

**Preliminary Programme of the International Conference Parallel CFD 2004 (19/04/2004)**  
**May 24-27, 2004. Gran Canaria, Canary Islands, Spain.**

Monday 24	Tuesday 25	Wednesday 26	Thursday 27	Friday 28
8:30-9:15 <b>Registration</b>	8:30-9:15 <b>Invited Lecture:</b> <b>Toward Direct Numerical Simulation of High Reynolds Number Wall-Bounded Turbulence</b> <i>by Robert Moser</i> <a href="#">Chairman Trond Kvamsdal</a>	8:30-9:15 <b>Invited Lecture:</b> <b>DNS of canonical turbulence with up to 4096<sup>3</sup> grid points</b> <i>by Yukio Kaneda</i> <a href="#">Chairman Nobuyuki Satofuka</a>		9:00-10:30 <b>Parallel CFD Tutorial &amp; Short Course: Part III (1)</b> <b>Algorithm and Message Passing for Metacomputing</b> <i>(J. Baranger, M. Garbey, R. Keller)</i>
9:15-10:30 <b>Opening Ceremony</b> <b>Invited Lecture</b> <b>High Performance Computing at the Army Research Laboratory, Past, Present and Future</b> <i>by Charles J. Nietubicz</i> <a href="#">Chairman Akin Ecer</a>	9:15-10:00 <b>Invited Lecture:</b> <b>Parallel Coupled Flow and Transport Applications Including Unstructured and Adaptive Grids</b> <i>by Graham Carey</i> <a href="#">Chairman Jacques Périaux</a>	9:15-10:00 <b>Invited Lecture:</b> <b>Massive Parallelization as Principal Technology for Constrained Optimization of Aerodynamic Shapes</b> <i>by Sergey Peigin</i> <a href="#">Chairman Gabriel Winter</a>	9:15-10:00 <b>Invited Lecture:</b> <b>Recent advances and new challenges in adaptivity and optimal control for parallel CFD</b> <i>by Vincent Heuveline</i> <a href="#">Chairman Damien Tromeur-Dervout</a>	
10:30-11:00 <b>Coffee Break</b>	10:00-10:30 <b>Coffee Break</b>	10:00-10:30 <b>Coffee Break</b>	10:00-10:30 <b>Coffee Break</b>	10:30-11:00 <b>Coffee Break</b>
11:00-12:30 <b>Session 1 (3)</b> DIRECT NUMERICAL SIMULATION & LARGE EDDY SIMULATION (I) <a href="#">Chairman J. Jiménez</a>	11:00-12:30 <b>Session 2 (3)</b> SPECTRAL ELEMENT METHOD & LATTICE BOLTZMANN METHOD <a href="#">Chairman I. López</a>	10:30-12:30 <b>Session 7 (6)</b> MESH STRATEGIES <a href="#">Chairman G. Carey</a>	10:30-12:30 <b>Session 8 (6)</b> ENVIRONMENTAL FLOW & ECOLOGY PROBLEMS <a href="#">Chairman G. Winter</a>	10:30-12:30 <b>Session 11 (4)</b> COMPLEX FLOWS (turbulent jet flame, mixed convective and diphasic flows, non-newtonian fluids, quasi gas dynamic) <a href="#">Chairman R. Agarwal</a>
		10:30-12:30 <b>Session 12 (4)</b> UNSTEADY FLOW COMPUTATION & EFFICIENCY ISSUES <a href="#">Chairman Jacques Périaux</a>	10:30-12:30 <b>Session 15 (5)</b> MULTIGRID & LOAD BALANCING & SECURITY IN DISTRIBUTED PARALLEL COMPUTATION <a href="#">Chairman Akin Ece</a>	11:00-13:00 <b>Parallel CFD Tutorial &amp; Short Course: Part III (2)</b> <b>Advanced PETSc programming</b> <i>(D. Keyes, M. Knepley, K. Buschelman)</i>
12:30-14:00 <b>Lunch</b>	12:30-14:00 <b>Lunch</b>	12:30-14:00 <b>Lunch</b>		13:00-14:30 <b>Lunch</b>
