



IEEE Transactions on Geoscience and Remote Sensing

CALL FOR PAPERS

UPCOMING SPECIAL ISSUE – DATA FUSION

Submission deadline: May 31, 2007

Data fusion emerged as a new topic in the late '80, but it was only by the first half of the following decade that the availability of remotely sensed data in digital form by different sources allowed considering remote sensing data fusion. At that point, the Data Fusion Technical Committee of GRSS recognized the need for a Special issue of TGARS about "Data Fusion", which was published in May 1999. That pioneering issue brought to the attention of many researchers the need for an increased effort towards the joint exploitation of multiple data or information sources.

In the following years, and until now, some of the fields highlighted in that issue came to a full maturity. Many other research fields have however emerged, as results of the continuous improvement in data quality and quantity, and the fast changing electronic and optical technologies, that allow recording, transmitting and storing of huge information amounts. For instance, spatial and spectral resolution of remotely sensed data are steadily increasing, going towards very high resolution (VHR) sensors, both in the spatial and in the spectral sense. This requires combined spectral and spatial analysis, and fusion of features extracted and selected at different scales. Moreover, the third dimension is no more an option for remotely sensed data, and multiple bi-dimensional view analysis of the same area, as well as multiple three-dimensional data comparison and combination, are some new faces of the same data fusion problem. At a higher level, feature fusion has been also increased by the larger CPU power and memory capacity of modern processors, still to be pushed by the use of multiple CPUs and grid/distributed computing.

New research fields are emerging, and new forces are working towards new data fusion algorithms, architectures and solutions. The Special Issue will give them an option to discuss their achievements and set a further mileage stone in the Data Fusion Technical Committee history.

Papers are solicited on Multi-scale/view/resolution data fusion, applications of data fusion approaches to hyperdimensional and multi-source data, feature extraction and pre-processing methods for data fusion, and Information fusion approaches. Submissions are encouraged however in a broad range of algorithms which demonstrate substantive use of data fusion remote sensing methodologies.

Procedure:

Prospective authors should follow the regular guidelines of the IEEE Transactions on Geoscience and Remote Sensing as listed inside the back cover of the Transactions. Authors should submit their manuscripts electronically to <http://mc.manuscriptcentral.com/tgrs>. Instructions for creating new user accounts, if necessary, are available on the login screen. Please indicate in your submission that the paper is intended for the Data Fusion Special Issue by selecting "Data Fusion Special Issue" from the pull down menu for manuscript type.

Inquiries concerning the Special Issue should be directed to the Guest Editors:

Paolo Gamba
Department of Electronics
University of Pavia
Via Ferrata, 1
27100 Pavia (Italy)
Telephone: +39-0382-985781
Fax: +39-0382-422583
Email: paolo.gamba@unipv.it

Jocelyn Chanussot
GIPSA-Lab, Signal and Images Department
INP Grenoble
BP 46
F-38 402 Saint Martin d'Herès Cedex, France
Telephone: +33 - 476 826 273
Fax: +33 - 476 826 384
E-Mail: jocelyn.chanussot@lis.inpg.fr