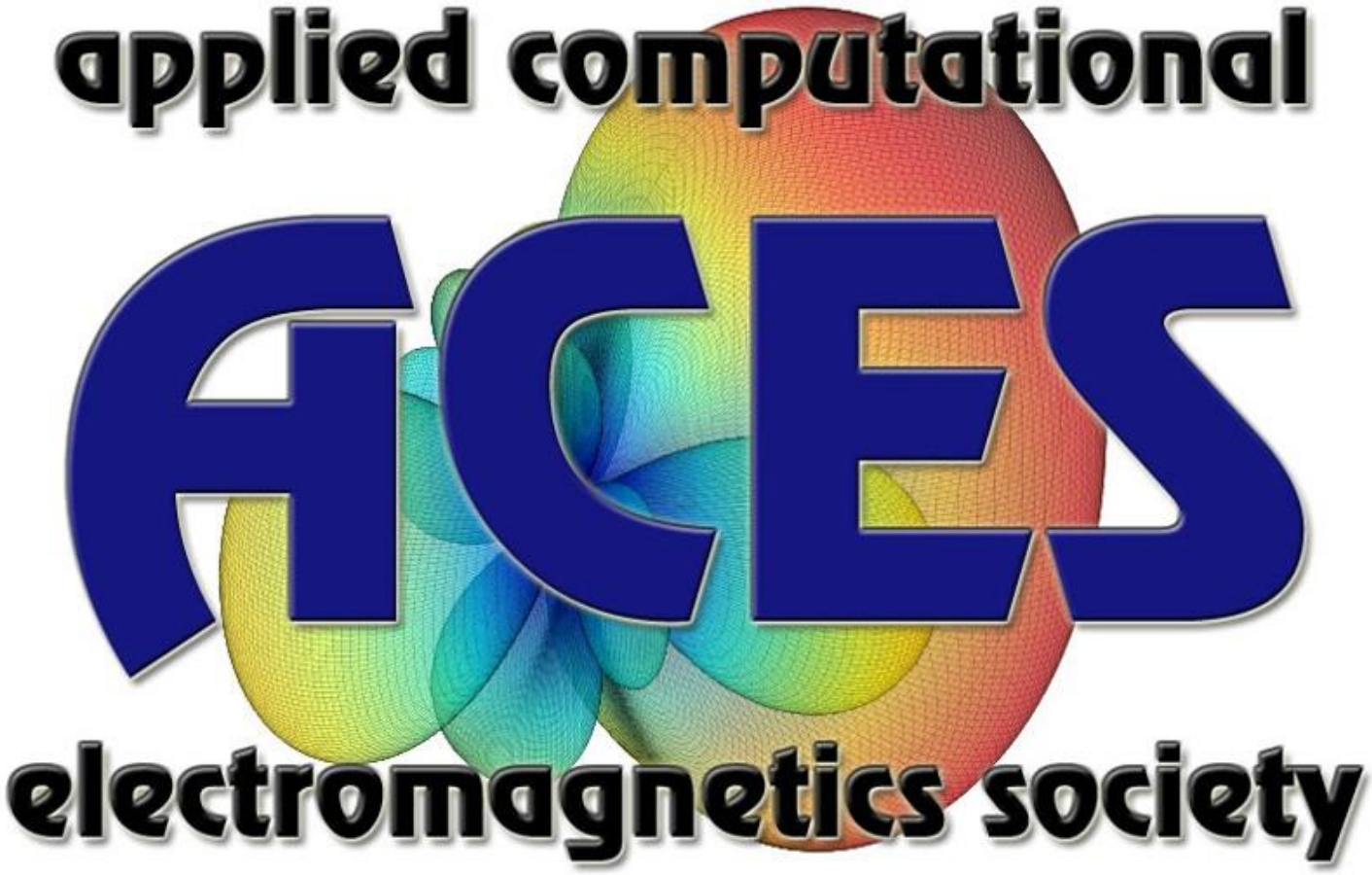


Newsletter

December 2017

Applied Computational Electromagnetic Society (ACES)

President's Message

Greetings from Golden Colorado, USA.

It is that time of the year when we look back at the year which is ending and we look forward to the new year.

Looking back at 2017, ACES had a lot of activities including two successful conferences. The first was held in **Florence, Italy** (**March 2017)** and it was chaired by Sami Barmada of the University of Pisa, Italy. The second was held in **Suzhou, China (August 2017)** and it was chaired by Yongxin Guo of the National University of Singapore, Singapore. In addition, the ACES China Branch was established (August 2017) and its offices were inaugurated in Xuzhou, China. The China branch is chaired by Wenhua Yu of the Jiangsu Normal University, China.

In addition, the ACES Newsletter was relaunched in September 2017 and the ACES Express Journal has moved to a new format.

Looking forward to 2018 and beyond, two ACES conferences are planned for 2018. The first to be held in **Denver Colorado, USA (March 24-29, 2018)** and it is chaired by Branislav Notaros of the Colorado State University, USA. The second to be held in **Beijing, China (August 7-10, 2018)** and it is co-chaired by Dongling Su of the Beihang University, China and Fan Yang of the Tsinghua University, China. In addition, the Board of Directors approved the 2019 ACES Conference, to be held in Miami FL, USA, and to be co-chaired by Osama Mohammed and John Volakis of the Florida International University in Miami Florida, USA. We are looking forward to seeing you at ACES future conferences.

In closing, on behalf of the ACES Board of Directors and myself, our best wishes for a happy holiday season and a prosperous 2018.

