CHƯƠNG TRÌNH HỘI THẢO PHÒNG PTVP

BUỔI SÁNG

Chủ tọa: GS. TSKH. Đinh Nho Hào

9h00-10h00

Tên báo cáo: **On the (a,b,c,d) Boussinesq sytems**

Báo cáo viên: **TS. Lương Thái Hưng**

Tóm tắt: The full system of PDEs modeling water waves is too complex to be used for the description of long time dynamics of waves. In the long wave, small amplitude regime (Boussinesq regime) where, denoting by h the mean depth of the fluid layer, a a typical amplitude of the wave and λ a typical (horizontal) wave length, one assumes that

$$a/h = (h/\lambda)^2 = \epsilon \ll 1,$$

the four-parameter Boussinesq system for long wavelength, small amplitude gravity surface water waves was derived by J. Bona, M. Chen and J-C Saut as an asymptotic model of the full water waves system. In this talk, I will present some known results on the Cauchy problem, the existence of the line solitons for this system. I will also present our recent work on the Cauchy problem for the 2-d system when one perturbs it by its line soliton.

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10h00-11h00

Tên báo cáo: **Time decay rates of the L^3-Norm for strong solutions to the Navier-Stokes equations in $\mathbb{R}^3$**

Báo cáo viên: **TS. Đào Quang Khải**

Tóm tắt: Let $u \in C([0,\infty); L^3(R^3))$ be a strong solution of the Cauchy problem for the 3D Navier-Stokes equations with the initial value u_0. We show that the time decay rates of u in the L^3-norm coincide with ones of the heat equation with the initial value u_0. Our proofs use the theory about the existence of local strong solutions, time decay rates of strong solutions when the initial value is small enough, and uniqueness arguments.

This is a joint work with Vu Thi Thuy Duong (Faculty of Basic Sciences Quang Ninh University of Industry, Quang Ninh Vietnam, Email: vuthuyduong309@gmail.com),
Nguyen Minh Tri (Institute of Mathematics Vietnam Academy of Science and Technology 18 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam, Email: triminh@math.ac.vn)

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BUỔI CHIỀU

Chủ tọa: TS. Đào Quang Khải

14h00-15h00

Tên báo cáo: **STABILITY RESULTS FOR BACKWARD TIME-FRACTIONAL PARABOLIC EQUATIONS**
Báo cáo viên: **GS.TSKH. Đinh Nho Hào**

Tóm tắt:
Optimal order stability estimates of Hölder type for the backward Caputo time-fractional abstract parabolic equations are obtained. This ill-posed problem is regularized by a non-local boundary value problem method with a priori and a posteriori parameter choice rules which guarantee error estimates of Hölder type. Numerical implementations are presented to show the validity of the proposed scheme.

This is a joint work with
Jijun Liu (School of Mathematics/S.T.Yau Center of Southeast University, Southeast University, Nanjing, 210096, PR China, Email: jjliu@seu.edu.cn),
Nguyen Van Duc and Nguyen Van Thang (Department of Mathematics, Vinh University, Vinh City, Vietnam, Email: nguyenvanducdhv@gmail.com, nguyenvanthangk17@gmail.com)
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15h00-16h00

Tên báo cáo: **Asymptotic expansions of the lowest eigenvalue of the perturbed fractional p-Laplace operators.**
Báo cáo viên: **TS. Nguyễn Văn Hoàng**

Tóm tắt: In this talk, we consider the fractional p-Laplacian in $\mathbb{R}^d$ perturbed weakly by a potential V. We calculate the asymptotic expansions of the lowest eigenvalue of such an operator in the supercritical case and critical case and discuss the connection with the fractional Sobolev interpolation inequalities. This is based on the joint work on progress with Vo Hoang Hung.