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1. Code validation. This is done using internal checks or experimental, analytical or other computational data. Measured data of potential utility to code validation efforts will also be considered. This usually involves identification of numerical accuracy or other limitations, solution convergence, numerical and physical modeling errors, and parameter trade-offs. However, it is also permissible to address issues such as ease-of-use, set-up time, run time, special outputs, or other special features.

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3. Computational studies of basic physics. This involves using a code, algorithm, or computational technique to simulate reality in such a way that better, or new physical insight or understanding, is achieved.

4. New computational techniques or new applications for existing computational techniques or codes.

5. “Triks of the trade” in selecting and applying codes and techniques.

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Applications of interest include, but are not limited to, antennas (and their electromagnetic environments), networks, static fields, radar cross section, inverse scattering, shielding, radiation hazards, biological effects, biomedical applications, electromagnetic pulse (EMP), electromagnetic interference (EMI), electromagnetic compatibility (EMC), power transmission, charge transport, dielectric, magnetic and nonlinear materials, microwave components, MEMS, RFID, and MMIC technologies, remote sensing and geometrical and physical optics, radar and communications systems, sensors, fiber optics, plasma, particle accelerators, generators and motors, electromagnetic wave propagation, need for preconditioning, test equipment evaluation, eddy currents, and inverse scattering.

Techniques of interest include but not limited to frequency-domain and time-domain techniques, integral equation and differential equation techniques, high-frequency and low-frequency techniques, numerical and geometrical optics, method of moments, finite differences, and hybrid methods.

For directions of possible and appropriate, authors are required to provide applications of quantitative accuracy for measured and/or computed data. This issue is discussed in “Accuracy & Publication: Requiring, quantitative accuracy statements to accompany data,” by E. K. Miller, ACES Newsletter, Vol. 9, No. 3, pp. 23-29, 1994, ISBN 1056-9170.

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