

## **MATHEMATICAL MODELS FOR CANCER GROWTH AND TREATMENT**

**Leili Shahriyari\* and Li Wang\***

\*Department of Mathematics, University of Texas Arlington, Arlington Texas, USA 76019  
leili.shahriyari@uta.edu and li.wang@uta.edu

### **MINI-SYMPOSIUM PROPOSAL**

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#### **1 MINI-SYMPOSIUM PROPOSAL**

Although there are many studies about the process of initiation and progression of tumors, cancer is still a mystery. A team of scientists with different background is therefore needed to collaborate and discover effective cancer treatments.

Current studies have demonstrated that computational data analysis models are required to obtain effective personalized cancer treatments, which are based on an individual's unique tumors. Computational and mathematical models assist us to expand our knowledge about tumors and their unique features as well as the process of tumorigenesis. For this reason, many mathematical models using both stochastic and deterministic methods have been developed to study the evolutionary process of tumorigenesis and predict the outcome of various drugs to obtain optimal treatments' strategies.

This proposed mini-symposium fits well with the themes of the CMBE meeting. It will bring together scientists who are interested in understanding the process of tumorigenesis and computationally modeling the process of carcinogenesis and cancer treatments to obtain effective strategies.

The approval of this proposal will provide an environment that the researchers in different fields, including medicine, biology, bioengineering, mathematics, and computer science working on this topic to actively exchange their ideas and find potentially collaborations. We would like to not only increase interest among the participants but also promote critical thinking. We are specifically interested in giving young and established scientists a chance to present and discuss their insights and research projects together to create collaboration opportunities.