



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

**Initiative Against Climatic Change by  
Lasers Based on 2018 Physics Nobel  
Prize?**

**Professor Heinrich Hora  
University of New South Wales, Sydney Australia**

**Friday 8<sup>th</sup> March 2019 @ 6.00PM**

At the  
**Boston University, Sydney Academic Centre  
15-25 Regent Street Chippendale**

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*Summary of talk:*

Fusion energy is ten million times higher than chemical energy from burning coal, but ignition needs dozens of millions degrees of temperature. Instead of using these exorbitant thermal pressures for a power station, fusion can be ignited at moderate heating in power stations by lasers, however only by pulses of extremely short duration and ultrahigh power. This has just been reached by the amplification for which the 2018 Physics Nobel Prize was awarded. The non-thermal pressure by the laser can dominate. The thermally very weak fusion of boron can be billion times higher than classical, shown by experiments. This extreme increase is explained by the mentioned domination and a specific avalanche of the boron reaction. This leads to the design of a possible power generator for environmentally absolute clean, safe, low cost and abundant electric energy.





***Brief Biography of the Speaker:***

Heinrich Hora Dr.rer.nat. (1960 Jena) D.Sc. (1979 UNSW) is an Australian Professor of Theoretical Physics University of New South Wales, Sydney 1975, emeritus 1992, Visiting Professor Rochester, Bern, Tokyo, Iowa, Osaka, Giessen, Weizmann-Institute, CERN after he was 20 years in research at industry laboratories (Zeiss, IBM, Westinghouse, Siemens) and of the Max-Planck-Institute of Plasma Physics in Garching-Munich. He is author of 12 books and editor of 15 books and founder and first Editor-in-Chief of the Journal “Laser and Particle Beams” at Cambridge University Press. His research is in the field of plasma theory and laser, nonlinear forces, relativistic self-focusing, Schwarz-Hora effect (Appl. Phys. Lett. 102, 141119 (2013)) on non-resonance quantum excitations in solids, volume ignition of fusion, and predicted non-thermal ultrahigh acceleration of plasma blocks by lasers for environmentally clean, low cost and lasting boron fusion energy.

He is FInstP(London), FAIP, FRSN and received the Edward Teller, the Dirac, the Ernst-Mach and the Ritter von Gerstner Medals. He is founding director of the International Research and Development Corporation “HB11 Energy” in Sydney/Australia.

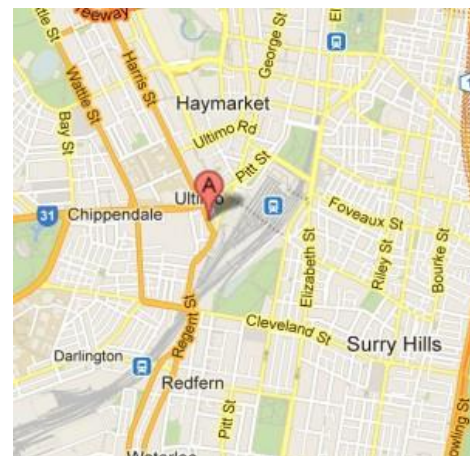


***Detailed Schedule for Friday, 8<sup>th</sup> March 2019:***

- 5.30-6.00 pm **REFRESHMENTS, Boston University Sydney Lecture Theatre**
- 6.00-7.00 pm **LECTURE by Professor Heinrich Hora**
- 7.30 pm **DINNER with the Speaker at nearby Restaurant**

***E-mail Dr Fred Osman ([fosman@bu.edu](mailto:fosman@bu.edu)) if you will be able to join us.***

**The BU Sydney Academic Centre (BUSAC) is located in the neighbourhood of Chippendale near Railway Square and Central Station.**



***Event sponsored by:***



***The Australian Institute of Physics – NSW Branch  
& Boston University, Sydney Academic Centre***

