Berkeley Week at Kavli IPMU

Report of Contributions

https://indico.ipmu.jp/e/313

Contribution ID: **1** Type: **not specified**

Neutrino studies in Kamioka

Thursday, 16 January 2020 11:30 (30 minutes)

How research may not go as planned, and how collaboration between experiments and theories are important.

Presenter: Prof. KAJITA, Takaaki (ICRR)

Contribution ID: **2** Type: **not specified**

Limit on the axion decay constant from the cooling neutron star in Cassiopeia A

Friday, 17 January 2020 09:30 (30 minutes)

Presenter: Mr YANAGI, Keisuke (Hongo)

Contribution ID: **3** Type: **not specified**

Direct Detection Signals from Absorption of Fermionic Dark Matter

Friday, 17 January 2020 11:30 (30 minutes)

Presenter: Mr MCGEHEE, Robert (Berkeley)

Contribution ID: **4** Type: **not specified**

Axion Dark Matter Search with Interferometric Detectors

Friday, 17 January 2020 10:30 (30 minutes)

Presenter: Dr OBATA, Ippei (ICRR)

Contribution ID: **5** Type: **not specified**

Distinguishing neutrino mass hierarchy from DM annihilation

Friday, 17 January 2020 10:00 (30 minutes)

Presenter: Dr SAHA, Ipsita (Kavli IPMU)

Contribution ID: **6** Type: **not specified**

Shing-Chi Leung (Caltech)

Thursday, 16 January 2020 14:00 (1 hour)

https://research.ipmu.jp/seminar/?seminar_id=2478

Contribution ID: **7** Type: **not specified**

Alireza Allahyarisadeghabadi (IPM, Tehran, Iran)

Tuesday, 14 January 2020 15:30 (1 hour)

https://research.ipmu.jp/seminar/?seminar_id=2423

Contribution ID: **9** Type: **not specified**

Testing seesaw and leptogenesis by gravitational wave

Tuesday, 14 January 2020 09:30 (30 minutes)

Presenter: Prof. MURAYAMA, Hitoshi (Berkeley, Kavli IPMU)

Contribution ID: **10** Type: **not specified**

Gauge Anomalies in an Effective Field Theory, the On-Shell Way

Wednesday, 15 January 2020 10:00 (30 minutes)

In a seminal paper, John Preskill showed how gauge theories in the Higgs phase can couple consistently to anomalous matter content. This formulation is complementary to the traditional approach in which gauge theories with an anomalous fermion content necessitate gauged-WZW terms that cancel the fermion anomaly. The gauge invariant statement that follows is that anomalous theories in the Higgs phase are completely consistent with unitarity, when considered as EFTs.

In this work we shed more light on the consistency of anomalous gauge theories in the Higgs phase, using the recently discovered, on-shell notion of gauge anomalies as tension between locality and unitarity at 1-loop. We demonstrate how this tension is reconciled in the Higgs phase by calculating the 1-loop contribution of massless chiral fermions to the massive 4-vector amplitude. This is the one of the first full 1-loop calculations that combine the method of generalized unitarity with Nima Arkani-Hamed's massive amplitude formalism.

Presenter: Dr TELEM, Ofri (Berkeley)

Contribution ID: **12** Type: **not specified**

On the New Uncertainty Relation Derived Geometrically from Aharonov's Weak Value

Wednesday, 15 January 2020 09:30 (30 minutes)

Presenter: Mr WATANABE, Kaisei (KEK)

Contribution ID: **13** Type: **not specified**

Rapid bound-state formation of Dark Matter in the Early Universe

Wednesday, 15 January 2020 11:30 (30 minutes)

Presenter: Dr BINDER, Tobias (Kavli IPMU)

Contribution ID: **14** Type: **not specified**

Oscillon of Ultra-Light Axion-like Particle

Tuesday, 14 January 2020 10:00 (30 minutes)

Presenter: Mr SONOMOTO, Eisuke (ICRR)

Contribution ID: **16** Type: **not specified**

New ideas in light dark matter direct detection.

