

## AINSE Gold Medal Award – 2007 Professor Stewart Campbell



*Professor Stewart Campbell (right) receives his award from Professor John White (AINSE President 2005 – 2006)*

Stewart Campbell has a long and illustrious history with AINSE going back more than 30 years to his involvement in building the LONGPOL instrument at HIFAR in 1974, stretching to this day and his active involvement in some of the final HIFAR experiments and the first to be done at OPAL.

Following his early contributions to the development of the Long Wavelength Polarisation Analysis Instrument LONGPOL and with the benefit of access to HIFAR via a series of AINSE grants, Stewart Campbell has employed both neutron polarisation and, particularly, powder diffraction techniques in the study of a wide range of magnetic materials.

Stewart's successful contributions to magnetism have centred on systematic investigations of four main classes of materials:

- The origin of magnetic and atomic diffuse scattering in transition metal alloys
- The discovery of a set of quaternary rare-earth (R), transition-metal (T) intermetallic compounds
- Determination of the magnetic structures and phase diagrams of an important class of ternary  $RT_2X_2$  compounds and
- Clarification of the interplay between structural and magnetic behaviour in disordered and nanostructured materials.

In addition to this scientific productivity, Stewart has played a leadership role within the Australian neutron-scattering community, within his own institution and within AINSE: his successful role in publishing the proceedings of ICNS2005, his encouragement of others at ADFA and elsewhere to use AINSE's programs, and his recent presidency of the Australian Neutron Beam Users Group.

It should be noted that in addition to the 44 publications linked directly with AINSE projects, his projects have often formed the basis of successful applications for access to overseas facilities. In such cases these additional studies allowed extra insight to be obtained as a result of, for example, higher resolution and intensity; more extensive temperature ranges and access to high pressure environments.