## Agenda of First Shanghai Assembly

16:40-16:55 Qirong Zhu

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|---|----------------------------|--|--|--|
| Sunday  | 18:00-20:00                | Reception at Mehood Lestie Hotel   |  |  |
| Day 1: 2019/11/4  |                            |  |  |  |
| 8:50-9:00   | Xiaohu Yang                | Welcome and Opening Remarks  |  |  |
| Session 1:  | Large scale structu        | are and cosmological probes, Chair: Pengjie Zhang  |  |  |
| 9:00-9:25   | Arman Shafieloo            | H0 Tension: Systematics or New Physics?  | KASI                                     |  |
| 9:25-9:50   | Gongbo Zhao                | TBD  | NAOC                                     |  |
| 9:50-10:15  | Baojiu Li                  | TBD (RSD or BAO Reconstruction)  | Durham University                        |  |
| 10:15-10:30   | Yi Zheng                   | kSZ effect on cosmological gravity test  | SYSU                                     |  |
| 10:30-11:00   | Coffee Break               |  |  |  |
| Session 2:  | Strucuture Format          | ion Simulations, Chair: Raul Angulo  |  |  |
| 11:00-11:25   | Xiaohu Yang                | Elucid Project   | SJTU                                     |  |
| 11:25-11:40   | Metin Ata                  | Initial Density Field Reconstructions with Galaxy Surveys  | IPMU                                     |  |
| 11:40-12:05   | Noam Libeskind             | The Hestia Project: constrained simulations of the local group   | AIP Potsdam /IPNL Lyon                   |  |
| 12:05-14:00   | Lunch Break                |  |  |  |
| Session 3: Galaxy Formation in Simulations, Chair: Ho Seong Hwang |                            |  |  |  |
| 14:00-14:25   | Marta Reina-Campos         | Formation and evolution of stellar clusters in a cosmological context: the E-MOSAICS simulations                             | Universität Heidelberg                   |  |
| 14:25-14:40   | Florent Renaud             | How galaxy mergers have shaped the Milky Way   | Lund Observatory                         |  |
| 14:40-15:05   | Andrea Maccio              | Galaxies as cosmological probes  | New York University Abu<br>Dhabi         |  |
| 15:05-15:35   | Coffee Break               |  |  |  |
| Session 4:  | Galaxy Formation           | in Simulations, Chair: Volker Springel   |  |  |
| 15:35-16:00   | Feng Yuan                  | AGN feedback study in a galactic scale   | SHAO                                     |  |
| 16:00-16:25   | Robert John James<br>Grand | Gas accretion and galactic fountain flows in the Auriga cosmological simulations: angular momentum and metal re-distribution | Max-Planck-Institute for<br>Astrophysics |  |
| 16:25-16:40   | Jolanta Zjupa              | The role of galactic feedback in regulating angular momentum and intrinsic alignments of galaxies                            | Observatoire de la Côte<br>d'Azur        |  |
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Go to Infinity in Real: Lattice Sum With Multipole Expansions

Carnegie Mellon

University

| Day 2: 2019/11/5                                   |                    |   |   |
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| Session 1:   |                    |   |   |
| 9:00-9:25  | Cheng Li           | Identifying groups of high-z galaxies from incomplete spectroscopic surveys   | Tsinghua                                  |
| 9:25-9:50  | Ho Seong Hwang     | Evolution of environmental dependence of galaxy properties over cosmic time: comparison between observations and simulations    | KASI                                      |
| 9:50-10:10   | Clotilde Laigle    | Group connectivity in COSMOS: A tracer of mass assembly history   | Institut d'Astrophysique<br>de Paris      |
| 10:10-10:40  | Coffee Break       |   |   |
| Session 2:   | Environments of G  | alaxies, Chair: Cheng Li  |   |
| 10:40-11:05  | Lingyu Wang        | Deciphering the role of mergers in galaxy evolution   | SRON - Netherlands<br>Institute for Space |
| 11:05-11:20  | Hengxing Pan       | Measuring the HI mass function below the detection threshold  | University of Oxford /<br>PMO             |
| 11:20-11:45  | Hong Guo           | Clustering-Lensing Discrepancy  | SHAO                                      |
| 11:45-12:00  | Haojie Xu          | Accurate Modeling of the Projected Galaxy Clustering in Photometric Surveys   | SJTU                                      |
| 12:00-14:00  | Lunch Break        |   |   |
| Session 3:   | Exploring the High | Redshift Universe, Chair: Xi Kang   |   |
| 14:00-14:25  | Xuelei Chen        | The 21cm probe of Reionization  | NAOC                                      |
| 14:25-14:40  | Hyunbae Park       | Implications of Baryonic-Dark Matter Streaming velocity on Reionization   | IPMU                                      |
| 14:40-14:55  | Hyunmi Song        | Ly $\alpha$ Radiative Transfer: Modelling Spectrum and Surface Brightness<br>Profile of Ly $\alpha$ -emitting Galaxies at z=3–6 | KASI                                      |
| 14:55-15:10  | Jian Yao           | Cross correlation with Tianlai 21cm survey & DESI   | SJTU                                      |
| 15:10-15:40  | Coffee Break       |   |   |
| Session 4: Galaxy Observations, Chair: Lingyu Wang |                    |   |   |
| 15:40-16:05  | Renbin Yan         | Beyond the BPT diagnostic diagrams  | University of Kentucky                    |
| 16:05-16:30  | Wenting Wang       | The stellar halo of isolated central galaxies in the Hyper Suprime-Cam imaging survey   | SJTU/IPMU                                 |
| 16:30-16:55  | Tingwen Lan        | Probing the Circumgalactic Medium with the SDSS   | IPMU                                      |

