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# Workshop on Dynamical System and Number Theory

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Shandong University  
June 15<sup>th</sup> – 17<sup>th</sup>, 2016

## Organizers

Liming Ge, Chinese Academy of Sciences

Jianya Liu, Shandong University

Xiangdong Ye, University of Science and Technology of China

葛力明

## Speakers

Aihua Fan, Central China Normal University

Wen Huang, University of Science and Technology of China

Takao Komatsu, Wuhan University

Jianya Liu, Shandong University

Guangshi Lü, Shandong University

Song Shao, University of Science and Technology of China

Fei Wei, Chinese Academy of Sciences

Jie Wu, Université de Lorraine

Boqing Xue, Chinese Academy of Sciences

Xiangdong Ye, University of Science and Technology of China

**Venue: B924 Zhixin Building, Central Campus, Shandong University**

## Schedule

### Thursday, June 16

09:00 – 09:30      Opening ceremony

09:30 – 10:15      Speaker: Xiangdong Ye, University of Science and Technology of  
China

10:15 – 10:45      Break

10:45 – 11:30      Speaker: Song Shao, University of Science and Technology of  
China

### Lunch

14:15 – 15:00      Speaker: Jianya Liu, Shandong University

15:00 – 15:30      Break

15:30 – 16:15      Speaker: Boqing Xue, Chinese Academy of Sciences

16:15 – 16:45      Break

16:45 – 17:30      Speaker: Takao Komatsu, Wuhan University

### Friday, June 17

09:30 – 10:15      Speaker: Aihua Fan, Central China Normal University

10:15 – 10:45      Break

10:45 – 11:30      Speaker: Guangshi Lü, Shandong University

### Lunch

14:15 – 15:00      Speaker: Jie Wu, Université de Lorraine

15:00 – 15:30 Break

15:30 – 16:15 Speaker: Fei Wei, Chinese Academy of Sciences

16:15 – 16:45 Break

16:45 – 17:30 Speaker: Wen Huang, University of Science and Technology of

China

Handwritten notes in Chinese characters, possibly "李天" (Li Tian).

Sequences from zero entropy nonconformal total automorphisms and Sarkis Conjecture  
Bong Shao  
University of Science and Technology of China

In this talk we study  $C^*$ -algebra version of Sarkis Conjecture for nonconformal total automorphisms. Let  $A$  be a separable unital  $C^*$ -algebra and  $\alpha$  be the conformal total automorphism arising from a matrix  $S \in GL(d, \mathbb{Z})$ . We show that if the von Neumann entropy of  $\alpha$  is zero, then the sequence  $\{p_n^2\}_{n \geq 1}$  is a sum of a nilsequence and a zero-entropy sequence where  $n \in \mathbb{N}$  and  $p$  is any state on  $A$ . Then by a result of Green and Tao, this sequence is linearly disjoint from the Möbius function. This is a joint work with Jian Huang and Ye.

李天

Jian Li

Shandong University

本演讲以图论为出发点，研究非正规全自同构的熵问题。