

## Collaboration enables research at the atomic level



→ *The Department of Minerals Science and Metallurgical Engineering will be collaborating with the University of Oxford.*

**The Department of Materials Science and Metallurgical Engineering will be collaborating with the Department of Materials at the University of Oxford in the United Kingdom to conduct atom probe tomography (APT) experiments to examine the microstructures of some high-pressure commercial pipe steels at the atomic level in order to assess their feasibility for examination using APT and the chemistry of any identified carbides.**

APT is a microscopy technique that was invented in 1988 by Prof George Smith, former Head of the Department of Materials at the University of Oxford, together with Alfred Cerezo and Terry Godfrey.

This technique provides 3D atom-by-atom imaging of materials with a uniquely powerful combination of spatial and chemical resolution. Research that can be conducted using APT includes establishing new materials applications, instrumentation and the development of 3D reconstruction and data analysis techniques.

This collaboration with Oxford Materials makes the University of Pretoria the first research institute in Africa to undertake materials research at this level by making use of this unique instrumentation.

Prof Roelf Mostert, Head of the Department of Materials Science and Metallurgical Engineering at UP, is excited about what might be discovered about the microstructures of steels using this technology. ➔



## Prof Fanie de Beer receives esteemed prize

**Prof Fanie de Beer of the Department of Information Science received an academic prize from the Afrikaans Language and Culture Association (ATKV) and the South African Academy for Science and the Arts in 2014.**

Every year, the ATKV awards R60 000 to six academic articles (R10 000 per article) that were written in Afrikaans and published in accredited journals in a specific year. Four of the prizes go to articles in the humanities and two articles in the natural sciences. The South African Academy for Science and the Arts is responsible for the selection process.

In 2014, the editors of eight accredited journals submitted 16 of the best articles that were published in 2012 to the Academy for selection. Prof De Beer was nominated as one of the four recipients in humanities. His award-winning article, entitled "Die polemologie vir die gees" (The polemology for the spirit) was published in the March 2012 issue of the *Tydskrif vir Geesteswetenskappe* (Journal of Humanities).

Dr Dioné Prinsloo, CEO of the Academy, congratulated Prof De Beer on the high quality of his research and the excellent article emanating from it. The University of Pretoria is proud of Prof De Beer and congratulates him on his achievement. ➔