

April 6, 2024

Dear Colleagues,

It is with deep regret that we pass on the news that Em/Prof. Robert (Bob) Leith Dewar, FAA, has passed away in Cambridge UK following a stroke.

Bob was a giant in the field of theoretical plasma physics, with important contributions in Magnetohydrodynamics (MHD) and in dynamical systems. These include MHD equilibrium and stability, MHD ballooning modes, Taylor relaxation and Hamiltonian maps. Bob worked closely with computer simulation and with experimentalists and has made important contributions to magnetic fusion research and to astrophysics. Recently he has been instrumental in the development of a multiple region relaxed MHD model to describe general stellarator fields, and he was presently working on a generalisation of such models to systems that preserve magnetic helicity with a weak ideal Ohm's law constraint.

Bob was a graduate of the University of Melbourne, and obtained a PhD in 1970 from Princeton University. He was a staff scientist of Princeton Plasma Physics Laboratory from 1970-1982, and an academic of the ANU from 1982-2011, with Emeritus Professor status from 2011 to the present. He initiated several major collaborations across physics and mathematics, including the National Plasma Fusion Research Facility, the Australian Research Council Complex Open Systems Research Network, and led the ANU's plasma theory and modelling group until retirement in 2011. Perhaps most importantly, he has left a legacy in both research and teaching, spanning 5 postdocs, 16 PhD, and many Masters and Honours students. Many of these now hold prominent positions in the field.

Bob was undertaking a 6-month sabbatical at the Isaac Newton Institute for Mathematical Sciences, where he was an active participant in the programme on Anti-Diffusive Dynamics, interacting with colleagues from a broad range of research areas. He recently celebrated his 80th birthday. Colleagues and staff at INI are deeply saddened by his sudden death.

Bob is survived by his daughter Sophie Dewar and granddaughter Dara, and his son-in-law Brendan, and will be deeply missed by friends and colleagues of the ANU and international community. We will announce an opportunity to celebrate Bob's life at a later date.

Messages of condolence could be sent to his daughter Sophie at Sophie.dewar@gmail.com, 10 Service Basin Rd, Yackandandah Victoria 3749, Australia.

Yours Sincerely,

Matthew Hole, Lilia Ferrario, Boyd Blackwell, Rod Boswell, Henry Gardner, Stuart Hudson,

Amitava Bhattacharjee, Adelle Wright, Steve Cowley.

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