Q.S. Hong: Effects of golf ball dimple configuration on aerodynamics, trajectory, and acoustics (14:00-14:25) W.S. Islam, V.R. Raghavan: Numerical Simulation of High Sub-critical Reynolds Number Flow Past a Circular Cylinder (14:25-14:50)	<u>Session: Asymptotic methods</u> Z.-H. Yang, Y.-Z. Li, Y. Zhu: Application of Bifurcation Method to Computing Numerical Solutions of Lane-Emden Equation (14:00-14:25) H. Tian: Uniformly Convergent Numerical Methods for Singularly Perturbed Delay Differential Equations (14:25-14:50)
14:50 - 15:10	Coffee Break	
15:10 - 16:25	<u>Minisymposium: M. Stynes, E. O'Riordan</u> H. Wang: A Component-Based Eulerian-Lagrangian Formulation for Compositional Flow in Porous Media G.I. Shishkin: A posteriori adapted meshes in the approximation of singularly perturbed quasilinear parabolic convection-diffusion equations W. Layton, I. Stanculescu: Numerical Analysis of Approximate Deconvolution Models of Turbulence	<u>Session: Special Flows</u> B. Rasuo: On Boundary Layer Control in Two-Dimensional Transonic Wind Tunnels (15:10-15:35) M. Vasiliev: About unsteady Boundary Layer on a dihedral angle (15:35-16:00) K. Mansour: Boundary Layer Solution for Laminar Flow through a Loosely Curved Pipe by using Stokes Expansion (16:00-16:25)

	ROOM SCHOOL-LAB (SL)	ROOM MPI
16:25 - 16:45	Coffee break	
16:45 - 18:00	<u>Minisymposium: M. Stynes, E. O’Riordan</u> R.K. Dunne, <u>E. O’Riordan</u>, M.M. Turner: A singular perturbation problem arising in the modeling of plasma sheaths	
19:00 - 21:00	Get Together Party Old Town Hall	

	ROOM SCHOOL-LAB (SL)	ROOM MPI
Tuesday, 25 July		
9:15 - 10:15		Plenary Talk: M. Stynes: <i>Convection-diffusion problems, SD-FEM/SUPG and a priori meshes.</i>
10:15 - 10:45	Coffee break	
10:45 - 12:25	<u>Session: Heat Transfer</u> M. Hölling, H. Herwig: Computation of turbulent natural convection at vertical walls using new wall functions (10:45-11:10) O. Shishkina, C. Wagner: Boundary and Interior Layers in Turbulent Thermal Convection (11:10-11:35) K. Morinishi: Rarefied Gas Boundary Layer Predicted with Continuum and Kinetic Approaches (11:35-12:00)	<u>Minisymposium: J.Maubach, I.V.Tselishcheva:</u> M. Anthonissen, I. Sedykh, J. Maubach: A convergence proof of local defect correction for convection-diffusion problems J. Maubach: On the difference between left and right preconditioning for convection dominated convection-diffusion problems A. Hegarty, St. Sikwila, G.I. Shishkin: An adaptive method for the numerical solution of an elliptic convection diffusion problem P. Zegeling: An Adaptive Grid Method for the Solar Coronal Loop Model
12:30 - 14:00	Lunch Break	

	ROOM SCHOOL-LAB (SL)	ROOM MPI
14:00 - 14:50	<p><u>Session: Flows in Special Geometries</u></p> <p>D. Kachuma, I. Sobey: Fast waves during transient flow in an asymmetric channel (14:00-14:25)</p> <p>J. Mauss, J. Cousteix: Global Interactive Boundary Layer (GIBL) for a Channel (14:25-14:50)</p>	<p><u>Minisymposium: J.Maubach, I.V.Tselishcheva:</u></p> <p>A.I. Zadorin: Numerical method for the Blasius equation on an infinite interval</p> <p>S. Li , L.P. Shishkina, G.I. Shishkin, Parameter-uniform method for a singularly perturbed parabolic equation modelling the Black-Scholes equation in the presence of interior and boundary layers</p>
14:50 - 15:10	Coffee Break	
15:10 - 16:25	<p><u>Minisymposium: R. Hartmann, P. Houston</u></p> <p>J. Mackenzie, A. Nicola: A Discontinuous Galerkin Moving Mesh Method for Hamilton-Jacobi Equations</p> <p>R. Schneider, P. Jimack: Anisotropic mesh adaption based on a posteriori estimates and optimisation of node positions</p> <p>S. Perotto: Layer Capturing via Anisotropic Adaption</p>	<p><u>Session: Numer. Methods for Fluid Flows</u></p> <p>P. Knobloch: On methods diminishing spurious oscillations in finite element solutions of convection-diffusion equations (15:10-15:35)</p> <p>G. Matthies, L. Tobiska: Mass conservation of finite element methods for coupled flow-transport problems (15:35-16:00)</p> <p>M. Olshanskii: An Augmented Lagrangian Based Solver for the low-viscosity incompressible flows (16:00-16:25)</p>
16:25 - 16:45	Coffee break	

