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IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing

Special Issue on “New Challenges and Opportunities in Scatterometry”

In October 1998, in anticipation of the Advanced SCATterometer (ASCAT) on the MetOp satellite, EUMETSAT and ESA organised the “Emerging Scatterometer Applications: from Research to Operations Workshop”. In 2011, with ASCAT on MetOp-A in orbit since 2006 and with the commencement of phase A studies for the next ASCAT type scatterometer generation, a follow-on conference was organised in Darmstadt [IEEE TGARS, vol. 50, no. 7, July 2012]. Accentuating more than 20 years of European scatterometer data and various successful applications, the focus of that meeting was on C-band scatterometry. Yet it also addressed recent advances in the US, Chinese, and Indian scatterometer programs, taking account of the increasing interest in spaceborne scatterometry around the world.

Today we witness the continuous improvement of the scatterometer data record and the technological advancement in scatterometer instrumentation. While the MetOp Second Generation scatterometers, which are currently studied under Phase-B, will include innovative observation modes such as polarimetry, the historic scatterometer archives in both C-band and Ku-band are becoming a data cornerstone for understanding our climate system. With the organisation of a third scatterometer science conference in February 2016, EUMETSAT and ESA aim specifically at promoting recent advances in scatterometry and to prepare for the development and exploitation of MetOp-SG scatterometer data. Key contributions of this conference will be published in this special issue of IEEE JSTARS.

For this special issue we will invite contributions of unpublished original research in the following domains:
1. Recent technological developments, including innovative polarisation options considered for MetOp-SG Scatterometers;
2. Emerging requirements and applications according to the challenges and opportunities provided by the recent technological advances;
3. Scatterometer science and applications over ocean, land and ice and the exploitation of the scatterometer data records available to date;
4. Synergies and complementarities between scatterometer missions, in terms of data content and spatio-temporal sampling.

The special issue follows the February 2015 and 2016 Scatterometer conferences, but submission is not restricted to the conference contributors and attendees. The papers will be judged on their scientific quality and suitability for the special issue.

Format
All submissions will be peer reviewed according to the IEEE Geoscience and Remote Sensing Society guidelines. Submitted articles should not have been published or be under review elsewhere. Submit your manuscript on http://mc.manuscriptcentral.com/jstars, using the Manuscript Central interface and select the “New challenges and opportunities in Scatterometry” special issue manuscript type. Prospective authors should consult the site http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7416303 for guidelines and information on paper submission. Please note that IEEE JSTARS applies a mandatory page over length charge of $200 per page (beginning with page 7 and beyond).

Schedule
June 1, 2016: Full paper submission deadline
May 2017: Publication date

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