



**Research Committee**  
College of Science, Engineering and Technology  
Texas Southern University



## **KEYNOTE SPEECH**

### **From the near and "simple", to the far and unknown**

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Department of Physics  
Texas Southern University

12:10 pm– 12:40 pm, Wednesday, March 27, 2019  
COSET Research Day  
Science Building 156

#### **Abstract**

The Electromagnetic spectrum opens a number of windows in which to “see” and study the Universe. With the proper instruments one can detect radiation from specific types of physical processes, originating from different astronomical sources, generally classified as either high, intermediate or low energy processes. The study of star formation, primarily dependent on the force of gravity, density and temperature of the medium, is a low energy process. So, Infrared and Radio observations are the most appropriate for the task.

In this talk we will discuss some of the present radio astronomy results of the star forming process, stellar evolution and the present state of the Universe.

#### **Biography**



**Dr. Migenes** joined the Department of Physics at Texas Southern University in 2015 to establish a research group in the field of Radio Astronomy, focused in star formation and evolution. A new 3m dish working at frequencies between 1.4-1.6 GHz was installed on the roof of the Spearman Technology Bldg in 2017. Dr. Migenes is now the Interim Chairman of the Department of Physics. He received his BSc from the University of Puerto Rico in 1981 and continued graduated studies in Physics and Astrophysics at the University of Pennsylvania. He completed an MSc in Physics and a Ph.D. in Astronomy and Astrophysics by 1989. He continued his research in star formation of high-mass stars, as a Postdoctoral Research Assistant, at the radio laboratory of Jodrell Bank, University of Manchester (UK). During this time he also expanded his research interests to Stellar Evolution, Radio Stars and the Evolution of Galaxies utilizing more advance interferometric techniques like those supported by instruments like MERLIN (UK), and the VLBA (USA). In 1992 he moved to Australia to continue his research efforts at the Australian Telescope National Facility. Here he served as resident astronomer in the NASA facilities at Canberra. In 1995 he joined the VLBI Space Observing Probe mission (VSOP), of the National Astronomical Observatory of Japan, who in 1997 launched the first radio astronomy antenna in Earth’s orbit.

In 1997 he started a new project as a Professor of Physics and Astronomy at the University of Guanajuato (UG) in Mexico. In 2004 he became the Chairman of the Department of Astronomy and in 2006 the Director of the Center for Atmospheric Sciences of UG. Finally, returning to the USA in 2009 to join the faculty of Brigham Young University to strengthen the research in Astrophysics and the Graduate Program. Dr. Migenes has mentored 7 Doctoral students, 3 Masters students and 12 undergraduate students. He has published over 75 research papers in national and international journals with over 1000 citations.