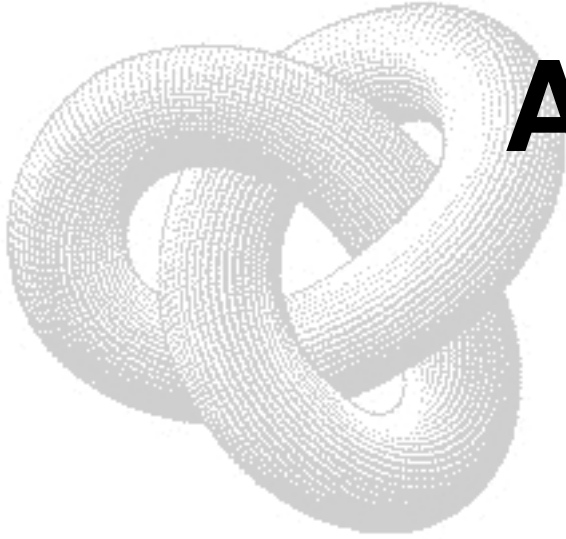


## An Undergraduate Lecture Series



# Announcing

**A Presentation  
on March 24, 2015  
at 4:30 pm in  
North Hall 104  
at The University of New Haven**

### **Dr. Joseph Kolibal**

Department of Mathematics and Physics  
The University of New Haven

### **Title: II. Volumes and their boundaries in $\mathbb{R}^n$**

#### **Abstract:**

The relationship of the surface of a sphere in  $\mathbb{R}^n$  to the volume it contains provides some interesting insights into the nature of higher dimensional spaces and also provides an introduction to some fundamental topics in mathematics. We examine these volume-surface relationships starting from the fundamental theorem of calculus and integration by parts, to the theorems of vector calculus, taking note of some interesting aspects of the technique and the useful mathematics which results from exploiting these relationships.

Collectively, these merit consideration as one of the building blocks of modern mathematics. It is a feature of so many problems that it deserves consideration for inclusion into Paul Halmos' table of the mathematical elements.

This is Part II of a two part exploration.

#### **Further Information**

For further information, please contact Angie Domschine at the Department of Mathematics, Office: Maxcy 204, 203-932-7250, ADomschine@newhaven.edu.