

## **RECENT ADVANCES IN MODELING, COMPUTATIONAL PDES AND THEIR APPLICATIONS**

**Zhiliang Xu<sup>\*</sup>, Martina Bukač<sup>\*</sup>**

<sup>\*</sup> University of Notre Dame, 153 Hurley Hall, Notre Dame, IN 46556, zhiliangxu@nd.edu (ZX),  
mbukac@nd.edu (MB)

### **MINI-SYMPOSIUM PROPOSAL**

**Keywords:** *mathematical modeling, interdisciplinary research, experimental measurements*

#### **ABSTRACT**

The emergence and evolution of complex interaction among biological and other systems have triggered researchers aiming to understand structural and functionality properties that are essential to these systems. This mini-symposium will explore the recent advancement in experiments, mathematical and computational modeling and numerical schemes for studying these systems. We would like to promote exchange of ideas by gathering researchers from diverse areas to study dynamics of complex systems including topics such as disease and complex fluids using interdisciplinary approaches. Theoretical frameworks will include but not restrict to agent-based modeling, differential equations, stochastic processes, and optimization. New computational techniques will be also introduced for various applications.