

## EXPERT'S PROFILE

**Name of Grantee** : DR. AMADOR C. MURIEL

**Area of Expertise** : Theoretical Physics

**Inclusive Date of Contract as BSP Awardee** : August 27 – November 24, 2008 Short-Term Program

**Host Institutions** : National Institute of Physics  
University of the Philippines Diliman

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## EDUCATIONAL BACKGROUND

- Ph.D. in Physics, State University of New York, Stony Brook, 1967
- M.A. in Physics, State University of New York, Stony Brook, 1965

## PRESENT POSITION

- IN INFORMATION TECHNOLOGY:  
**Founder and President**  
Data Transport Systems  
- a 20-year old IT consultancy firm with activities in New York and Geneva since 1986. The company has served several United Nations agencies like WHO, ITU, UNICEF, UNIDO, UNDP, WFP, and other non-profit international organizations in Vienna, Copenhagen, Geneva and New York using small and large distributed databases

Responsible for two major theoretical contributions in physics:

- Time evolution of the one dimensional gravitational gas, published in several papers in Astronomy and Astrophysics
- Theoretical origin of the onset of turbulence, published in Physica D, JETP Letters, and several conference proceedings.

and in econophysics:

- Theoretical and practical model for foreign currency trading, used by Data Transport Systems, and under evaluation by UBS Warburg, Geneva, trading arm of Union Bank of Switzerland

## To be accomplished as BSP Awardee:

- Develop and apply his Molecular Theory of Turbulence by continuing to publish in international journals.
- Conduct other possible research collaborations
- Work with UPD Professors and Graduate Students on the following principles of Theoretical and Applied Physics:
  - Burgers Turbulence
  - Radiative Terms of Post-Navier Stokes Equations
  - Comparison of lamina-turbulent transition data for Argon with theoretical expectations from quantum confinement arguments
  - Structure Formation in Self-Gravitating Systems