Abd A. Arkadan,
President-ACES
Professor of Electrical Engineering
Colorado School of Mines
Golden CO, USA

In This Issue

President's message
ACES Express Journal
ACES Journal
ACES 2018 Conferences
ACES Book Series

Become ACES Member

ACES membership offers many advantages that include access to ACES Journal and discounted registration fees for ACES conferences.

Membership:
Basic: $40/year
Student/Retired: $25/year
Life: $400/year

Institutional Membership:
Basic (US): $360/year
Basic (Intl): $540/year
Expanded (US): $535/year
Expanded (Intl): $715/year

Become ACES member by signing up here.

Join ACES Group on LinkedIn

ACES Express Journal

We are pleased to inform you that the ACES Express Journal has moved to a new format which will offer the benefits of quicker processing as well as indexing of these papers. In moving towards this new format, the **Express Journal papers will be included within the Regular Journal issue (each month) but with its own section of papers, "Express Papers".**

The Express papers that were previously published online will be re-published in the Regular ACES Journal issues staring with December 2017 issue until we have completed indexing all those already posted on line as Express papers.

Please keep in mind that the paper submissions for the Express Papers will continue to go through the same existing online submission process, keeping the two submission systems (Regular and Express) separate from one another.

We would like to take this opportunity to thank all authors of the Express Journal for their contributions and for general supports to ACES activities.

ACES Journal

The ACES Journal is devoted to the exchange of information in computational electromagnetics, to the advancement of the state of the art, and to the promotion of related technical activities. The ACES Journal welcomes original, previously unpublished papers, relating to applied computational electromagnetics. All papers are refereed. Access to all issues of ACES Journal are available online.

October 2017 Issue
November 2017 Issue

Upcoming ACES Conferences

2018 ACES Denver

You are cordially invited to the 2018 International Applied Computational Electromagnetics Society Symposium, ACES2018, to be held from March 24-29, 2018, in Denver, Colorado, USA.

As of the submission deadline (November 15, 2017), we had 260 papers submitted. The system will remain open for accepting papers for some time.

Our Session Organizers have done a phenomenal job in proposing an extremely interesting, timely, and diverse set of sessions and recruiting high quality papers and authors from around the world. Their work is greatly appreciated! We have lined up six outstanding plenary speakers that will provide quite unique perspectives on some of the most interesting and relevant topics for the community.

Our early registration fee of $600 for ACES members and $650 for non-members, which includes meals during the conference, six tutorials, six plenaries, etc., it's quite unique. The Symposium will be held at the Embassy Suites by Hilton, Denver Tech Center. The ACES negotiated hotel rate is $149 and it is available 3 days before and after the conference official dates, to allow you to enjoy more of the "Mile High City", skiing, hiking, Estes Park, Rocky Mountain National Park, and many other opportunities nearby.

We owe a particular debt of gratitude to our Platinum Sponsors Lockheed Martin and LGS Innovations, to the Gold Sponsor Altair, and to our Technical Sponsor IEEE and IEEE Denver Section! Special thanks and sincere appreciation go to all members of the ACES2018 Organizing Committee for their outstanding efforts and contributions which all together promise to make our conference a great success!

We look forward to seeing you at the Denver edition of ACES Conference this March 24-29.

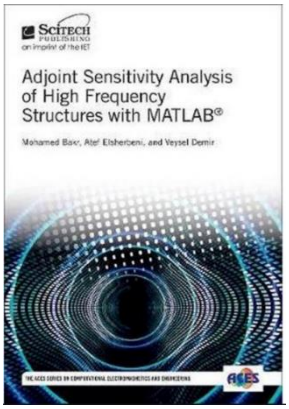
Branislav Notaros
ACES2018 Denver General Chair

2018 ACES-China

More to come from the 2018 ACES-China Organizing Committee in the upcoming months! For general information, please click the link above to visit the conference page.

ACES Books Series

Mohamed H. Bakr, Atef Z. Elsherbeni, and Veysel Demir, "Adjoint Sensitivity Analysis of High Frequency Structures with MATLAB"



This book presents the theory of adjoint sensitivity analysis for high frequency applications through time-domain electromagnetic simulations in MATLAB®. This theory enables the efficient estimation of the sensitivities of an arbitrary response with respect to all parameters in the considered problem. These sensitivities are required in many applications including gradient-based optimization, surrogate-based modeling, statistical analysis, and yield analysis.

Using the popular FDTD method, the book shows how wideband sensitivities can be efficiently estimated for different types of materials and structures, and includes plenty of well explained MATLAB® examples to help readers absorb the content more easily and to make the theory more understandable to the broadest possible audience. Topics covered include a review of FDTD and an introduction to adjoint sensitivity analysis; the adjoint variable method for frequency-independent constitutive parameters; sensitivity analysis for frequency-dependent objective functions; transient adjoint sensitivity analysis; adjoint sensitivity analysis with dispersive materials; adjoint sensitivity analysis of anisotropic structures; nonlinear adjoint sensitivity analysis; second-order adjoint sensitivities; and advanced topic.

Prospective authors are Encouraged to Contact the Series Editor, Prof. Andrew F. Peterson (afpeterson@gatech.edu**) for future ACES book series publications.**

ACES is looking forward to your contributions to the ACES Journal and the Express Journal as well as your participation in the 2018 Conferences. We look forward to your feedback and involvement in ACES activities.

Sincerely,

Sami Barmada
Editor - ACES Newsletter