

Spring 2023 Colloquium

Department of Physics & Astronomy, A&M-Commerce

Mar 9, Thursday, 4-5 PM in Science Building 127

(coffee and cookies will be served at 3:50 PM)

Astro-Physics

From the Big Bang to Supernovae: Unlocking the Mysteries of the Universe

Dr. Christian ILIADIS

University of North Carolina at Chapel Hill



Dr. Christian ILIADIS is the J. Ross Macdonald Distinguished Professor and former department chair of Physics & Astronomy at the University of North Carolina at Chapel Hill, and a nuclear astrophysicist at the Triangle Universities Nuclear Laboratory. He was born in Germany and received his diploma in physics from the University of Muenster. He then moved to the United States, where he worked on his PhD thesis at the University of Notre Dame. After a 3-year postdoctoral fellowship at TRIUMF in Vancouver, Canada's largest nuclear physics facility, he accepted a faculty position at the University of North Carolina. He was awarded the 2014 University of North Carolina Board of Governor's Award for Excellence in Teaching.

In 2015, his second edition of "Nuclear Physics of Stars" was published by John Wiley & Sons. He is also the 2019 recipient of the Jesse W. Beams Research Award of the American Physical Society. More information can be found at <https://iliadis.web.unc.edu>

Abstract

Explosions in the universe play an outstanding role in astrophysics and nuclear physics research alike. Nuclear reactions produce new elements during the explosions and seed the interstellar medium with the building blocks of new stars, planets and life itself. I will explain what modern research is like in the field of nuclear astrophysics and discuss the interplay of observations, computations, and nuclear physics experiments. New developments provide opportunities to address open questions in cosmology, supernovae, and galactic chemical evolution. Future progress to understand our origins will require strategic thinking and the availability of crucial experimental and computational tools.