

OIST Mini Symposium

"Mathematical Modeling and Analysis of Protein Cages"

DATE: Wednesday, January 13, 2016 – Friday, January 15, 2016

LOCATION: OIST Main Campus, Seminar Room C210

Program

Day 1 (Jan. 13) Venue: C210

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| 9:00–9:30 | Opening remarks by Executive Vice President Robert Baughman, OIST |
| 9:30–10:30 | Talk-1: Fasseli Coulibaly (Monash University)
"Structural analysis of in vivo-grown protein microcrystals" |
| 10:30–10:45 | Coffee Break |
| 10:45–11:45 | Talk-2: Chandrajit Bajaj (University of Texas at Austin)
"Generating highly symmetric and congruently tiled cages" |
| 11:45–13:00 | Lunch |
| 13:00–13:15 | General Campus tour |
| 13:15–14:15 | Lab Tour |
| 14:15–14:30 | Coffee Break |
| 14:30–15:30 | Talk-3: William Klug (UCLA Engineering)
"Rational mechanics of viral shells: Is elasticity theory a stretch?" |
| 15:30–15:45 | Coffee break |
| 15:45–16:45 | Talk-4: Eric Dykeman (The University of York)
"The multiple roles of viral RNA packaging signals and their consequences capsid assembly and evolution" |
| 18:00–20:00 | Dinner (Speakers/ Organizers only) |

Day 2 (Jan. 14) Venue: C210

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| 9:30–10:30 | Talk-5: Meera Sitharam (University of Florida)
"EASAL: efficient atlasing, search and analysis of assembly landscapes under short-ranged potentials using geometrization, stratification and Cayley convexification" |
| 10:30–10:45 | Coffee Break |
| 10:45–11:45 | Talk-6: Giuliana Indelicato (University of Torino)
"Graph-theoretical methods for the structural characterization of self-assembling nanoparticles" |



- 11:45–12:45 Lunch
- 12:45–13:45 Talk-7: Roya Zandi (UC Riverside)
“The robust assembly of small symmetric nanoshells”
- 13:45–14:00 Coffee Break
- 14:00–15:00 ***For those who are interested, there will be a seminar by Professor Seung-Wuk Lee who is currently visiting Professor Amy Shen, Micro/Bio/Nanofluidics Unit, OIST.*
Seminar: Seung-Wuk Lee (UC Berkeley)
“Manufacturing Goes Viral: Biomimetic Self-templating Assembly and Applications”
Venue: C209
- 15:00–18:00 Excursion
***For those who are interested.*
(Excursion Schedule)
15:00 Leave OIST
 >>Cape Zampa >> Okashi-goten (Souvenir shop)
18:00 Back to OIST
- 18:00–20:00 Banquet Dinner (Speakers/ Organizers only)

Day 3 (Jan. 15) Venue: C210

- 9:30–10:30 Talk-8: Farrah Sadre-Marandi (The Ohio State University)
“Lattice structures of viral capsids”
- 10:30–10:45 Coffee Break
- 10:45–11:45 Talk-9: Koya Shimokawa (Saitama University)
“Knots and links in the simple cubic lattice”
- 11:45–13:00 Lunch
- 13:00–14:00 Talk-10: Guang Hu (Soochow University)
“From mathematics in DNA cage to dynamics in protein cage”
- 14:00–14:15 Coffee Break
- 14:15–15:15 Talk-11: Paolo Cermelli (University of Torino)
“The disassembly of viral capsids as a case-study for the stability of systems of many interacting proteins”
- 15:15–15:30 Coffee Break
- 15:30–16:30 Discussion
- 16:30–17:00 Closing
- 18:00–20:00 Dinner (Speakers/ Organizers only)

End