Mission Statement

MICS aims to meet the publication needs of the burgeoning community of mathematicians who work on problems that are important to industry. Its central theme is the stimulation of innovative mathematics by the modelling and analysis of such problems across the physical, biological and social sciences.

The intensely collaborative nature of industrial mathematics will be reflected in the way MICS attracts and processes papers. The editorial board will include many experienced researchers who are regularly involved in industrial problem-solving around the world. This will enable them proactively to encourage rapid publication of appropriate case studies. Unsolicited submissions will also be welcomed and it is planned that strong alliances with relevant websites and newsletters will create natural channels for such submissions.

Although MICS has been conceived as the result of the vibrant Canadian culture of mathematics-in-industry, it intends to publish contributions from around the world, highlighting the commonality of key methodologies and pinpointing areas where mathematical creativity will have most impact.

www.micsjournal.ca

The Fields Institute is a center for mathematical research activity - a place where mathematicians from Canada and abroad, from business, industry and financial institutions, can come together to carry out research and formulate problems of mutual interest. Our mission is to provide a supportive and stimulating environment for mathematics innovation and education by promoting mathematical activity in Canada and helping to expand the application of mathematics in modern society.

A focal point for excellence in mathematics, bridging research, education and industry.

Aim and Scope

Industrial Mathematics and Mathematical Modeling has been a creative branch of mathematics for many years now. The growth of commercial and industrial mathematics has stimulated numerous maths-in-industry study groups, graduate programs on industrial mathematics and the emergence of national and international networks such as *MITACS* in Canada and the *Knowledge Transfer Network in Industrial Mathematics* in the United Kingdom. However, there are few research journals available to students who wish to learn relevant skills and for researchers to archive papers in which modelling is an essential part of the final product.

MICS provides a much needed venue for sharing ideas among academic and industrial researchers and a learning opportunity for newcomers and students. The case study and electronic format puts the emphasis on the modelling process and is intended to make the journal accessible to a wide variety of readers. It will also provide a source of interesting mathematical problems for researchers in other areas of mathematical sciences.

The main differences between MICS and existing journalsare:

• an emphasize on the modelling process and carrying the model through to a conclusion; the models must be motivated by real world applications.

•the papers must record the essential ingredients of the iterative modelling process, namely problem identification, simplification, mathematical and computational analysis and model verification; they must provide valuable insights for practitioners, give testable conclusions, and serve as useful sources of interesting mathematical problems.

MICS is an entirely electronic journal with the possible exception of a book format for special issues.

Our ultimate goal is to make the journal an important source for publishing high quality research in industrial mathematics as well as a continuing and evolving source of interesting and relevant problems for students and researchers.

Audience
Mathematicians, engineers, biological, physical and medical researchers and social scientists in university and in industry.

Format
One volume with approximately 20 papers per year in two categories: papers proposed by the editorial board and submitted papers.

Special issues
Issues of papers on particular topics.

Mode of Delivery
Electronic, free of charge.

Administrative & Technical Support
Fields Institute.

Editors-in-chief
Alistair D. Fitt (University of Southampton),
Hilary Ockendon (Oxford University)

Managing Editor
Huaxiong Huang (York University).

Editorial board
Active researchers who are regular participants and organizers of math-in-industry study groups, workshops or other collaborations in industrial and applied mathematics.