14:00-14:45 <b>Invited Lecture:</b> <b>What would it take to substitute experiments with simulations for turbulent flows?</b> <i>By Javier Jiménez</i> <a href="#">Chairman Dave Emerson</a>	14:00-14:45 <b>Invited Lecture:</b> <b>Numerical simulation of two phase compressible turbulent mixing by Rayleigh-Taylor instabilities</b> <i>by Benoit Desjardins</i> <a href="#">Chairman Boris Chetverushkin</a>	14:00-16:00 <b>Mini Symposium 2 PARALLEL OPTIMIZATION TOOLS FOR CFD DESIGN PROBLEMS</b> <i>organized by Jacques Periaux and Gabriel Winter</i>	14:00-16:00 <b>Parallel CFD Tutorial &amp; Short Course: Part II. State of the art and best practice (3)</b> <ul style="list-style-type: none"><li>Lecture 4: Load Balancing for parallel CFD codes. (A. Ecer)</li><li>Lecture 5: Scalable parallel algorithm (D. Keyes)</li></ul>	14:30-16:30 <b>Parallel CFD Tutorial &amp; Short Course: Part III (3)</b> <b>Advanced PETSc programming</b> <i>(D. Keyes, M. Knepley, K. Buschelman)</i>
14:45-16:00 <b>Session 3 (3)</b> GRID COMPUTING & INTEGRATED PLATFORM & MONTECARLO SIMULATION <a href="#">Chairman G. Brenner</a>	14:45-16:00 <b>Session 4 (3)</b> ENERGY PHYSICS <a href="#">Chairman B. Chetverushkin</a>	14:45-16:00 <b>Session 9 (2)</b> RADIATION <a href="#">Chairman B. Galván</a>	14:45-16:00 <b>Session 10 (2)</b> KELVIN-HELMHOLTZ INSTABILITY <a href="#">Chairman M. Soria</a>	
14:45-16:00 <b>Parallel CFD Tutorial &amp; Short Course: Part I. Introduction (1)</b> <b>Practice and tools at the introductory level.</b> (M. Garbey)	14:45-16:00 <b>Parallel CFD Tutorial &amp; Short Course: Part II. State of the art and best practice (1)</b> <ul style="list-style-type: none"><li>Lecture 1: Parallel Programming with MPI/openMP. (R. Keller)</li></ul>			12:30-18:30 <b>Excursion</b>
16:00-16:30 <b>Coffee Break</b>	16:00-16:30 <b>Coffee Break</b>	16:00-16:30 <b>Coffee Break</b>		16:30-17:00 <b>Coffee Break</b>
16:30-18:30 <b>Session 5 (4)</b> DIRECT NUMERICAL SIMULATION & LARGE EDDY SIMULATION (II) <a href="#">Chairman J.McDonough</a>	16:30-18:30 <b>Session 6 (4)</b> AERODYNAMIC FLOW <a href="#">Chairman K. Matsuno</a>	16:30-18:30 <b>Session 13 (4)</b> FLOW CONTROL & FLOW CODES <a href="#">Chairman D. Emerson</a>	16:30-18:30 <b>Session 14 (4)</b> METACOMPUTING & TIME INTEGRATION <a href="#">Chairman M- Garbey</a>	17:00-17:15 <b>Closing Ceremony</b>
16:30-19:00 <b>Parallel CFD Tutorial &amp; Short Course: Part I. Introduction (2)</b> <b>Practice and tools at the introductory level.</b> (M. Garbey)	16:30-18:30 <b>Mini Symposium 1 LATTICE BOLTZMANN METHOD</b> <i>organized by Andrew T. Hsu</i>	16:30-18:30 <b>Parallel CFD Tutorial &amp; Short Course: Part II. State of the art and best practice (2)</b> <ul style="list-style-type: none"><li>Lecture 2: FEM in CFD. (R. Kirby, M. Knepley)</li><li>Lecture 3: Microfluidics: Small Devices Meet Big Iron. (D. Emerson)</li></ul>	16:30-17:30 <b>Parallel CFD Tutorial &amp; Short Course: Part II. State of the art and best practice (4)</b> <ul style="list-style-type: none"><li>Lecture 6: CFD blood flow simulation. (Dörthe Pesek)</li></ul>	
16:30-19:00 <b>Part I. Introduction (3)</b> <b>Introduction to the Portable, Extensible Toolkit for Scientific Computation Library (PETSc) .</b> <i>(M. Knepley, K. Buschelman)</i>				
20:30 <b>Welcome Cocktail</b>		20:30 <b>Congress Banquet</b>		