



**Australian Institute of Physics
NSW Branch (March Public Talk)**

“Living at the Speed of Light”

**Dr Jesse Shore
Prismatic Sciences**

Tuesday 23rd March 2010 @ 5.30PM

At the

Slade Lecture Theatre, School of Physics, University of Sydney

Public talk arranged by: The Australian Institute of Physics (NSW Branch)

Entrance is FREE

Summary of talk:

Whether you know it or not you are living at the speed of light. From mobile phones to microwave ovens, the internet, and soon your home computer, all depend on signals and energy of light travelling at the fastest speed in the universe. Yet modern communications are both enabled and limited by the speed of light. The talk weaves threads of basic physical concepts into a more complex tapestry about photonics, the science of making, detecting, controlling and using light, and explore why it is one of the important new research areas. A key part of photonics is about changing the speed of light to make better use of it. A range of photonic technologies will use optic fibres to communicate far more information at higher rates while using far less energy than electronic circuits. This will lead to new applications and huge improvements to existing processes which include specialised medical diagnosis and treatment made available to remote areas, increased DVD memory capacity, more powerful computers, speedier access to vast amounts of information of libraries, superior imaging of biological material and the cosmos, improved lasers, chemical processing and things we haven't dreamed of yet. New discoveries about how to interact with light are leading to potential applications such as invisibility cloaks which previously appeared only in science fiction or fantasy stories. The talk uses a number of everyday experiences to introduce apparently simple science concepts underlying photonic communication then builds and expands on them to explore some of the more recent understanding of newer less familiar processes.





Brief Biography of the Speaker:

Dr Jesse Shore has over 26 years of experience as a science communicator. Currently he works through his business, Prismatic Sciences, to develop science based programs for various audiences and media. He enjoys making science meaningful to a variety of audiences and likes to have a bit of fun in how he presents his content. From 1984 through 2008 he worked at the Powerhouse Museum in Sydney where he was an exhibition project leader during the building of the museum and then Senior Curator of sciences for 21 years. While at the museum he created, directed and promoted a wide range of science

exhibitions and events and in 2006 was one of the founders of the Ultimo Science Festival, a major National Science Week activity. Jesse is President of the Australian Science Communicators.



Detailed Schedule for Tuesday, 23rd March 2010:

- 5.30-6.30 pm **LECTURE by Dr Jesse Shore.**
- 6:35-7.00 pm **REFRESHMENTS, Slade Lecture Theatre.**
- 7.00-8.00 pm **LECTURE by Dr Marc Duldig.**
- 8.15 pm **DINNER with the Speakers at Buon Gusto (Italian), 368 Abercrombie Street, Chippendale.**
E-mail Dr Fred Osman (fred_osman@exemail.com.au) if you will be able to join us for dinner.

Travel Directions:

- Train to Redfern station and walk to the **School of Physics.**
- Buses 422, 423, 426, 428, 448, and 450 from Circular Quay to City Road / King, or 412, 435, 438, 470, 483 etc. along Parramatta Road from Circular Quay.
- Drive and park in various parking lots. You will need to pay for parking (**\$6 flat-rate after 4 pm**) and display the ticket in your car. You may also find parking places on public roads outside the Uni.

Event sponsored by:



***The Australian Institute of Physics – NSW Branch
& The University of Sydney.***