| Day 3: 2019/11/6, Free Afternoon & Banqu |
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| Session 1:  | Halo Structure, Ch                     | air: Noam Libeskind   |  |
|-------------|--|---|--|
| 9:00-9:25   | Jie Wang                               | Universality in the structure of dark matter haloes over 20 orders of magnitude in halo mass              | NAOC   |
| 9:25-9:50   | Raul Angulo                            | TBD   | Donostia International<br>Physics Center         |
| 9:50-10:15  | Jiaxin Han                             | Towards optimal dynamical models of the Milky Way halo  | SJTU   |
| 10:15-10:30 | Zhaozhou Li                            | Constraining the Milky Way Mass Profile with Satellite Galaxies in Phase Space                            | SJTU   |
| 10:30-11:05 | <b>Conference Photo</b> & Coffee Break |   |  |
| 11:05-11:30 | Masami Ouchi                           | Exploring Early Galaxies and Cosmic Structures with Subaru, HST, and ALMA                                 | NAOJ/U. Tokyo                                    |
| Session 2:  | Posters, Chair: Hac                    | ojie Xu, Each one has 2min talk+1min question   |  |
| 11:30-12:00 | Saito Shun                             | Towards Lyman-alpha Intensity Mapping Cosmology in HETDEX   | Missouri University of<br>Science and Technology |
|             | Yashpal Bhulla                         | Detection of the thermonuclear X-ray bursts and dips from the X-ray binary 4U 1323-62 with AstroSat/LAXPC | Pacific University,<br>Udaipur                   |
|             | Sung-Ho An                             | The Number Excess of Misaligned Interactions in the Spin-Orbit<br>Alignment of Interacting Halo Pairs     | Yonsei University                                |
|             | Jenny Wagner                           | Halo mass densities from a statistical viewpoint  | ZAH, Heidelberg<br>University                    |
|             | Cesar Hernandez-<br>Aguayo             | Galaxy clustering from modified gravity hydrodynamical simulations  | Durham University                                |
|             | Unnikrishnan Potty<br>Sureshkumar      | How galaxy properties trace their environment?  | Jagiellonian University                          |
|             | Raj Kumar Pradhan                      | The age and kinematic distributions of the Milky Way stellar halo   | Tribhuvan University                             |
|             | Gillian Dora Beltz-<br>Mohrmann        | Taking HOD modeling to the next level: results from SDSS and tests with hydrodynamic simulations          | Vanderbilt University                            |
|             | Jun-Sung Moon                          | On the origin of the spin–orbit alignment in galaxy pairs   | Yonsei University                                |
| 12:00-14:00 | Lunch Break                            |   |  |

| 14:00-17:00 Free Discus | sion |
|-------------------------|------|
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14:00-15:30 Carlos Frenk Public Talk: Everything from

