



Notice of a lecture presented by the
Australian Institute of Physics (SA branch)

<http://www.physics.adelaide.edu.au/aip-sa>

Meetings: Dr John Patterson (08) 8303 5291 jpatters@physics.adelaide.edu.au Fax: (08) 8303 4380
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at **7:30 pm, Tuesday March 16th 1999**

**in the KERR GRANT Lecture Theatre,
Physics Building, the University of Adelaide**

**“ Two’s company, three’s a crowd
(until recently)! ”**

by A/Prof. Igor Bray

<http://yin.ph.flinders.edu.au/igor.html>

**School of Chemistry, Physics and Earth Sciences
Flinders University**

Abstract:

Scattering experiments are crucial to our observing the world around us. We daily use scattered light to learn about our surroundings. In addition, atomic physicists scatter electrons from various targets to either learn about the target properties or to measure the collision parameters of practical interest. Since the universe is dominated by the light elements, often existing in plasma conditions, an understanding of electron scattering on light atoms and ions is important for various branches of astrophysical sciences. Furthermore, these processes are of great interest to the lighting, plasma display, and controlled fusion industries. Yet, the prototype, electron-hydrogen scattering problem, has given computational physicists a headache continuously since the first attempts to solve it by Massey and Mohr (two Australians) back in 1932. Though formally this three-body problem cannot be solved, recently and very controversially, we demonstrated that given sufficient computer power we can force the problem to yield all of its secrets.

Biography:

Igor Bray is currently an Australian Research Council (ARC) Senior Research Fellow at Flinders University (South Australia). His research interests are in the area of electron/positron/photon scattering and ionisation of atoms and ions. Among his distinctions are being the winner of the 1995 David Syme medal, joint winner of the 1996 Walter Boas medal, and joint winner of the 1998 Pawsey medal.

Dinner:

Members are invited to have dinner prior to the lecture from 6pm onwards in the Equinox restaurant in the Union building at the University of Adelaide. Bookings, which are helpful but not essential, should be made by noon on Tuesday 16th March with the AIP-SA Secretary or with Ms. Tanya Weir on (08) 8303 5996.