

Seminars in Connection with the Trotter Lectures

Department of Physics
Texas A&M University

Thursday, December 4, 2008

256 Jack E. Brown

- 08:45 – 09:00 H. Joseph Newton Welcoming Remarks
Dean, College of Science
- 09:00 – 9:50 Charles Townes "The sizes, shapes, and changes of old stars"
- Many old stars are quite active in throwing off gas, in changing size, and in at least temporary non-sphericity. Measurement of such properties with interferometry at mid-IR wavelengths which penetrate the dust and gas surrounding them will be reported.
- 10:00 – 10:30 Break
- 10:30 – 11:20 Federico Capasso "Quantum Cascade lasers: from band-engineering to wavefront engineering"
- QC lasers have emerged in the last decade as the laser of choice for many applications. New developments in this area will be covered along with the emergence of exciting new tools enabled by the QC laser together with recent advances in plasmonics and metamaterials.
- 11:30 – 12:20 Marlan Scully "Quantum Thermodynamics: a new slant on the role of information in the cosmos"
- We Often hear phrases like "quantum weirdness" and the strange world of the quantum." A fact that is not so widely appreciated is that quantum mechanics can (and does) shed light on problems such as the Maxwell Demon Paradox of thermodynamics, and promises ultra efficient quantum heat engines.
- 12:30 – 13:30 Lunch Break (Catered by Jason's Deli)
- 13:30 – 14:20 Owen Gingerich "Four Myths of the Copernican Revolution"
- Copernicus, Kepler, Galileo - - iconic figures of the Astronomical Revolution and fathers of modern science - - and subject to much myth making. Prof. Gingerich will puncture some of these widely held beliefs and will argue that some of their most significant influences are often overlooked.
- 14:30 Ide Trotter Concluding Remarks
- 15:00 Dudley Herschbach "Teaching Science as a Liberal Art"
(25th anniversary celebration of the Center for Teaching Excellence at TAMU)
Relocate to Rm 113 Wehner Building
- 19:00 Trotter Lectures
Charles H. Townes "The Parallelism and Likely Eventual Convergence of Science and Religion"
Owen Gingerich "The Divine Handiwork: Evolution and the Wonder of Life"
Rudder Theatre