



<http://kicp-workshops.uchicago.edu/2015-mg/>

WORKSHOP PROGRAM

The Kavli Institute for Cosmological Physics (KICP) at the University of Chicago is hosting a workshop this fall on theories of modified gravity. The purpose of workshop is to discuss recent progress and interesting directions in theoretical research into modified gravity. Topics of particular focus include: massive gravity, Horndeski, beyond Horndeski, and other derivatively coupled theories, screening and new physics in the gravitational sector, and possible observational probes of the above. The meeting will be relatively small, informal, and interactive workshop for the focused topics.

Organizing Committee

Scott Dodelson

Fermilab, University of Chicago

Wayne Hu

University of Chicago

Austin Joyce

University of Chicago

Hayato Motohashi

University of Chicago

Lian-Tao Wang

University of Chicago

WORKSHOP PROGRAM**Monday - October 12, 2015**

9:30 AM - 9:40 AM Welcome

MORNING SESSION

Chair: Wayne Hu

9:40 AM - 10:05 AM **Rachel A. Rosen**, Columbia University in the City of New York
On Recent Developments in Partially Massless Gravity

10:15 AM - 10:40 AM **Claudia de Rham**, Case Western Reserve University
Non-trivial vacua

10:50 AM - 11:20 AM Coffee break

11:20 AM - 11:45 AM **Masahide Yamaguchi**, Tokyo Institute of Technology
Perturbations of Cosmological and Black Hole Solutions in Massive gravity and Bi-gravity

11:55 AM - 12:20 PM **Teruaki Suyama**, Research Center for the Early Universe, University of Tokyo
Spontaneous scalarization: asymmetron as dark matter

12:30 PM - 12:40 PM Group photo

12:40 PM - 2:40 PM Lunch / Posters & Discussion

AFTERNOON SESSION

Chair: Lian-Tao Wang

2:40 PM - 3:05 PM **Gregory Gabadadze**, New York University
A New Approach to Big Cosmological Constant and Dark Energy

3:15 PM - 3:40 PM **George Zahariade**, University of California, Davis
A manifestly local theory of vacuum energy sequestering

3:50 PM - 4:30 PM Coffee break

4:30 PM - 4:55 PM **Kurt Hinterbichler**, Perimeter Institute for Theoretical Physics
A Stueckelberg approach to quadratic curvature gravity and its decoupling limits

Tuesday - October 13, 2015

MORNING SESSION*Chair: Hayato Motohashi*

- 9:40 AM - 10:05 AM **David Langlois**, Astroparticle and Cosmology Laboratory, Paris
Exploring theories beyond Horndeski
- 10:15 AM - 10:40 AM **Filippo Vernizzi**, CEA
A unifying description of dark energy
- 10:50 AM - 11:20 AM Coffee break
- 11:20 AM - 11:45 AM **Kazuya Koyama**, Insitute of Cosmology and Gravitation, University of Portsmouth
Phenomenology of beyond Horndeski theories
- 11:55 AM - 12:20 PM **Gustavo Niz**, University of Guanajuato, Mexico
On the Vainshtein mechanism
- 12:30 PM - 2:30 PM Lunch / Posters & Discussion

AFTERNOON SESSION*Chair: Scott Dodelson*

- 2:30 PM - 2:55 PM **Lam Hui**, Columbia University
Symmetries in gravity and large scale structure
- 3:05 PM - 3:30 PM **Gianmassimo Tasinato**, Swansea University
Vector fields, galileons, and modified gravity
- 3:40 PM - 4:20 PM Coffee break
- 4:20 PM - 4:45 PM **Shinji Mukohyama**, Yukawa Institute for Theoretical Physics, Kyoto University
Massive gravity and cosmology

Wednesday - October 14, 2015

MORNING SESSION

Chair: Austin Joyce

- 9:40 AM - 10:05 AM **Alberto Nicolis**, Columbia University in the City of New York
Icosahedral inflation
- 10:15 AM - 10:40 AM **Cedric Deffayet**, CNRS
P-form Galileons
- 10:50 AM - 11:20 AM Coffee break
- 11:20 AM - 11:45 AM **Nemanja Kaloper**, University of California, Davis
Lambda: The Sequester
- 11:45 AM - 11:55 AM Closing

Posters (October 12-14, 2015)

1. **Andrew Matas**, Case Western Reserve University
Charged Spin 2 Fields