	ROOM SCHOOL-LAB (SL)	ROOM MPI
16:45 - 18:00	<p><u>Minisymposium: R. Hartmann, P. Houston</u></p> <p>V. Heuveline: On a new refinement strategy for adaptive hp finite element</p> <p>R. Hartmann: Discontinuous Galerkin methods for compressible flows: higher order accuracy, error estimation and adaptivity</p>	<p><u>Session: Numerical Methods 1</u></p> <p>M. Bause: Apects of SUPG/PSPG and GRAD-DIV Stabilized Finite Element Approximation of Compressible Viscous Flow (16:45-17:10)</p> <p>F. Nataf, G. Rapin: Application of the Smith Factorisation to Domain Decomposition Methods for the Stokes Equations (17:10-17:35)</p> <p>A. Cangiani, E.H. Georgoulis, M. Jensen: Continuous-Discontinuous Finite Element Methods for Convection-Diffusion Problems (17:35-18:00):</p>
20:00 - 21:30	<p>Public Talk:</p> <p>Gersten: Vom Kochtopf bis zum Fußballspiel: Episoden zu der weltweiten Wirkung der Göttinger Strömungsforscher (in german)</p>	

	ROOM SCHOOL-LAB (SL)	ROOM MPI
Wednesday, 26 July		
9:15 - 10:15		Plenary Talk: W. Wall: <i>Variational Multiscale Methods for incompressible flows.</i>
10:15 - 10:45	Coffee Break	
10:45 - 12:25	<p><u>Session: Numerical Methods 3</u></p> <p>F. Alizard, J.-Ch. Robinet: Two-dimensional temporal modes in nonparallel flows (10:45-11:10)</p> <p>Q. Ye: Numerical simulation of turbulent boundary for stagnation-flow in the spray-painting process (11:10-11:35)</p> <p>A.I. Tolstykh, M.V. Lipavskii, E.N. Chigerev: Highly accurate 9th-order schemes and their applications to DNS of thin shear layer instability (11:35-12:00)</p> <p>N. Parumasur, J. Banasiak, J.M. Kozakiewicz: Numerical and Asymptotic Analysis of Singularly Perturbed PDEs of Kinetic Theory (12:00-12:25)</p>	<p><u>Session: Wall Functions 1</u></p> <p>T. Knopp: Model-consistent universal wall-function for RANS turbulence modelling (10:45-11:10)</p> <p>Th. Alrutz, T. Knopp: Near wall grid adaption for wall functions (11:10-11:35)</p> <p>Z. Hammouch: Similiarity solutions of a power-law non-Newtonian laminar boundary layer flows (11:35-12:00)</p> <p>B. Scheichl, A. Kluwick: On Turbulent Marginal Separation: How the Logarithmic Law of the Wall is Superseded by the Half-Power Law (12:00-12:25)</p>
12:30 - 14:00	Lunch Break	

	ROOM SCHOOL-LAB (SL)	ROOM MPI
14:00 - 15:00	<u>Open Discussion I</u> How to prevent spurious oscillations in boundary and interior layers?	<u>Session: Wall Functions 2</u> V.D. Liseykin, Y.V. Likhanova, D.V. Patrakhin, I.A. Vaseva: Application of boundary layer-type functions to comprehensive grid generation codes (14:00-14:25)
16:00 - 22:00	Excursion + Conference Dinner	

