Workshop on
Delay Differential Equations: Theory, Applications and New Trends (DDEs-TANTs 18), from 3—4 October 2018
Department of Mathematical Sciences, College of Science, UAE University, Al-Ain, UAE

The Issue

Recently, there has been increasing interest related to the theory of *delay differential equations* (DDEs), due to their important applications in physics, biology, ecology, and physiology. There is no doubt that some of the recent developments in the theory of DDEs have enhanced our understanding of the qualitative behavior of their solutions and have many applications in mathematical biology and other related fields. Both theory and applications of DDEs require a bit more mathematical maturity than their *ordinary differential equations* (ODEs) counterparts. From a mathematical point of view, they represent an important class of dynamical systems and can be studied by advanced mathematical methods, including e.g. bifurcation theory, singular perturbations or semigroup theory.

The main objective of this well-focused workshop (DDEs-TANTs 18) is to provide an opportunity to study the new trends and analytical insights of the delay differential equations, existence and uniqueness of the solutions, boundedness and persistence, oscillatory behavior of the solutions, stability and bifurcation analysis, parameter estimations and sensitivity analysis, and numerical investigations of solutions. Potential topics include but are not limited to the following:

- Development of novel theories or improvement to existing theories on delay differential equations
- Development of novel numerical approaches for delay differential equations
- Development of novel time delay models with their analytical or qualitative investigation
- Stability, sensitivity analysis and bifurcation analysis of time delay models
- Delay differential equations with optimal control.

Scientific Program

The scientific program of the workshop will consist of 50-minute plenary lectures, 30-minute invited lectures and 20-minute contributed talks. **Selected papers will be published in a special issue of an international impacted journal.**

Registration and Important Dates

The registration: Free   https://conferences.uaeu.ac.ae/dde2018/en/index.shtml
August 15, 2018, 5:00 pm: Deadline for abstract submissions (frihan@uaeu.ac.ae)
September 1, 2018: Notifications
October 3—4, 2018: Workshop days

Invited Speakers

1. Prof. **Gennady Bocharov**, Institute of Numerical Mathletics, Russian Academy of Sciences, Moscow, Russia
2. Prof. **Yang Kuang**, School of Mathematics and Statistical Sciences, Arizona State University, USA

Organizing Committee

Prof. **Fathalla A. Rihan** (Chair), Email: frihan@uaeu.ac.ae, Tel: +971(0)506603324
Prof. **Mohamed Syam**
Dr. **Abdessamad Tridane**
Dr. **Nasser Al-Salti** (SQU, OMAN)

Scientific Committee

1. Prof. G. Bocharov (Russia)
2. Prof. Yang Kuang (USA)
3. Prof. Ephraim Agyingi (USA)
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