

SCIENCE SEMINAR

FRIDAY, APRIL 24
KNOTT HALL B01
3PM

NONLINEAR DYNAMICS IN THE HUMAN MENSTRUAL CYCLE

GREG AND PAULA DERRY
LOYOLA COLLEGE

THE STUDY OF NONLINEAR SYSTEMS HAS BECOME VERY IMPORTANT DURING THE LAST FEW DECADES IN RESEARCH IN BOTH BIOLOGICAL AND PHYSICAL SYSTEMS. IN THIS TALK, WE WILL INTRODUCE THE IDEA OF A NONLINEAR SYSTEM AND HOW TO ANALYZE ITS BEHAVIOR. THE AVAILABLE LITERATURE ON THE HUMAN MENSTRUAL CYCLE SUGGESTS THAT IT CAN BE STUDIED FROM THIS VIEWPOINT, AND THAT DOING SO MIGHT PROVIDE A MORE COHERENT PICTURE OF THE PHYSIOLOGY OF MENSTRUATION AND MENOPAUSE. USING MENSTRUAL CYCLE LENGTH DATA FROM THE TREMIN TRUST, A LARGE AND LONG-RUNNING PROSPECTIVE STUDY, WE TESTED THIS HYPOTHESIS USING MATHEMATICAL TECHNIQUES THAT HAVE BEEN RECENTLY DEVELOPED FOR THE STUDY OF NONLINEAR SYSTEMS. A DESCRIPTION OF THESE TECHNIQUES AND THE RESULTS WE OBTAINED, ALONG WITH OUR OVERALL CONCLUSIONS AND A SUMMARY OF THE NEXT STEPS IN OUR STUDY, WILL BE PRESENTED.

REFRESHMENTS WILL BE SERVED