

## CALL FOR PAPERS FOR SPECIAL SESSION IN DSP2009



Submissions are invited for a special session on

### *“DSP for Navigation and Positioning”*

to be held at the 16th International Conference on Digital Signal Processing (DSP2009) in Santorini, Greece, July 5-7, 2009.

The increasing demand for precise and reliable positioning technologies is no longer to be demonstrated. The application domains are in constant growth, as well for civil as for military applications.

The European initiatives in this area are truly historical striking decisions and the implied momentum throughout the European research and industrial entities is unprecedented. The European GNSS Supervisory Authority (<http://www.gsa.europa.eu/>) is particularly well paving the way towards an independent and most demanding policy in this respect.

The recent ‘Growing Galileo2009 days’ (<http://www.gsa.europa.eu/go/communications/events/growing-galileo-09>) emphasized the hottest applications

- Road telematics
- Applications targeted at SMEs
- Fleet management and logistics
- Agriculture
- Applications with social/public dimension
- EGNOS for aviation
- SAR service

Amongst the research fields addressed by these challenges, the thematic research associated to *Signal Processing* appears to be the area where the research effort has to be concentrated. The problems to be solved become even more difficult when the positioning addresses areas where Satellite positioning could no longer provide sufficient accuracy, integrity, availability and continuity of service: dense urban areas, indoor positioning, ‘white’ zones’ like mountain areas, etc. These cases impose a multisensory approach, with GNSS augmentation procedures relying on hybridation with ground wireless network-based positioning (telecommunication networks, Terrestrial Digital TV, sensor networks), self-sensory embedded devices (inertial, barometric, MEMS, ...)

Let us just quote some of the most relevant action lines to be followed and challenges to be tackled

- Multi-frequency receivers and more generally Software Receivers
- Interoperability with multiple constellations
- Acquisition and tracking of weak GNSS signals
- Interference and multipath mitigation
- Channel modeling for positioning systems.
- Array processing for interference and multipath suppression
- Algorithms for high precision End-to-end Signal processing in complete positioning and navigation systems involving all the processing stages to nonlinear filtering, data fusion, etc.
- Synchronization methods.
- Position estimation in non-line-of-sight situation
- Sensor networks and network-aided positioning..

All accepted papers will be published in the conference proceedings and will be available for online access via IEEE Xplore.

<i>Important Dates</i>	
Deadline for paper submission – <b>Special Session</b>	<b>March 1<sup>st</sup>, 2009</b>
Acceptance Notification	March 15, 2009

Questions about the session should be sent to the session organizer:

Prof. F. Castanié [francis.castanie@tesa.prd.fr](mailto:francis.castanie@tesa.prd.fr)



Authors of papers are invited to submit original contributions, not exceeding eight (8) pages, including figures, tables and references. The submission instructions can be found at [www.dsp2009.org](http://www.dsp2009.org). Please note that all submissions will be peer-reviewed for quality and applicability. The authors should submit the full camera-ready paper, following the general Call for Papers instructions, at:

<http://www.dsp2009.org/default.asp?pg=submission&lng=en>

A copy of the paper should be sent as an email attachment (in PDF format) to [francis.castanie@tesa.prd.fr](mailto:francis.castanie@tesa.prd.fr)