	ROOM SCHOOL-LAB (SL)	ROOM MPI
Thursday, 27 July		
9:15 - 10:15		Plenary Talk: P. Houston: <i>Discontinuous Galerkin Finite Element Methods for CFD: A Posteriori Error Estimation and Adaptivity.</i>
10:15 - 10:45	Coffee Break	
10:45 - 12:25	<u>Session: Anisotropic Meshes 1</u> H.-G. Roos: A Comparison of Stabilization Methods for Convection-Diffusion-Reaction Problems on Layer-Adapted Meshes (10:45-11:10) H.-G. Roos, H. Zarin: Discontinuous Galerkin stabilization for convection-diffusion problems (11:10-11:35) L. Tobiska: Using rectangular Q_p elements in the SD-FEM for a convection-diffusion problem with a boundary layer (11:35-12:00) C. Clavero, J.L. Gracia, F. Lisbona: A second order uniform convergent method for a singularly perturbed parabolic system of reaction-diffusion type (12:00-12:25)	<u>Session: Turbul. Modelling</u> Boguslawski: Sheare Stress Distribution on Sphere Surface at Different Inflow Turbulence (10:45-11:10) H. Lüdecke: Detached Eddy Simulation of Supersonic Shear Layer Wake Flows (11:10-11:35) O. Mierka, D. Kuzmin: On the implementation of turbulence models in incompressible flow solvers based on a finite element discretization (11:35-12:00) S.A. Gaponov, G.V. Petrov, B.V. Smorodsky: Boundary layer interaction with external disturbances (12:00-12:25)
12:30 - 14:00	Lunch Break	
14:00 - 14:50	Round Tours (DLR or Mathematical Institute)	
14:50 - 15:10	Coffee Break	

	ROOM SCHOOL-LAB (SL)	ROOM MPI
15:10 - 16:25	<p><u>Minisymposium: G.I. Shishkin, P. Hemker</u></p> <p>G.I. Shishkin: Grid approximation of parabolic equations with nonsmooth initial condition in the presence of boundary layers of different types</p> <p>L.P. Shishkina, G.I. Shishkin: A difference scheme of improved accuracy for a quasilinear singularly perturbed elliptic convection-diffusion equation in the case of the third-kind boundary condition</p> <p>D. Branley, A. Hegarty, H. MacMullen and G.I. Shishkin: A Schwarz method for a convection-diffusion problem with a corner singularity</p>	<p><u>Session: Anisotropic Meshes 2</u></p> <p>A.E.P. Veldmann: High-order symmetry-preserving discretization on strongly stretched grids (15:10-15:35)</p> <p>Th. Apel, G. Matthies: A family of non-conforming finite elements of arbitrary order for the Stokes problem on anisotropic quadrilateral meshes (15:35-16:00)</p> <p>G. Lube: A stabilized finite element method with anisotropic mesh refinement for the Oseen equations (16:00-16:25)</p>
16:25 - 16:45	Coffee Break	
16:45 - 18:00	<p><u>Minisymposium: G.I. Shishkin, P. Hemker</u></p> <p>I.V. Tselishcheva, G.I. Shishkin: Domain decomposition method for a semilinear singularly perturbed elliptic convection-diffusion equation with concentrated sources</p> <p>Th. Linss, M. Madden: Layer-adapted meshes for time-dependent reaction diffusion</p> <p>S. Hemavathi, S.Valarmathi: A parameter-uniform numerical method for a system of singularly perturbed ordinary differential equations</p>	<p><u>Open Discussion 2</u></p> <p>Anisotropic mesh generation for advection-dominated problems and for incompressible flow problems</p>

	ROOM SCHOOL-LAB (SL)	ROOM MPI
Friday, 28 July		
9:15 - 10:30	<p><u>Minisymposium: D. Das, T.K. Sengupta</u></p> <p>M.H. Buschmann M. Gad-El-Hak: Turbulent Boundary Layers: Reality and Myth</p> <p>L. Savic, H. Steinrück: Asymptotic Analysis of the mixed convection flow past a horizontal plate near the trailing edge</p>	
10:30 - 11:00	Coffee Break	
11:00 - 12:25	<p><u>Minisymposium: D. Das, T.K. Sengupta</u></p> <p>T.K. Sengupta, A. Kameswara Rao: Spatio-temporal growing waves in boundary-layers by Bronw- wich contour integral method</p> <p>A. Nayak, D. Das: Three-dimensional Temporal Instability of Unsteady Pipe Flow</p> <p>J. Hussong, N. Bleier, V.I.V. Ram: The structure of the critical layer of a swirling annular flow in transi- tion</p>	
12:25 - 12:40	Closing Session	
12:40 - 14:00	Lunch	