The Department of Mathematics presents the

Dr. Marjorie Lee Browne Colloquium

as part of the University of Michigan’s
Rev. Dr. Martin Luther King, Jr. Symposium

Professor Cristina Villalobos
School of Mathematical and Statistical Sciences
University of Texas-Rio Grande Valley

**Becoming Agents of Change:**
**Building Diverse Communities and Lessons Learned from the Mathematical Modelling of Eye Disease**

The mathematical modeling of the photoreceptor interactions in the presence of retinitis pigmentosa will be presented and discussed in this talk. Retinitis pigmentosa is an eye-disease that affects approximately 1 in 4000 individuals and can lead to blindness. Currently, there is no treatment to halt the degeneration of the photoreceptors. However, the discovery of the RdCVF protein has shed light to possible therapies to slow the degeneration. Existence of an optimal control along with numerical results will be presented that show the experimentally observed rescue effect that RdCVF has on the cones. Based on some of the lessons learned from the mathematical model, the speaker will transition and discuss her invitation to students and faculty to become agents of change in their own communities. With that purpose in mind, the presenter will share her own career path to her present position and her efforts in “becoming an agent of change” in mentoring faculty and students which has led to the creation of a Center of Excellence in STEM Education that has allowed her to inspire and to help Latino students to enroll and obtain PhD degrees.

Monday, January 18, 2016
4:00 p.m. • Room 1360 East Hall
530 Church Street, Ann Arbor, MI
Reception to follow in the Mathematics Atrium

The Colloquium honors Dr. Marjorie Lee Browne, the first African-American woman to earn a Ph.D. in Mathematics from the University of Michigan. It is supported by the Carroll V. Newsom fund.

For information please contact the Math Department at (734) 764-0335 or see www.math.lsa.umich.edu/mlk/