

*Student  
Seminar*

# *Pi Mu Epsilon*

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& GAMECOCK MATH CLUB

Tangled Up in Red, Green, and Blue  
(with Apologies to Bob Dylan):  
An Introduction to the Mathematical  
Theory of Knots



Ron Taylor

by Ron Taylor, Professor, Berry College

Knot theory as a scientific endeavor dates back to the 1800s when chemists thought that the elements could be in the shape of knots. Mathematically the study of knot theory is also relatively young, but it is a vibrant area of study. In this talk, we will discuss some of the historical development of the mathematics of knots and the central questions that knot theorists ask. There are a variety of techniques called knot invariants that are used to answer these questions. We will discuss a few of these invariants along with the foundational ideas that go along with validating these techniques. We will also prove that one particular method for studying knots is an invariant and talk about some open questions in knot theory.

Ron Taylor is a Professor on Mathematics at Berry College in northwest Georgia. He is an active member of the Mathematical Association of America and a Forest Dot Project NExT Fellow of the MAA. Ron has served as the co-director of Project NExT-SE, Beginning Faculty Activities Coordinator and organizer of the MAA-SE Math Jeopardy! contest along with writing questions for the competition. In addition to functional analysis and operator theory, he has done research in knot theory, geometry, symbolic logic, number theory, graph theory, and recreational mathematics.

Tuesday 18<sup>th</sup> February 2020  
7:00 pm  
LC 310

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