Dr. Arlie O. Petters is the Dean of Academic Affairs for Trinity College of Arts & Sciences at Duke University. He is the Benjamin Powell Professor of Mathematics and a Professor of Physics and Economics. Before coming to Duke, he was an Assistant Professor of Mathematics at Princeton University (1993-1998) and an Instructor of Pure Mathematics at Massachusetts Institute of Technology (MIT) (1991-1993). Dr. Petters received his Ph.D. in mathematics from MIT in 1991 with a specialization in mathematical physics.

Dr. Petters’ research deals with explores how gravity acts on light. He was the first to develop the mathematical theory of gravitational lensing, which brought powerful methods from pure mathematics to bear on astronomy. Dr. Petters also pioneered new applications of gravitational lensing in physics, predicting effects that probe the nature of spacetime around black holes and developing tests of Einstein’s general relativity and modified gravity models. He has written five books and is currently co-authoring a monograph on gravitational lensing and black holes.

Among the many awards Dr. Petters has earned for his innovative research are an Alfred P. Sloan Research Fellowship, a National Science Foundation CAREER Award and the first Blackwell-Tapia Prize in the Mathematical Sciences. He was also selected in 2006 by the National Academy of Sciences to be part of a Portrait Collection of Outstanding African Americans in Science, Engineering, and Medicine.

In recognition of Dr. Petters’ outstanding scientific and educational accomplishments, the Queen of England named him in 2008 to Membership in the Most Excellent Order of the British Empire and his birthplace, Dangriga, Belize, honored him in 2009 with a street in his name.