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## Education Liquid Crystal Outreach: The human Nematic Experiment

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## EDUCATION

# LIQUID CRYSTAL OUTREACH: the Human Nematic Experiment

by Joseph MacLennan, Physics Department,  
University of Colorado at Boulder, USA

**T**he Ferroelectric Liquid Crystals Materials Research Group (FLC MRG) at the University of Colorado in Boulder is a collaboration among research faculty in the Departments of Physics, Chemistry and Chemical Engineering. In addition to developing and investigating new FLC systems, the group maintains an active outreach and education programme to bring new perspectives to our work and to enrich the educational experience of students.

The University's CU Wizards programme hosts lecture-demonstrations in astronomy, chemistry and physics, both on campus and at venues state-wide. Held on the last Saturday of each month during the school year, these hour-long shows are intended primarily for students in grades 5 through to 9, although parents and teachers typically form a large part of the audience.

In the spring of 1997, the first Liquid Crystal Wizards Show was produced by the FLC MRG. It was conceived and presented by Noel Clark, David Walba, Joe MacLennan, and Chris Connery from nearby Broomfield High School. The Show set out to demonstrate the

fundamental optical and electrical properties of liquid crystals, illustrating key scientific principles with simple analogies and examples from 'toy' systems, and showing how these properties can be exploited in high-tech display and communications devices. One of the highlights of the show was undoubtedly the Human Nematic Experiment. Our idea was to try to achieve some sort of liquid crystal-like ordering in rod-like objects held by members of the audience. The Wizard Show was an ideal venue for performing a live experimental simulation of the isotropic-nematic phase transition. We used parents at the Show for the demonstration, and the spectacle of parents jiggling to the music of the Beatles proved highly entertaining to their children seated in the auditorium. Details of the Human Nematic Experiment, together with stills from the videotape are available at the Worldwide Web site <http://bly.colorado.edu.mrc>.

**Editors note:** Readers are invited to submit reports of demonstrations or experiments that can be used in Outreach Programmes to further the knowledge of and interest in liquid crystals.

## Post-Doctoral Position

The Complex Fluid Group at the University of São Paulo (Brazil) seeks a Post-Doctorate, trained in the Complex Fluid Physics Field. Period: 1-4 years. The applicant must have specific skills in experimental optical techniques, X-ray scattering and diffraction for measuring liquid crystals, ferroelectrics and antiferroelectrics physical parameters. Monthly financial support of US\$2500.00.

If interested, please forward curriculum vitae and two letters of recommendation to:

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**Instituto de Física**  
**Departamento de Física Experimental**  
**Caixa Postal 66.318**  
**05315-970 São Paulo (SP), Brazil**

c/o Prof. Dr Antonio M. Figueiredo Neto  
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fax: (+55)(11)818 6715

## LIQUID CRYSTALS ON THE WORLD-WIDE WEB

The International Liquid Crystal Society has a presence on the World-Wide Web through a server established at the Liquid Crystal Institute, Kent State University, Ohio, USA. The address of the server is:

<http://alcom.kent.edu/ILCS>

Information available at present includes members' addresses, forthcoming meetings and positions vacant. It is expected that additional material will be accessible in the future.

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