

International Workshop on

Holographic Metrology in Fluid Mechanics

May 28th - 30th, 2003

Burleigh Court
on the campus of
Loughborough University, UK

1st Announcement

Organizing committee:

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**please send your expression
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GENERAL

In fluid mechanics three-dimensional structures become more and more important and new techniques to directly measure those phenomena, e.g. in turbulent flows are highly demanded by the research community. The aim of this workshop is to bring together those researcher world-wide working on holographic metrology for fluid dynamics. This field has received general attention again very recently. A round table linked to the PIV'01 conference in Goettingen with 27 participants from various universities, institutes, industry and SME's has demonstrated the large interest in this technique.

Over the last ten years systems have been presented capable of directly measuring the displacement in extended volumes. Due to the development of computer power, handling and processing of the huge amount of data stored in a single hologram has now become feasible. But still, holography on photographic film seems to be an old fashioned technique, regarding its cumbersome chemical processing. Some new recording materials, however, promise a dramatic change for the future. The future of purely digital solutions is very much dependent on the progress in suitable sensors like CCD and CMOS. But already with today's equipment impressive results have been obtained from electronically recorded holograms using numerical reconstruction processes.

SCOPE

This three-day workshop intends to stimulate discussions about the various techniques and topics related to holographic metrology for fluid dynamics (e.g. holographic materials, laser sources and evaluation schemes for 3D image data). It is planned as a low-cost workshop to attract the majority of active researchers in this field. Participants are expected to show their own work in a 30 minutes oral presentation, including a general discussion. The number of participants is therefore strictly limited and a presentation shall be about 30 minutes including discussion. The state-of-the-art and some hot topics are presented by invited speakers introducing each session.

VENUE

The venue, Burleigh Court in Loughborough, UK is a very pleasant place offering seminar rooms in a convenient connection with a hotel and a restaurant. The approximate participation fee of less than € 100,00 already includes two nights at the hotel with breakfast, lunches and a formal dinner. This price will be possible due to obtaining substantial funding. The organizing committee tries to further reduce it by looking for sponsors.

PARTICIPATION

Everyone interested to participate is asked to send an informal expression of interest to the address given below. It should contain the full name, address, affiliation and telephone- / fax-numbers as well as your email-address and an abstract of what you are going to present with a maximum of 2 pages and 2 figures. It is planned to output a bound volume afterwards, thus it will be necessary to provide a manuscript ready for the workshop (details will be given later). The results of the workshop will also be presented in a condensed way during an open PIVNet-Workshop in Europe in 2004. People with a more general interest in the topic, who are not directly addressed by the present expert-workshop should consider visiting the upcoming PIVNet-workshop or using the HPIV communication site <http://photon.physik.uni-oldenburg.de/hpiv>

INVITED SPEAKERS

(list to be supplemented)

Dr. Donald Barnhart, Loughborough / UK
and Urbana, IL / USA

Bacterio-rhodopsin as a high resolving and reusable recording material

Prof. Hui Meng, Buffalo, NY / USA

Recent developments in HPIV and digital HPIV

Prof. Joseph Katz, Baltimore / USA