



The **Center for Detectors** presents  
The Detector Virtual Workshop



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**High Time Resolution Astrophysics in the ELT era  
Science Problems and Detector Requirements**

**Dr. Andy Shearer**

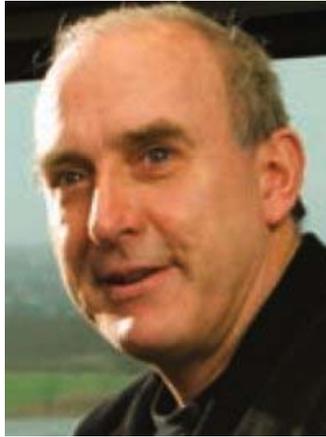
Director, Centre for Astronomy  
School of Physics, NUI Galway, Galway Ireland

Monday, Oct. 24, 2011, 11:00 am – 12:00 pm, Building 78, Room 2240

(Please note that Dr. Shearer's presentation will be shown virtually at this location, the actual presentation will not take place on the RIT campus.)

Cookies & Coffee at 10:30 am

Presentation will be broadcast at: <https://connect.rit.edu/dvw>



**Abstract**

30-40m telescopes will enable astronomical observations on sub-second, sub-millisecond and in some cases sub-microsecond time-scales. To-date, these have been limited to a few of the brightest targets such as the Crab pulsar. In this talk, I will review the current state of optical HTRA science and its possibilities over the next 5 years. One of the challenges will be the requirement to move HTRA into the near infra-red to match, for example, the spectral response of the European Extremely Large Telescope.

**About the Speaker**

Dr. Andy Shearer graduated from London University with a BSc in Astronomy in 1975. He subsequently obtained an MSc(1978) and PhD(1980) in Cosmic Ray Physics from Durham University. He worked as a post-doc in Bristol University and in industry before taking up a research position in Experimental Physics department University College Galway in 1991. In 1996, he was appointed as a lecturer in the Information Technology Department at the renamed National University of Ireland, Galway. In 2005, he founded the Irish Centre for High-End Computing (ICHEC) and was its first Director. His research interests cover high-time resolution astronomical observation, modeling astrophysical plasmas and medical/astronomical image processing. He has a specific interest in optical observations of rotation-powered pulsars. His group is credited with the discovery of optical pulsations from two out of the five of the known optical pulsars. He is currently working on optical follow on studies of pulsars discovered by the Fermi Gamma-Ray Satellite. He is the Director of the Centre of Astronomy, NUI, Galway.

**About the Detector Virtual Workshop**

The Detector Virtual Workshop is a year-long NSF-funded program dedicated to the advancement of UV/O/IR detectors. It brings together people from around the world to discuss detector technologies. For more information, visit [ridl.cfd.rit.edu](http://ridl.cfd.rit.edu) and click on the DVW tab.