The aim of this workshop is to bring together all the people involved in hyperspectral data processing**, generally speaking.**

People are invited to submit new research results on the following suggested topics :

- **Spectrometers and hyperspectral sensors : design and calibration**
- **Physical modeling, physical analysis**
- **Noise estimation and reduction**
- **Dimension reduction**
- **Unmixing, source separation, endmember extraction**
- **Segmentation, classification**
- **High performance computing and compression**

Keynote plenary speakers :

Hyperspectral imaging and food safety.
By Alan M. Lefcourt, Ph.D.
Research Biomedical Engineer
Environmental Microbial and Food Safety Laboratory
USDA Agricultural Research Service, Beltsville, USA

Planetary exploration with VIS-NIR imaging spectrometers: the VIRTIS case
By Gianrico Filacchione
VIRTIS science/technical team
INAF-IASF Rome, Italy.

Hyperspectral remote sensing for forestry applications**.**
By Kamaruzaman Jusoff, Professor
Professor of Forest Engineering Survey
Department of Forest Production, Faculty of Forestry,
Universiti Putra Malaysia (UPM), Malaysia

Committees

General Chair
Jocelyn Chanussot, Grenoble Institute of Technology, France

Technical Committee
Jon Atli Benediktsson, University of Iceland, Iceland
Jose Bioucas Dias, Technical University of Lisbon, Portugal
Xavier Briottet, ONERA, Toulouse, France
Lorenzo Bruzzone, University of Trento, Italy
Jocelyn Chanussot, Grenoble Institute of Technology, France
Thomas Cooley, Air Force Research Labs, USA
Melba Crawford, Purdue University, USA
Sylvain Douté, Laboratoire de Planètologie de Grenoble, France
Jenny Q. Du, Mississippi State University, USA
Florence Forbes, INRIA Mistis, France
Paolo Gamba, University of Pavia, Italy

David Goodenough, University of Victoria, Canada
Xiuping Jia, Australian Defence Force Academy, Canberra, Australia
Bor-Chen Kuo, National Taichung University, Taiwan, Republic of China
John Kerekes, Rochester Institute of Technology, USA
Antonio Plaza, University of Extremadura, Spain
Ryuei Nishii, Kyushu University, Japan
Ils Reusen, VITO, Belgium
John Richards, The Australian National University, Australia
Stanley Rotman, Ben-Gurion University of the Negev, Israel
Alan Schaum, Naval Research Laboratory, Washington, D.C, USA
Sebastiano Serpico, University of Genoa, Italy
Anita Simic, University of Toronto, Canada
Eric Slezak, Observatoire de la Cote d'Azur, France
James Theiler, Space and Remote Sensing Sciences, Los Alamos National Laboratory, USA
Jean-Yves Tourneret, IRIT Laboratory, Toulouse, France

Organizing Committee
Lucia Bouffard Tocat, Grenoble Institute of Technology, France
Xavier Ceamanos, Laboratoire de Planètologie de Grenoble, France
Isabelle Cieren, Grenoble Institute of Technology, France
Sylvain Douté, Laboratoire de Planètologie de Grenoble, France
Mathieu Fauvel, INRIA Mistis, France
Florence Forbes, INRIA Mistis, France
Murtaza Khan, GIPSA-Lab, Grenoble, France
Yuliya Tarabalka, Grenoble Institute of Technology, France
Silvia Valero, Grenoble Institute of Technology, France
Alberto Villa, Grenoble Institute of Technology, France

Publication Chair
Bin Luo, Grenoble Institute of Technology, France

08:30 - 09:30 **Plenary 2 - Hyperspectral imaging and spectroscopy in astrophysics** (tbc)

09:30 - 11h10 **Session thu-o-1-a**
Recent Advances in Spectral Mixture Analysis of Hyperspectral Data (2/3)
Session Chairs: Jose M. Bioucas Dias, Tech. Univ. Lisbon – Portugal
Qian Du, Mississippi State University – USA

09:30 - 09:50 Reducing Noise in Hyperspectal Data – A Nonlinear Data Series Analysis Approach
David Goodenough and Tian Han

09:50 - 10:10 On the incorporation of spatial information to endmember extraction: survey and algorithm comparison
Antonio Plaza, Gabriel Martin and Maciel Zortea

10:10 - 10:30 Hyperspectral unmixing from a convex analysis and optimization perspective
Tsung-Han Chan, Wing-Kin Ma, Chong-Yung Chi and ArulMurugan Ambikapathi

10:30 - 10:50 Component Analysis-Based Unsupervised Linear Spectral Mixture Analysis for Hyperspectral Imagery
Xiaoli Jiao, Yingzi (Eliza) Du and Chein-I Chang

10:50 - 11:10 Applying linear spectral unmixing to airborne hyperspectral imagery for mapping crop yield variability
Chenghai Yang, James Everitt and Joe Bradford

09:30 - 11h10 **Session thu-o-1-b**
Applications in forestry
Session Chairs: David Goodenough, Univ. of Victoria – Victoria, BC – Canada
Ils Reusen, VITO – Belgium

09:30 - 09:50 LiDAR-Guided Analysis of Airborne Hyperspectral Data
Olaf Niemann, Gordon Frazer, Rafael Loos and Fabio Visintini

09:50 - 10:10 Fusing minaert-k with spectral unmixing for forest heterogeneity mapping using chris-proba data
Jochem Verrelst, Michael Schaepman and Jan Clevers

10:10 - 10:30 Mapping spatio-temporal variation in Douglas-fir (pseudotsuga menziesii) foliar biochemistry
David Goodenough, K. Olaf Niemann, Geoffrey Quinn and Jessie Liu

10:30 - 10:50 Estimating foliar biochemistry from reflectance and the detection of phellinus sulphurascens induced stress
Geoffrey Quinn, Olaf Niemann and David Goodenough

10:50 - 11:10 Discrimination of remnant tree species and regeneration stages in queensland, australia using hyperspectral imagery
Armando Apan, Stuart Phinn and Tek Maraseni

11:10 - 11:40 Coffee break