Public Talk: Everything from nothing: how the universe was made

17:00-20:00 Conference Banquet Location: Mingxin Cruise on the Huangpu River, the bund

| Day 4: 2019/11/7 |                                 |  |  |
|------------------|---------------------------------|--|--|
| Session 1:       | Probing the Dark                | Matter Models, Chair: Jiaxin Han   |  |
| 9:00-9:25        | Carlos Frenk                    | Astrophysical tests of the nature of the dark matter   | Durham University                                |
| 9:25-9:50        | Ran Li                          | Exploring the identity of dark matter with strong gravitational lensing  | NAOC   |
| 9:50-10:10       | Keri Dixon                      | Clues to the nature of dark matter from first galaxies   | New York University Abu<br>Dhabi                 |
| 10:10-10:40      | Coffee Break                    |  |  |
| Session 2:       | Probing the Dark                | Matter Models, Chair: Carlos Frenk   |  |
| 10:40-11:00      | Xi Kang                         | Warm dark matter model with a few keV mass is bad for the too-big-to-<br>fail problem  | РМО  |
| 11:00-11:15      | Ana Diaz Rivero                 | Strong gravitational lensing as a cosmological probe: new ways of finding substructure and constraining the particle nature of dark matter | Harvard University                               |
| 11:15-11:40      | Laurence Perreault<br>Levasseur | Analysis of Strong Gravitational Lensing Data with Machine Learning  | University of Montreal                           |
| 11:40-12:05      | Andrew Robertson                | Constraints on self-interacting dark matter from galaxy clusters   | Durham University                                |
| 12:05-14:00      | Lunch Break                     |  |  |
| Session 3:       | Large scale structu             | are and cosmological probes, Chair: Takahiro Nishimichi  |  |
| 14:00-14:25      | Changbom Park                   | Minkowski Functionals and Minkowski Tensors in cosmology   | KIAS   |
| 14:25-14:50      | Shun Saito                      | Simulating emission-line galaxies for ongoing and future BAO surveys   | Missouri University of<br>Science and Technology |
| 14:50-15:15      | Christohe Pichon                | When peaks, filaments or walls merge: forecasting special events through the coalescence of critical points                                | Institut d'Astrophysique<br>de Paris             |
| 15:15-15:45      | Coffee Break                    |  |  |
| Session 4:       | Large scale structu             | are and cosmological probes, Chair: Shun Saito   |  |
| 15:45-16:10      | Keiichi Umetsu                  | Unveiling Cosmic Structure Formation by Cluster Lensing  | ASIAA  |
| 16:10-16:35      | Teppei Okumura                  | Intrinsic alignments of halo orientations with density and velocity fields at BAO scales and beyond  | ASIAA  |
| 16:35-17:00      | Takahiro Nishimichi             | Emulating Halo Statistics for Large-Scale Structure Cosmology  | Kyoto University                                 |

| Day 5: 2019/11/8   |             |  |  |
|--|-------------|--|--|
| Session 1: Large scale structure and cosmological probes, Chair: Changbom Park |             |  |  |
| 9:00-9:25  | Juhan Kim   | Structure Formation in the Early Universe Viewed with the Horizon Run 5 Simulation     | KIAS   |
| 9:25-9:50  | Sownak Bose | Fundamental Cosmology with the Smallest Galaxies                                       | Harvard-Smithsonian<br>Center for Astrophysics |
| 9:50-10:05   | Taira Oogi  | Clustering and halo occupation of AGNs using a semi-analytic model of galaxy formation | IPMU   |

10:05-10:35 Coffee Break

| Session 2:  |                     |   |                         |
|-------------|---------------------|---|-------------------------|
| 10:35-11:00 | Weiguang Cui        | The connections of galaxy properties to halo formation history                                    | University of Edinburgh |
| 11:00-11:15 | Antonios Katsianis  | The evolution of the simulated and observed SFRs of galaxies in the Past 13 billion years         | SJTU                    |
| 11:15-11:30 | Jesse Golden-Marx   | Observationally Tracing Central Galaxy Assembly: The Stellar-Halo Mass-<br>Magnitude Gap Relation | SJTU                    |
|             |                     |   |                         |
| 11:30-14:00 | Lunch Break         |   |                         |
| Session 3:  |                     |   |                         |
| 14:00-14:20 | Kwan Chuen Chan     | The large-scale bias of cosmic voids  | SYSU                    |
| 14:20-14:35 | Junsup Shim         | Identification of Cosmic Voids as the Cluster Counterpart   | KIAS                    |
| 14:35-14:50 | Hei Yin Jowett Chan | New Insight into the Void-in-Cloud Process  | Tohoku University       |
| 15:00-15:30 |                     | Summary of Meeting  |                         |