

PHYSICS GUEST SEMINAR

ASSISTANT PROFESSOR SEARCH CANDIDATE

Dr. Mariana Lazarova

University of Nebraska at Kearney

Thursday, March 1, 2018 • Ross 0220

1:30 - 2:30 pm

Following the presentation, students are encouraged to visit with Dr. Lazarova and enjoy refreshments from 2:30 - 3:30

Catastrophic Galaxy Collisions and the Birth of Quasars

My research interests are in the evolution of some of the brightest galaxies in the universe, the quasars. Those galaxies harbor active supermassive black holes at their centers. In those so-called Active Galactic Nuclei, gas and matter falling into the gravitational potential of the black hole is responsible for the extreme luminosity of the nucleus, which often outshines the entire galaxy itself.

How and why some galaxies have active nuclei is a question of fervent scientific research. Recent findings strongly suggest that violent collisions between normal spiral galaxies of comparable size might be responsible for fueling the nucleus and igniting the quasar activity. In my talk, I will present our current knowledge of quasars, the leading models which attempt to explain the observations, and how my particular research contributes to our understanding of quasar formation in the large scheme of galaxy evolution.