

# ***21st International Workshop on Water Waves and Floating Bodies***

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**Loughborough University**

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## Foreword

The International Workshop on Water Waves and Floating Bodies is an annual meeting of engineers and scientists with a particular interest in water waves and their effects on floating and submerged bodies. The workshop was initiated by Professor D. V. Evans (University of Bristol) and Professor J. N. Newman (MIT) following informal meetings between their research groups in 1984. First intended to promote communications between workers in the UK and the USA, the interest and participation quickly spread to include researchers from many other countries. In the organization and conduct of the workshop, particular emphasis is given to the participation of younger researchers, interdisciplinary discussion between engineers and scientists, and the presentation of preliminary work before it is published elsewhere. Attendance is restricted to the authors of submitted extended abstracts that are reviewed for acceptance by a small committee. These proceedings include the extended abstract for every presentation made at the 21<sup>st</sup> workshop. The proceedings of previous workshops are available online at [www.rina.org.uk](http://www.rina.org.uk) thanks to the cooperation of the Royal Institution of Naval Architects.

This 21<sup>st</sup> International Workshop on Water Waves and Floating Bodies is dedicated to Professor David Evans on the occasion of his retirement. It is particularly appropriate that this workshop takes place in Loughborough as we all had the privilege of working with David at early stages in our careers.

*Chris Linton, Maureen McIver, Phil McIver*

## Host Institution for the 21<sup>st</sup> Workshop

Loughborough University

## Organising Committee

Chris Linton, Maureen McIver, Phil McIver, Jackie Baseley

## Cover Illustration

Loughborough is about as far from the sea as it is possible to get within Great Britain. However, this does not mean that we are without “water waves and floating bodies”. In the 18<sup>th</sup> and 19<sup>th</sup> centuries an extensive system of canals was built in Britain for the transportation of cargoes such as coal and lumber, although the system is now mostly used by holidaymakers. The cover illustration shows a boat on the canal at Zouch, a short distance to the north of Loughborough.



Professor David Evans

## David Evans

*As noted in the foreword to these proceedings, this workshop grew out of discussions between David Evans and Nick Newman in the early 1980s, and the first workshop took place at MIT in February 1986. Last year in Svalbard, the workshop was dedicated to Nick Newman on the occasion of his 70<sup>th</sup> birthday. With this 21<sup>st</sup> meeting in Loughborough the workshop has “come of age” and it is an appropriate time and place to celebrate the achievements of David Evans who is due to retire later this year. Nick Newman has kindly provided the following commentary that encompasses both David’s career and the development of this workshop.*

David Evans came to the United States to work as a Post-Doc at the Stevens Institute of Technology, after completing his Ph.D. in Manchester. We first met during a meeting of the H-5 Panel. Since we had both studied under Fritz Ursell, we felt an immediate sense of kinship.

Meetings of the H-5 Panel took place under the aegis of the Society of Naval Architects and Marine Engineers. These meetings brought together the small group of researchers working in the field of ‘Analytical Ship-Wave Relations’. The direct technical advances resulting from these meetings were less important than the opportunities for informal exchange, especially between established senior people and aspiring younger workers. Most of the Panel Members were American, but foreign guests frequently attended and added greatly to the value of these meetings.

When David’s Post-Doc at Stevens was finished, I was able to offer him a similar position in 1968-9 at MIT. That was a wonderful year for me and my students. David extended our mathematical horizons, and entertained us with his Welsh humor. We were sorry when he left, but shared his pleasure that he was going to a promising new position at Bristol.

David’s subsequent career at Bristol has added another chapter to the remarkable progression of British applied mathematicians who have studied the hydrodynamics of floating bodies. In this respect, David Evans follows in the foot steps of Kelvin, Lamb, Havelock, and Ursell. David was able to lead a group of research students and post-docs, working on a scale that was not possible for his predecessors. But that is not to imply that David was primarily an administrator. His own contributions are well known, including scattering by multiple bodies, wave-power absorbers, and trapping structures, to name but a few high peaks of his research. Remarkably, in parallel with these activities, David *did* fill important administrative positions, ultimately serving as Pro-Vice Chancellor of Bristol University. Fortunately this did not interfere with his participation in the Workshops.

David’s role as a leader expanded beyond his own research group, to include other students throughout the UK. He brought them together, in the spirit of the H-5 Panel, on two occasions when I was present. The first, at Bristol, was so successful that we resolved to hold an informal meeting with our students and junior colleagues in

conjunction with the 1984 Naval Hydrodynamics Conference in Hamburg. That *ad hoc* event led us to think of an annual meeting, which originally was envisaged to include students and colleagues from the UK and USA. Serious planning took place when the Evans family came to Lymington, on 31 July 1985, to visit with my wife and myself on our boat. Little did we imagine, as we drafted the announcement and requirements for attendance, that these would be copied verbatim for so many years in different parts of the world.

The International Workshops on Water Waves and Floating Bodies (IWWWFB), as they came to be known, could not have been started without financial support. For the first Workshop I approached George Lea, in the US National Science Foundation. His response was positive, but he was concerned that the proposed meeting should result in significant *work*. The name 'Workshop' was chosen to satisfy this concern. The rest, as they say, is history. But I also want to note that, while David and I were the first organizers and hosts, the subsequent remarkable success of the IWWWFB is due to the many colleagues who have taken up where we left off.

It is most appropriate to celebrate David Evans' career on this occasion of the 21<sup>st</sup> IWWWFB. It also is notable that the venue is Loughborough, where the next chapter is unfolding in the spirit of Kelvin, Lamb, Havelock, Ursell, and Evans.