

# The 23rd Annual Workshop of Differential Equations

第二十三屆微分方程研討會

January 17-18, 2015

## ***Program***

議程與論文摘要

### ***Venue***

Room B301

Department of Mathematics

National Taitung University

369, Sec. 2, University Rd., Taitung, Taiwan, R.O.C.

國立臺東大學數學系 B301 室

臺東市大學路二段 369 號

## The 23rd Annual Workshop of Differential Equations

日期：2015 年 1 月 17 日(星期六) 至 1 月 18 日(星期日)

地點：國立臺東大學數學系 B301 室

**主辦單位：**

國立臺東大學數學系、科技部數學推動中心

**贊助單位：**

國立臺東大學數學系、國立臺東大學理工學院、科技部數學推動中心

**學術委員 Scientific Committee :** (依筆畫排序)

王信華	Shin-Hwa Wang	(國立清華大學)
王懷權	Hwai-Chiuan Wang	(國立清華大學)
林松山	Song-Sun Lin	(國立交通大學)
林長壽	Chang-Shou Lin	(國立台灣大學)
陳宜良	I-Liang Chern	(國立交通大學)
陳俊全	Chiun-Chuan Chen	(國立臺灣大學)
陳建隆	Jann-Long Chern	(國立中央大學)
郭忠勝	Jong-Shenq Guo	(淡江大學)
許世璧	Sze-Bi Hsu	(國立清華大學)
劉太平	Tai-Ping Liu	(中央研究院)
賴明治	Ming-Chih Lai	(國立交通大學)
羅春光	Chun-Kong Law	(國立中山大學)

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程友文	Yu-Wen Cheng	(國立臺東大學)
黃豐國	Feng-Kuo Huang	(國立臺東大學)

**邀請講員 Invited Speakers:**

Kenji Nakanishi	(Kyoto University, Japan)
Hideo Takaoko	(Hokkaido University, Japan)
Ariane Trescases	(ENS Cachan, France)
王信華	(國立清華大學)
史習偉	(國立成功大學)
吳恭儉	(國立高雄師範大學)
吳菁菁	(國立中興大學)
林立人	(中央研究院)
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林俊良	(中央研究院)
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郭鴻文	(國立成功大學)
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袁淵明	(靜宜大學)
許世璧	(國立清華大學)
劉太平	(中央研究院)
謝天長	(國立中央大學)

## 大會議程

時間	2015.1.17(六)	時間	2015.1.18 (日)
09:20-09:50	報到	Chair	羅春光
09:50-10:10	開幕致詞	09:10-10:00	劉太平
Chair	林太家	Chair	吳宗芳
10:10-11:00	Kenji Nakanishi	10:05-10:35	吳恭儉
11:00-11:15	茶會	10:35-11:05	郭鴻文
Chair	林太家	11:05-11:20	茶會
11:15-11:45	夏俊雄	Chair	李志豪
11:45-12:15	洪盟凱	11:20-11:50	Ariane Trescases
12:15-13:30	午餐	11:50-12:20	林俊良
Chair	方永富	12:20-13:40	午餐
13:30-14:20	Hideo Takaoka	Chair	王懷權
14:20-14:50	史習偉	13:40-14:30	王信華
14:50-15:10	茶會	14:30-15:00	林英杰
Chair	郭忠勝	15:00-15:20	茶會
15:10-16:00	許世璧	Chair	張仁煦
Chair	吳金典	15:20-15:50	吳菁菁
16:10-16:40	袁淵明	15:50-16:20	謝天長
16:40-17:10	林立人	會議結束	
18:00	晚宴(富野溫泉休閒會館)	會議結束	

## ***Program***

Time	2015.1.17 (Saturday)
09:20-09:50	Opening
Chair	Tai-Chia Lin (National Taiwan University)
10:10-11:00	Kenji Nakanishi (Kyoto University, Japan) Multi-frequency NLS limit for a model equation of gravity-capillary waves
11:00-11:15	Tea time
Chair	Tai-Chia Lin (National Taiwan University)
11:15-11:45	Chun-Hsiung Hsia (National Taiwan University) On the asymptotic analysis of GFDs and the related equations
11:45-12:15	Meng-Kai Hong (National Central University) The global entropy solution to the Fanno-Rayleigh's type of compressible Euler equations in the transonic flows
12:15-13:30	Lunch
Chair	Yung-Fu Fang (National Cheng Kung University)
13:30-14:20	Hideo Takaoka (Hokkaido University, Japan) Well-posedness for the cubic NLS on surface $S^2$
14:20-14:50	Hsi-Wei Shih (National Cheng Kung University) Local and global well-posedness for the 1D quantum Zakharov system
14:50-15:10	Tea time
Chair	Jong-Shenq Guo (Tamkang University)
15:10-16:00	Sze-Bi Hsu (National Tsing Hua University) A nonlocal problem in conservation biology
Chair	Chin-Tien Wu (National Chiao Tung University)
16:10-16:40	Juan-Ming Yuan (Providence University) Primary results on a higher-order nonlinear wave equation
16:40-17:10	Li-Jen Lin (Academia Sinica) Construction of mixed dimensional soliton trains for nonlinear Schrödinger equations
18:00	Banquet (Hoya Hot Springs Resort & Spa)

Time	2015.1.18 (Sunday)
Chair	Chun-Kong Law (National Sun Yat-Sen University)
09:10-10:00	Tai-Ping Liu (Academia Sinica) Invariant manifolds for steady Boltzmann equation and applications
Chair	Tsung-Fang Wu (National University of Kaohsiung)
10:05-10:35	Kung-Chien Wu (National Kaohsiung Normal University) Semigroup decay of the Boltzmann equation in a torus
10:35-11:05	Hung-Wen Kuo (National Cheng Kung University) Thermalizing effects of the boundary for the Boltzmann equation
11:05-11:20	Tea time
Chair	Jyh-Hao Lee (Academia Sinica)
11:20-11:50	Ariane Trescases (ENS Cachan) Regularity of the Boltzmann equation in bounded domains
11:50-12:20	Chun-Liang Lin (Academia Sinica) Green's functions of compressible Navier-Stokes equations in half line
12:20-13:40	Lunch
Chair	Hwai-Chiuan Wang (National Tsing Hua University )
13:40-14:30	Shin-Hwa Wang (National Tsing Hua University) Proof of a conjecture for the one-dimensional perturbed Gelfand problem from combustion theory
14:30-15:00	Ying-Chieh Lin (National University of Kaohsiung) The well-posedness for the compressible Navier-Stokes equations with density dependent viscosity and free boundaries in physical vacuum
15:00-15:20	Tea time
Chair	Jen-Hsu Chang (National Defense University)
15:20-15:50	Chin-Chin Wu (National Chung Hsing University) On the dead-core problem for the $p$ -Laplace equation with a strong absorption
15:50-16:20	Tien-Tsan Shieh (National Central University) The gradient theory of phase transition theory with Dirichlet boundary condition and a quadratic constraint
	~The end~

## 12. Ariane Trescases . . . . .

Regularity of the Subsonic Solutions

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