



Final Workshop

A European collaboration on development, quality assessment, and standardization of Particle Image Velocimetry for industrial applications

Göttingen - September 07- 08, 2006

DLR - Institute of Aerodynamics and Flow Technology, Göttingen, Germany

Thursdays the 7 th of September	Time
Reception at MPI Lecture hall	8:30
<i>Welcome</i> – J. Kompenhans	9:00
<i>Presentation of PivNet 2</i> – A. Schröder	9:15
Session I PIV Challenges	
<i>Synthesis of the 3 International PIV challenges</i> M. Stanislas, K. Okamoto, C. Kähler, J. Westerweel; LM Lille, Uni Tokyo, TU Braunschweig, TU Delft	9:30
Session II μPIV (Chair: J. Westerweel)	
<i>Micro Particle Image Velocimetry (μPIV) – an overview</i> R. Lindken, J. Westerweel; TU Delft	10:00
<i>Measurements and simulations of the flow field in an electrically-excited micromixer</i> D. Barz, H. Farangis Zadeh, P. Ehrhard; Uni Dortmund, FZ Karlsruhe	10:20
<i>Characterization of micro fluidic devices by measurements with μ-PIV and CLSM</i> M. Schlüter, M. Hoffmann, N. Rübiger; Uni Bremen	10:40
Coffee- Break	11:00
Session III Bio medical flows (Chair: P. Arroyo)	
<i>PIV measurements of flows in artificial heart valves</i> R. Kaminsky, S. Kallweit, M. Rossi, U. Morbiducci, L. Scalise, H. Weber, P. Verdonck; ILA, Uni Ancona, Uni Aachen, Uni Gent	11:20

<i>In vivo PIV measurements</i> P. Vennemann, R. Lindken, J. Westerweel; TU Delft	11:40
<i>PIV in lung bifurcation models</i> R. Theunissen, M. Riethmuller; VKI Brussels	12:00
<i>Time resolved PIV measurements of vortical structures in the upper human airways</i> S. Große, W. Schröder, M. Klaas; RWTH Aachen	12:20
Lunch	12:40

Session IV 3D PIV (Chair: R. Lindken)	
<i>Recent developments of PIV towards 3D measurements</i> M. P. Arroyo, K. D. Hinsch; Uni Zaragoza, Uni Oldenburg	13:50
<i>Holographic PIV system using a Bacteriorhodopsin (BR) film</i> T. Ooms, J. Braat, J. Westerweel ; TU Delft	14:10
<i>Digital in line holography system for three-dimensional-three-components (3D-3C) Particle Tracking Velocimetry</i> M. Malek, D. Lebrun, D. Allano; Uni Strasbourg, Uni Rouen	14:30
<i>Tomographic 3D-PIV and applications</i> G. Elsinga, B. Wieneke, F. Scarano, A. Schröder; TU Delft, LaVision, DLR	14:50
Coffee- Break	15:10
Session V CFD-PIV (Chair: A. Schröder)	
<i>Joint numerical and experimental investigation of the flow around a circular cylinder at high Reynolds number</i> C. Mockett, R. Perrin, M. Braza, E. Cid, S. Cazin, A. Barthet, A. Sevrain, F. Thiele; TU Berlin, Institute for Fluid Mechanics and Engineering Acoustics (ISTA)	15:30
<i>Dynamics of flow structures on heaving and pitching airfoils</i> C.J. Kähler, U. Scholz, R. Radespiel; TU Braunschweig	15:50
Session VI Application to appliances (Chair: F. De Gregorio)	
<i>Overview on PIV application to Appliances</i> E. P. Tomasini, P. Castellini, N. Paone, M. Rossi; Uni Polit. delle Marche of Ancona	16:10

