Area Seminar

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| Title | Numerical Simulation of MHD Waves in the Solar Atmosphere |
| Date and Time | 07/04/2014 16:00:00 |
| Speaker | Prof. Robert von Fay<br>Siebenburgen |
| Area | Theoretical Physics |
| Venue | Room No. 469 |
| Abstract | Photospheric motions, such as granular buffeting or vortices at the foot-point of magnetic flux tubes, could excite MHD waves, which propagate upwards though the solar atmosphere towards corona. In this talk I will show the results of 3D numerical simulation of generation and propagation of slow/fast magnetoacoustic and torsional Alfven modes in the localised waveguides and determine the energy flux they carry along the magnetic field lines. Also, the new analytical approach in construction of a system of multiple magnetic flux tubes, for example, pair of open tubes and complex mixed open tube configurations with curvature and asymmetry, will be discussed. This method provides an opportunity to build a range of analytical models of magnetic field configurations that will most realistically capturing magnetic structures of the lower solar atmosphere. About the speaker: Prof. Robert von Fay-Siebenburgen (Robertus) is the Director of Research at the School of Mathematics and Statistics at the University of Sheffield, UK. Prof. Robertus? group has a very high international reputation in the field of theoretical solar physics with particular expertise in the heating processes that generate and sustain the observed high temperature of the solar atmosphere by using both numerical and exact analytical methods and through observational studies using joint ground-based and satellite missions. |