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This journal is devoted to original papers in applied mathematics which have an intimate connection with applications. It is expected that each paper will be of a high scientific standard; that the presentation will be of such character that the paper can be easily read by those to whom it would be of interest; and that the mathematical argument, judged by the standard of the field of application, will be of an advanced character.

In accordance with their general policy, the Editors welcome particularly contributions which will be of interest both to mathematicians and to scientists or engineers. Authors will receive galley proof, and offprints will be provided in electronic form free of charge. A downloadable and printable PDF of each published article will be available to authors immediately after publication. Detailed instructions will be sent with galley proofs.

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FOREWORD

This issue of the Quarterly of Applied Mathematics collects papers presented at a meeting at Brown University to celebrate the 80th birthday of our friend and colleague Walter Strauss. We are indebted to Govind Menon for coordinating the collection and processing of these papers.

Over his long scientific career, which already spans nearly 60 years and still continues at full steam, Walter has been a pioneer and a leading figure in the area of nonlinear partial differential equations. His contributions, which cover a very broad spectrum, have had, and continue to have, a major impact in the field.

Walter's early work focused on the theory of nonlinear wave equations. He practically invented the mathematical theory of scattering of nonlinear waves, leading to the remarkable conclusion that for a broad class of nonlinear wave equations every finite-energy wave is a scattering state.

Walter was among the first to employ constrained variational methods for constructing solitary wave solutions. This work has generated considerable research activity in the theory of nonlinear elliptic equations in unbounded domains.

Walter has made fundamental contributions to kinetic theory, and in particular in the areas of classical solutions to the Vlasov-Maxwell system and the stability of equilibria in collisionless plasmas.

In the process of investigating the stability and instability of solitary waves in conservative systems, Walter developed a general framework for a theory of stability. This seminal and insightful work has had a broad impact, as it has provided a basic tool for the investigation of stability and instability in quite diverse contexts.

In recent years, Walter has focused his research on the theory of water waves. Of particular significance in that direction is his investigation of the role of vorticity.

Walter's contribution to mathematics is not limited to his own research but also extends to his excellent teaching and lecturing, his elegant writing, and especially his dedicated mentoring of a large number of students and postdocs.

Walter is widely valued as a friend and colleague, a source of warmth and inspiration for all.

Constantine Dafermos and Yan Guo

SUGGESTIONS CONCERNING THE PREPARATION OF MANUSCRIPTS FOR THE QUARTERLY OF APPLIED MATHEMATICS

The editors will appreciate the authors' cooperation in taking note of the following directions for the preparation of manuscripts. These directions have been drawn up with a view toward eliminating unnecessary correspondence, avoiding the return of papers for changes, and reducing the charges made for "author's corrections."

Submission of Accepted Manuscripts:

Submission of manuscripts electronically-prepared in LaTeX is required, with a strong preference for $\mathcal{AMS}$-LaTeX. To assist authors in preparing electronic manuscripts, the AMS has prepared author packages. The author package includes instructions for preparing electronic manuscripts, the *AMS Author Handbook*, samples, graphic creation instructions, and a style file. When choosing a style file for the *Quarterly of Applied Mathematics*, choose the QAM-specific journal package, made available by the American Mathematical Society at `www.ams.org/distribution/qam/qamauthorpac.html`. For more technical information, please visit `www.ams.org/authors/author-faq.html`.

Contributions to the *Quarterly of Applied Mathematics* should be submitted in final form. Only typographical errors should be corrected in proof; composition charges for any major deviations from the manuscript will be passed on to the *Quarterly of Applied Mathematics*. An abstract is required for all QAM manuscripts.

After the contribution has been accepted for publication, electronic files (.tex files along with .eps (or .tiff) files for figures) should be submitted via the web at `www.ams.org/submit-book-journal`, or sent via email to `pub-submit@ams.org`, or sent on CD to the Electronic Prepress Department, American Mathematical Society, 201 Charles St., Providence, RI 02904-2294 USA. When submitting electronic manuscripts via email or CD, please include a message indicating that the paper has been accepted for publication in the *Quarterly of Applied Mathematics*.

Electronic Graphics:

Comprehensive instructions on preparing graphics are included in PDF format in the author package. Submit files for graphics as EPS (Encapsulated PostScript) files. This includes graphics originating via a graphics application as well as scanned photographs or other computer-generated images. If this is not possible, TIFF files are acceptable as long as they can be opened in Adobe Photoshop or Illustrator.

Authors using graphics packages for the creation of electronic art should avoid the use of any lines thinner than 0.5 points in width at 100%. Many graphics packages allow the user to specify a "hairline" for a very thin line. Hairlines often look acceptable when proofed on a typical laser printer. However, when produced on a high-resolution laser imagesetter, hairlines become nearly invisible and will be lost entirely in the final printing process.

Screens should be set to values between 15% and 85%. Screens that fall outside of this range are too light or too dark to print correctly. Variations of screens within a graphic should be no less than 10%.

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