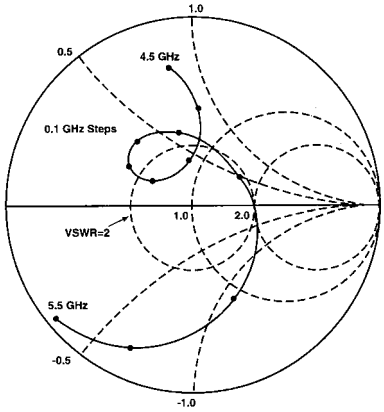

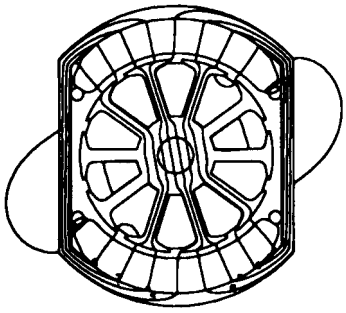

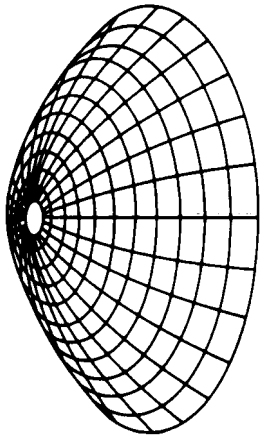

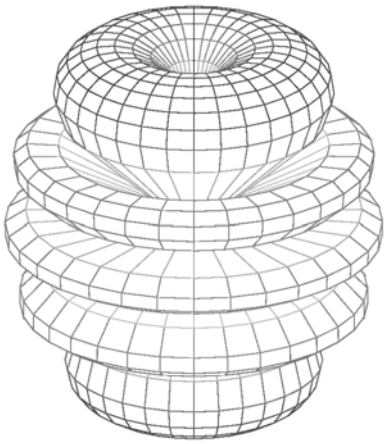

Applied Computational Electromagnetics Society Journal

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Phased and Adaptive
Array Antennas

Guest Editor
Deb Chatterjee

November 2006
Vol. 21 No. 3
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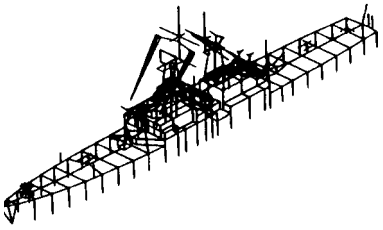

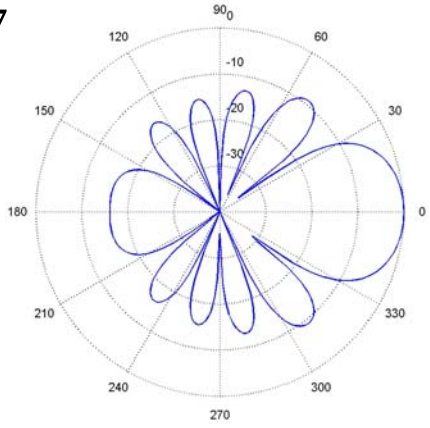

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Special Issue on
Phased and Adaptive Array Antennas

Guest Editor
Deb Chatterjee

November 2006
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Guest Editorial

ACES Invited Special Issue on *Phased and Adaptive Array Antennas*

This *invited* special issue of the Applied Computational Electromagnetics Society (ACES) Journal on *Phased and Adaptive Array Antennas* aims to capture information on a broad spectrum of the various aspects involved in array radiating systems and their applications. Recent advances in this area can be found in [1]-[3]. The earlier special issue [4] on a closely similar topic served as a guide in preparing for this ACES special issue. The information gleaned from these sources resulted in a widening of the scope of this special issue than was originally planned. For enhanced impact, it appeared appropriate to solicit contributions from leading researchers in the antennas and computational electromagnetics (CEM) areas. To that end, in quite a few cases, the topic of the invited contribution was suggested to the individual authors. All invited papers were peer-reviewed per standard guidelines.

In all there are twenty papers co-authored or authored by leading researchers from various countries. They represent a wide range of topics on phased and adaptive arrays. Specifically, papers on characteristic basis functions, genetic algorithms, ship-board arrays, conformal arrays, phased arrays for biomedical applications, multiple-beam phased arrays, array mutual coupling compensation, power-divider network, etc., appear here and provide useful information on both modeling and practical applications of phased and adaptive arrays. The valuable contribution of the authors and their patience is gratefully acknowledged.

In the course of assembling the special issue, special thanks go to Prof. Atef Elsherbeni (editor-in-chief) and Prof. Alexander Yakovlev (associate editor-in-chief) of ACES Journal, University of Mississippi (Ole Miss). The encouragement from Dr. W. Ross-Stone, editor-in-chief, *IEEE Antennas and Propagation Magazine*, is deeply appreciated. It is a pleasure to acknowledge the extensive editorial help from Mr. Mohamed Al Sharkawy (Ole Miss), in the final stages. At University of Missouri Kansas City (UMKC), Mr. Naresh Vijaya Yalamanchili had painstakingly retyped some of the manuscripts for this invited special issue. Thanks to all of them for their continued encouragement and timely help. Without their active support this endeavor would not have come to fruition.

The final judgment on the quality of this invited special issue rests on the reader. It is hoped that the reader shall find the contents in these papers of continuing value. Any drawback or other errors is the sole responsibility of the guest editor.

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[1] Arun K. Bhattacharyya, *Phased Array Antennas: Floquet Analysis, Synthesis, BFNs, and Active Array Systems*. Hoboken, NJ, USA: John-Wiley & Sons, Inc., 2006.

[2] L. Josefsson and P. Persson, *Conformal Array Antenna: Theory and Design*. Hoboken, NJ, USA: Wiley-Interscience, 2006.

[3] L. C. Godara**,** *Smart Antennas***.** Boca Raton, FL, USA: CRC Press, 2004.

[4] R. J. Mailloux (ed.)**,** Special Issue on *Phased Arrays*, IEEE Transactions on Antennas and Propagation, vol. 47, no. 3, March 1999.

Deb Chatterjee is an associate professor of Electrical and Computer Engineering, with the Computer Science and Electrical Engineering (CSEE) Department at University of Missouri Kansas City (UMKC), where he joined as a faculty in August 1999. He obtained his M.A.Sc. and Ph.D. degrees in Electrical and Computer Engineering and Electrical Engineering, from Concordia University, Montreal, Canada and University of Kansas, Lawrence, Kansas, respectively. His current research interests are in phased arrays, high-frequency scattering and propagation, miniature, ultra-wideband microstrip antennas. He has served as a reviewer of technical articles for *IEEE Transactions on Antennas and Propagation*, *IEEE Antennas and Wireless Propagation Letters*, *Radio Science*, and the *Applied Computational Electromagnetics Society* (ACES) *Journal*. Currently he serves as an associate editor for *International Journal of Antennas and Propagation* (IJAP). Dr. Chatterjee has published 35 articles in peer-reviewed journals and conference proceedings, and has taught courses in the area of electromagnetics and antennas at undergraduate and graduate levels. He is a member of the IEEE Antennas and Propagation and the Applied Computational Electromagnetics Societies.

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