Natural gas burners for domestic and industrial appliances: Application of the PIV technique L. Araneo, A. Coghe, F. Cozzi, A. Olivani, G. Solero; Polit. of Milano	16 :30
PIV application to fluid dynamics of bass reflex ports M.Rossi, E. Esposito, E. P. Tomasini; Uni Polit. delle Marche of Ancona	16:50
End of first day	17:10
Bus Transfer and Dinner	19:30

Friday the 8 th of September	Time
Session VII Turbomachinery (Chair: W. Hentschel)	
Selected applications of planar imaging velocimetry in combustion test facilities C. Willert, G. Stockhausen, J. Klinner, M. Voges, R. Schodl, C. Hassa, B. Schuermanns; DLR, ALSTOM	9:00
Recent applications of PIV to flow research in thermal turbomachinery J. Woisetschläger, E. Göttlich; TU Graz	9:20
Session VIII Internal combustion (Chair: A. Cogotti)	
PIV in engines – Introduction: status and challenges W. Hentschel; Volkswagen AG, R&D, Wolfsburg	9:40
Two-phase PIV: Fuel spray interaction with surrounding air S. Dankers, M. Gotthardt, T. Stengler, G. Ohmstede, W. Hentschel; Volkswagen AG, R&D, Wolfsburg	10:00
High Speed PIV: Applications in engines and future prospects D. P. Towers, C. E. Towers; Uni Leeds	10:20
Coffee- Break	10:40
Session IX Car industry (Chair: J. Woisetschläger)	
PIV in car industry: state of the art and future perspectives D. Cardano, G. Carlino, A. Cogotti; Pininfarina	11:10
Session X Questionnaire	
Questionnaire C. Willert, R. Lindken; DLR, TU Delft	11:40

Lunch	12:00
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Session XI	Complex aerodynamics	(Chair: K.-P. Neitzke)
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<i>PIV in icing wind tunnels</i> F. De Gregorio; CIRA	13:10
<i>PIV for complex high-lift-configurations</i> A. Schröder, K.-P. Neitzke, A. Heider, J. Agocs; DLR, Airbus-D	13:30
<i>Evaluation of large-scale wing vortex wakes from multi-frame PIV measurements in free-flight laboratory</i> C.F.v. Carmer, A. Heider, A. Schröder, R. Konrath, J. Agocs, A. Gilliot, J.-C. Monnier; DLR, ONERA	13:50
<i>Analysis of the vortex street generated at the core-bypass lip of a jet engine nozzle</i> J. Nogueira, M. Legrand, S. Nauri, P. A. Rodríguez, A. Lecuona; Uni Carlos III Madrid	14:10

Coffee Break	14:30
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Session XII	Supersonic flows	(Chair: A. Lecuona)
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<i>Overview of PIV in supersonic flows</i> F. Scarano; TU Delft	14:50
<i>PIV measurements in shock-tunnels</i> M. Havermann, J. Haertig, C. Rey, A. George; ISL	15:10
<i>PIV investigation of supersonic base flow - plume interaction</i> B.W. van Oudheusden, F. Scarano; TU Delft	15:30

Session XIII	Naval applications
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<i>Developments and applications of PIV in naval hydrodynamics</i> F. Di Felice and F. Pereira; INSEAN	15:50
Coffee Break	16:10
Round table discussion	16:30
Final remarks	17:00

Scientific conference management:

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Deadlines: Full paper submission: September 8, 2006

Please send abstract and paper to ilka.micknaus@dlr.de

Registration and Links: <http://pivnet.dlr.de/FinalWorkshop>

Please make reservations for accommodation also at

<http://pivnet.dlr.de/FinalWorkshop>

How to reach us ?

1. Airplane to [Frankfurt airport](#)

Train from [Frankfurt airport Fernbahnhof](#) - Göttingen
direct by ICE train ~ 2 hours

2. Airplane to [Hannover airport](#)

S-Bahn from [Hannover airport](#) - Hannover central station
~ 30 min

Train from [Hannover central station](#) - Göttingen
by ICE train ~30 min

3. Car (distance to Autobahn 3 km)

