

The IMA Journal of Applied Mathematics

The *IMA Journal of Applied Mathematics* is a direct successor of the *Journal of the Institute of Mathematics and its Applications* which was started in 1965 with the aim of publishing papers in all areas of the application of mathematics. Since the appearance of the *IMA Journal of Numerical Analysis* in 1981, analytic and numerical treatments of both physical and nonphysical applied mathematical problems, including those arising in industry, have formed the main part of the Journal's contents. The Journal also seeks to publish papers on new developments of existing mathematical methods, especially those that have relevance to more than one field of application and also new mathematical methods suggested by particular applications. Longer papers which survey recent progress in topical fields of mathematics and its applications are also published.

Editors: Professor Alan R. Champneys, Dept of Engineering Mathematics, University of Bristol, Queen's Building, University Walk, Bristol BS8 1TR, UK. Email: A.R.Champneys@bristol.ac.uk

Optics, engineering dynamics, control theory, aerospace engineering, computational applied mathematics, dynamical systems, nonlinear waves, elastic theory, artificial intelligence, neural networks.

Professor David J. Needham, School of Mathematics, The University of Birmingham, Edgbaston, Birmingham, B15 2TT, UK. Email: needhamd@for.mat.bham.ac.uk

Reaction diffusion, fluid dynamics, multiphase flow, granular media, nonlinear waves, dynamical systems, meteorology, partial differential equations, industrial mathematics, diffraction.

Professor Demetrios T. Papageorgiou, Department of Mathematical Sciences, New Jersey Institute of Technology, University Heights, Newark, NJ 07102-1982, USA. Email: depapa@aphrodite.njit.edu

Fluid dynamics, computational fluid dynamics, interfacial waves, water waves, hydrodynamic stability, microgravity flows, multiphase flows, aerodynamics, dynamical systems, combustion, financial mathematics.

Professor Yibin Fu, Professor Applied Mathematics, Department of Mathematics, Keele University, Keele, Staffordshire ST5 5BG, UK. Email: y.fu@keele.ac.uk

Various aspects of linear and nonlinear solid mechanics such as wave propagation, bifurcation, stability, homogenization, fundamental solutions, constitutive models, phase transformation, resonance phenomena, fracture mechanics, nano-mechanical, bio-mechanical applications.

Instructions to authors

Submission of manuscripts. Authors should email or post electronic files or original manuscripts to the Production Editor via imamat_submissions@oxfordjournals.org or by post to The IMA Journal of Applied Mathematics, School of Mathematics, University of Birmingham, Birmingham, B15 2TT, UK. Authors must indicate which one of the four Editors should review the manuscript, according to the subject areas listed above under each Editor's name. Authors should supply a list of between three and five referees who would be suitable to referee the paper. Please enclose full name, email and postal addresses.

Electronic submissions are particularly welcomed, and these should be in the form of a single postscript or pdf file. Authors of accepted papers will be asked to provide a $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ file of the paper, so please bear this in mind when preparing the paper for submission. Further information on this is given below.

Alternatively hard copies can be sent, and in that case four clear copies are required. Authors should also send two copies of any of their own unpublished work to which a crucial reference is made in the paper submitted. If, in the opinion of the Editor, a paper is more suitable for one of the other IMA Journals, they may forward it directly to the editors of that journal for consideration, subject to the consent of the authors.

Authors may not submit papers that are under consideration for publication elsewhere, and, if an author decides to offer a submitted paper to another journal, the paper must be withdrawn from IMAMAT before the new submission is made.

Manuscripts may include supplementary material to be made available by the publisher as online-only content, linked to the online manuscript. More information is available at www.imamat.oxfordjournals.org.

Manuscript layout. Manuscripts should be typewritten on one side only with wide margins on high-quality paper using double spacing throughout. Each page of the manuscript should be numbered. The front page should contain the article title, author's name and affiliation, and a summary. The summary or abstract should not exceed 300 words and should be intelligible to general readers without recourse to the main text. A list of notations should be avoided, but new notation and departures from standard use should be explained in the text. Footnotes should be avoided.

Articles should, in general, begin with an introduction which adequately covers the literature and scope of the paper. Each section in the paper should be numbered and equation numbers should be related to their own section. Each article should have, in general, a conclusion or discussion section. Any appendices should precede the Reference section.

Equations should be typed wherever possible and punctuated to conform to their place in the syntax of the sentence.

The SI system of units should be used in all papers.

$\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ submissions are encouraged. It is important that material submitted in disk form is accompanied by two hard copies, including all figures and tables. The computer format and file name must be clearly marked on the disk. Please follow the Journal style conventions as described in the Notes to Contributors.

Illustrations. Please note it is most important that lines and symbols should be drawn boldly enough to stand reduction to the desired size. A list of captions and titles should be typed at the end of the manuscript. Any photographs should be high-quality glossy prints.

References. References will be listed at the end of the main text. The Harvard system, whereby the surname of the author and year of publication of the reference are used in the text, is preferred. The list of references should be in alphabetical order of first-cited names. References by the same authors should be in chronological order. The normal form of listed references is author's surname, initials; year; article title; journal name (abbreviated); volume number (in bold); inclusive page numbers.

Copyright/Offprints. It is a condition of publication in the Journal that authors grant an exclusive licence to The Institute of Mathematics and its Applications. This ensures that requests from third parties to reproduce articles are handled efficiently and consistently and will also allow the article to be as widely disseminated as possible. In assigning copyright, authors may use their own material in publications provided that the Journal is acknowledged as the original place of publication, and Oxford University Press is notified in writing and in advance. In consideration of for assignment of copyright, the publisher will provide free online access to the paper. Offprints may be ordered at extra cost at the proof stage.