ANTHONY M. WAAS, Professor of Aerospace Engineering and Director, Composite Structures Laboratory at the University of Michigan, received his B.Sc. with first-class honors from Imperial College, University of London, United Kingdom, in 1982, and the M.S. in 1983 and Ph.D. in 1988 with a minor in Applied Mathematics from the California Institute of Technology, all in Aeronautics. He joined the faculty of the Department of Aerospace Engineering at the University of Michigan in 1988, where he was promoted to the rank of Associate Professor in 1994 and Professor in 2000. His current research interests include mechanics of composite structures and composite materials, structural stability, optical methods for experimental stress analysis, biomechanics, and smart materials and structures. Dr. Waas has served as a Member of the AIAA Structures Technical Committee (1991–1994, 1997–2001), the American Society of Mechanical Engineers (ASME) Technical Committee on Instability of Solids and Structures (1995–2001), the ASME Technical Committee on Experimental Mechanics (1996–2000), and the ASME Structures and Materials Committee (1998–2002). He is a recipient of the Royal Aeronautical Society Prize of Imperial College (1982), the William Balhaus Prize in Aeronautics at the California Institute of Technology (1988), a Rackham Faculty Fellowship (1990), the University of Michigan Aerospace Department Teaching Award (1995), the Society of Automotive Engineers Ralph Teetor Award (1995), the American Academy of Mechanics Junior Award for Research (1997), and a University of Michigan Aerospace Department Research Award (1998). He is a Fellow of ASME and an Associate Fellow of AIAA, the American Society for Composites, and the American Academy of Mechanics. He is an Associate Editor of the *Journal of Composites: B* and has served on the Editorial Advisory Board of the AIAA *Journal of Aircraft*. He is author or coauthor of more than 60 articles and papers.

Editorial Policy Statement on Numerical Accuracy and Experimental Uncertainty

The purpose of this statement is to reiterate the desire to have high-quality investigations with properly documented results published in the AIAA journals, and to clarify acceptable standards for presentation of numerical and experimental results. Recently there has been considerable concern with the quality of published numerical solutions. Also the practice of including error bars on experimental results is often lacking. In response to these problems, a succinct policy statement on these items is as follows:

> *The AIAA journals will not accept for publication any paper reporting (1) numerical solutions of an engineering problem that fails adequately to address accuracy of the computed results or (2) experimental results unless the accuracy of the data is adequately presented.*

The implementation of this policy will be at the discretion of the Editors and Associate Editors of the journals.

The accuracy of the computed results is concerned with how well the specified governing equations in the paper have been solved numerically. The appropriateness of the governing equations for modeling the physical phenomena and comparison with experimental data is not part of this evaluation. Accuracy of the numerical results can be judged from grid refinement studies, variation of numerical parameters that influence the results, comparison with exact solutions, and any other technique the author selects. The validity of the accuracy estimation will be judged by the reviewers of the paper. An estimate of accuracy of the numerical results must be presented when comparisons with other numerical and experimental results are given, and when new results of the author will likely become data for future comparisons. Since accuracy of various computed results obtained from a numerical solution can vary significantly, the accuracy of the result being used must be stated. Accuracy of results from a validated code must still be established to show that proper input parameters have been used with the code.

Estimates of experimental uncertainty are required for all plotted or tabulated data obtained by authors. If data from other workers are used, they require no uncertainty. Unless otherwise stated and properly referenced, it is assumed that the uncertainty of authors' output data is estimated by the small-sample method[1] with assumed odds 20:1. All reported data must show uncertainty estimates if used in text or tables; for example, $T = 642 + 8$ K. All figures reporting new data should contain uncertainty estimates either on the figure with error bars in both coordinate directions or in the caption; for example, uncertainty in $T = \pm 8$ K at 20:1 odds. Investigations with limited data should present tabulated results in the paper while extensive data should be available elsewhere in tabulated form for use by other workers.

Finally, the accepted documentation procedures for a technical investigation must be used. For computational papers, the author must provide an adequate description of the numerical solution procedure, if not documented elsewhere. In addition, the complete governing equations must be specified with sufficient detail along with the input parameters to the code so that a reader could reproduce the results of the paper. For papers concerned with experimental test, thorough documentation of the experimental conditions, instrumentation, and data reduction techniques is required.

[1] Kline, S. J., and McClintock, F. A., "Describing Uncertainties in Simple-Sample Experiments," *Mechanical Engineering*, Jan. 1953, pp. 3–8.