

## Preface

Welcome to Naples for this 10<sup>th</sup> edition of the Pacific Symposium on Flow Visualization and Image Processing. We at Department of Industrial Engineering – Aerospace Division are proud and pleased to host this major event of Flow Visualization and Image Processing, which takes place on June 15-18, 2015 in the University of Naples Conference Centre.

The Pacific Symposium of Flow Visualization and Image Processing (PSFVIP) is an international forum which provides an opportunity to world-wide researches and engineers, in all areas of flow visualization, image processing and related techniques, to exchange knowledge and new experience in the spirit of collaboration and friendship under the auspices of the Pacific Center of Thermal-Fluids Engineering (PCTFE).

PSFVIP started in Honolulu in 1997 and followed by Honolulu (1999), Maui (2001), Chamonix (2003), Daydream Island (2005), Honolulu (2007), Kaohsiung (2009), Moscow (2011) and Busan (2013). The 10th Pacific Symposium on Flow Visualization and Image Processing (PSFVIP-10) will take place in Naples Italy.

PSFVIP-10 will cover, but will not be limited to, the following topics:

Flow field and surface flow visualization: Classical and advanced optical methods (Schlieren, Shadowgraph, Interferometry, Holography, Holographic Interferometry, Speckle, Background oriented schlieren), Laser based methods (PIV/PTV, LIF, LDV), Absorption/Emission recording, Spectroscopy, Laser sheet imaging (Smoke and Particle visualization), Electronic Sparks and Discharges, IR thermography, Liquid crystals, Pressure and Temperature sensitive paints, Tufts, Digital data Acquisition and Processing (Image processing, Wavelet image analysis, Image-assisted methods), Numerical flow visualization (CFD), Tomographic reconstruction, Inverse problems in image analysis.

Fluid Flows: Subsonic/Supersonic/Hypersonic, Steady and Unsteady, Laminar and Turbulent, Physiological/Biological, Multiphase, Heat Transfer, Combustion, Non-Newtonian fluids, Jet, Swirling, Turbo-machinery, Environmental, Reacting, Micro/Nano, Fluidics and others.

The scientific committee accepted 152 papers from 34 countries, that are arranged in a parallel three-track program and organized in the following 16 sections:

Aerodynamics	Micro/Nano Flows
Biological Flows	Multiphase Flow/Droplets
Environmental Flows	Numerical Flow Visualization
Heat and Mass Transfer	Optical Methods
High Speed Flows	PIV/PTV
Image Processing	Reactive Flows/Combustion
Jets	Turbulent Flow
LIF/PSP	Others

The PSFVIP symposia are also an opportunity to reflect the current state of the art by inviting key personalities to deliver plenary lectures. In 2015, we are much privileged to have the following presentations:

Fast-responding pressure-sensitive paints for unsteady flow measurements  
*Masaru Kameda, Tokyo University of Agriculture and Technology*

Imaging buoyancy driven flows  
*Andrew W Woods, BP Institute, Cambridge University, United Kingdom*

Under-expanded Impinging Supersonic Jet Flow  
*Julio Soria, Monash University, Australia*

Another established tradition of the PSFVIP symposium is the exhibition by top companies, which is held concurrently with the sessions. For PSFVIP-10, the organizing committee has to thank the following companies for their active participation:

LaVision GmbH  
<http://www.lavision.de>

TSI GmbH  
<http://www.tsi.com>

Finally, PSFVIP-10 could not have been a success, as I hope it will be, without the help of University of Naples, the official host institution, and in particular the Department of Industrial Engineering and the technical sponsors: Pacific Center of Thermal-Fluids Engineering, AIDAA (Italian Association of Aeronautics and Astronautics), CIRA (Centro Italiano Ricerca Aerospaziale). Moreover, the PSFVIP-10 Organizing Committee wishes to thank all the students of the research group, who assisted them with their help. At last but not at least, the thorough support of the PSFVIP Committee, with special regard to prof. S. Mochizuki, is wholly acknowledged.

Special thanks are due also to all the participants to the conference, who spent time and money to make this 10<sup>th</sup> edition of the PSFVIP symposium a true success. I hope their effort was worth.

I wish you all a fruitful and successful PSFVIP-10 and a nice, memorable stay in Naples.

PSFVIP-10 Chairman  
Gennaro Cardone