University of Macau

Faculty of Science and Technology

Department of Mathematics

On the higher-dimensional linear quaternionic-valued ordinary differential equations

By

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Date: **18 August 2015 (Tuesday)**

Time: **4:00 p.m. - 5:00 p.m.**

Venue: **E11- 1006**

Abstract

This paper presents some basic propertiesfor the higher-dimensional linear quaternionic-valued ordinary differential equations. A definition of {\em Wronskian} is defined which is different from standard one in the real or complex valued ordinary differential equations. Quaternionic-valued Liouville formulas is given. Based on this, we studied the solutions of the linear and nonlinear quaternionic-valued ordinarydifferential equations.

Biography

Prof Xia is currently a Professor in the Department of Mathematics at Zhejiang Normal University. His research experience in differential equations include nonlinear systems, mathematical biology, neural networks, bifurcations and stability analysis in dynamic systems (including continuous, discrete and impulsive systems)，bifurcations of delayed differential equations including mathematical biology and neural networks. His present research focuses on the study of linearization of differential equations and spectrum of exponential dichotomy. He is the author of more than 30 journal papers such as Journal of Differential Equations, SIAM Journal on Applied Mathematics, IEEE Transaction on Neural Network, Proceedings of Edinburgh Mathematical Society, Journal of Mathematical Analysis and Applications,, etc.

FST Seminar - MAT - "On the higher-dimensional linear quaternionic-valued ordinary differential equations" at 4:00pm on 18 August 2015 (Tuesday), E11-1006