The 14th Lecture Series by Academicians from the Chinese Academy of Sciences (CAS)

Jointly Organized by
Department of Mathematics
The Institute of Mathematical Sciences
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Speaker: **Prof. Zhang Ping**
Division of Mathematics and Physics
Chinese Academy of Sciences
中國科學院數學物理學部張平院士

Title: 漫談Fourier 分析與偏微分方程
A Casual Discussion of Fourier Analysis and Partial Differential Equations

Date: Thursday, 18 April 2024

Time: 09:30-10:30
(Tea reception is available on 09:00)

Venue: 康本國際學術園 2 樓 LT8 演講廳
LT8, 2/F, Yasumoto International Academic Building

Registration: http://www.cuhk.edu.hk/cneo/cas_2024/

Biography

Professor Zhang Ping is now president of Academy of Mathematics and System Sciences, The Chinese Academy of Sciences (CAS). He received his BS in Mathematics from Nanjing University in 1991, and PhD from Nanjing University in 1997. He was postdoctor in the Institute of Mathematics, CAS, from 1997 to 1999. From 1999 on, he has been working in the Academy of Mathematics and System Sciences, CAS. He was promoted to the full professor position in 2003. Professor Zhang's research lies in the mathematical theory of viscous fluid dynamical equations and semi-classical limit of nonlinear Schrodinger equations. His honors include: Outstanding Youth Grant from Natural Sciences Foundation of China in 2005; China Youth Science and Technology Innovation Award in 2007: State Natural Science Award of second class in 2011: Changjiang chair professor of The University of the Chinese Academy of Sciences in 2015; Chern Shiing-Shen Prize of Chinese Mathematical Society in 2019. He was elected to the Academician of The Chinese Academy of Sciences in 2021.

Abstract

In this report, I will first review the classic Fourier method and its application to partial differential equations with linear constant coefficients; then introduce the pseudodifferential operator and Fourier integral operator and their application to partial differential equations with linear variable coefficients; finally discuss Bony's paraproduct decomposition and its application to nonlinear partial differential equations.

Language: English

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