

A3 Workshop on fluid dynamics and related topics

Date: March 6<sup>th</sup> – 9<sup>th</sup>, 2019

Venue: RIKEN Integrated Innovation Building (IIB) 8F

<https://www.bdr.riken.jp/en/access/kobe.html>

Program (As of Feb. 15)

March 6, 2019 (Wed)

17:00 All participants will meet at the front of Toyoko-Inn Kobe 2 (<https://www.toyoko-inn.com/eng/search/detail/00123>). We will move to the pick-up location.

18:00—20:00 Welcome Reception and Discussion at Sakabayashi, Shushinkan (<https://www.shushinkan.co.jp/sakabayashi/>)

March 7, 2019 (Thr)

9:30—10:00 Koya Sakakibara (Kyoto Univ)

Bidirectional numerical conformal mapping based on the dipole simulation method

10:00—10:30 Yana Di (Chinese Academy of Science)

Thin film dynamics in coating problems using Onsager principle

Break

10:45—11:15 Lei Zhang (Peking Univ.)

Construct solution landscapes of nematic liquid crystal

11:15—11:45 Ruo Li (Peking Univ.)

Discrete kernel preserving model for 1D electron-phonon scattering

11:50—12:00 Photo Session

Lunch

14:00—14:30 Yuto Miyatake (Osaka Univ)  
Estimating ODE models by iteratively reweighted  
least squares

14:30—15:00 Tomoki Uda (Tohoku Univ)  
Discrete formulation of Reeb graphs and its  
application to topological fluid data analysis

Break

15:15—15:45 Kengo Nakai (Univ of Tokyo)  
Machine-learning construction of a model for a  
macroscopic fluid variable using the delay-coordinate  
of a scalar observable

15:45—16:15 Xiaolan Zhou (Xiamen Univ), Mejd Azaiez,  
Chuanju Xu  
Reduced-order modelling for the Allen-Cahn  
equation based on scalar auxiliary variable  
approaches

Break

16:30—17:00 Jun-ya Nishiguchi (Tohoku Univ)  
Sensitivity with respect to delay

17:00—17:30 Daisuke Tagami (Kyushu Univ)  
TBA

18:30—20:30 Dinner and discussion at Stella Court

March 8 (Fri.)

“Scientific Tour to Naruto Strait for Discussion of Fluid Eddy Turbulence”

9:30—10:30 Depart at JR San-no-miya station for Fukura

10:30—11:15 Uzu-shio Science Museum

11:30—12:00 Video Lecture for Uzu-shio Creation

12:00—12:40 Lunch

12:50—13:50 Uzu-shio Cruise for observation of eddy turbulence.

13:50—14:20 Free Discussion

14:20—16:10 Depart at Fukura for Kobe

18:00 Dinner and Discussion at Ume-no-Hana

[http://www.umenohana.co.jp/n\\_english/](http://www.umenohana.co.jp/n_english/)

March 9, 2019 (Sat.)

9:30—10:00 Guanyu Zhou (Tokyo Univ of Science)

On the discrete  $H^{1/2}$  norm and the lifting lemmas for the non-conforming elements and the application to the slip boundary condition

10:00—10:30 Hui Yao (Xiamen Univ), Chuanju Xu

A finite element method and numerical analysis for the problem of inextensible immersed interface in incompressible flows

Break

10:45—11:15 Yuan Yao (Hong Kong Univ Sci Tech)

Robust estimation and generative adversarial networks

11:15—11:45 Yoshiki Sugitani (Tohoku Univ.)

Training of neural networks with biased datasets  
and its application to anemia control system

12:00—13:00 Lunch (end of the workshop)