Thursday, 16 January 2020 12:00 (30 minutes)

Presenter: Dr ZHANG, Zhengkang (Kevin) (Berkeley)

Contribution ID: **17** Type: **not specified**

Model of Composite Asymmetric Dark Matter

Wednesday, 15 January 2020 10:30 (30 minutes)

Presenter: Mr KOBAYASHI, Shin (ICRR)

Contribution ID: **18** Type: **not specified**

Matter Through the Looking Glass

Tuesday, 14 January 2020 10:30 (30 minutes)

Presenter: Ms HALL, Eleanor (UC Berkeley)

Contribution ID: **19** Type: **not specified**

J-factor estimation of Draco, Sculptor and Ursa Minor dwarf spheroidal galaxies with the member/foreground mixture model

Tuesday, 14 January 2020 12:00 (30 minutes)

Presenter: Mr HORIGOME, Shunichi (Kavli IPMU)

Contribution ID: **20** Type: **not specified**

Novel approaches to dark matter detection with atomic, molecular and optical experiments

Friday, 17 January 2020 14:30 (30 minutes)

Presenter: Dr STADNIK, Yevgeny (Kavli IPMU)

Contribution ID: **21** Type: **not specified**

Big Bounce Baryogenesis

Tuesday, 14 January 2020 14:30 (30 minutes)

Presenter: Dr BARRIE, Neil (Kavli IPMU)

Contribution ID: **22** Type: **not specified**

tea time

Wednesday, 15 January 2020 15:00 (30 minutes)

Contribution ID: **23** Type: **not specified**

tea time

Tuesday, 14 January 2020 15:00 (30 minutes)

Contribution ID: **24** Type: **not specified**

tea time

Thursday, 16 January 2020 15:00 (30 minutes)

Contribution ID: **25** Type: **not specified**

Islands, Double Holography, and Other Recent Advances in the Black Hole Information Paradox

Friday, 17 January 2020 14:00 (30 minutes)

Presenter: Ms WILDENHAIN, Liz (Berkeley)

Contribution ID: **27** Type: **not specified**

tea time

Friday, 17 January 2020 15:00 (30 minutes)

Contribution ID: **28** Type: **not specified**

Asymptotic safety and walking dynamics at large charge

Wednesday, 15 January 2020 14:30 (30 minutes)

Presenter: Prof. REFFERT, Susanne (University of Bern)

Contribution ID: **29** Type: **not specified**

Introduction to the large charge expansion

Tuesday, 14 January 2020 11:30 (30 minutes)

Presenter: Dr ORLANDO, Domenico (INFN division of Turin)

Contribution ID: **30** Type: **not specified**

QCD Axion Dark Matter from a Late Time Phase Transition

Wednesday, 15 January 2020 14:00 (30 minutes)

Presenter: Mr LEEDOM, Jacob (Berkeley)

Contribution ID: **31** Type: **not specified**

Amplification of gravitational motion via quantum weak measurement

Wednesday, 15 January 2020 15:30 (30 minutes)

Presenter: Mr UEDA, Daiki (KEK)

Contribution ID: **32** Type: **not specified**

Aspects of Nonlinear Effect on Black Hole Superradiance

Wednesday, 15 January 2020 16:00 (30 minutes)

Under some conditions, light boson fields grow exponentially around a rotating black hole, called the superradiance instability. We discuss effects of nonlinear interactions of the boson on the instability. In particular, we focus on the effect of the particle production and show that the growth of the boson cloud may be saturated much before the black hole spin is extracted by the boson cloud, while the nonlinear interactions also induce the boson emission. For application, we revisit the superradiant instability of the standard model photon, axion and hidden photon.

Presenter: Dr FUKUDA, Hajime (Berkeley)

Contribution ID: **33** Type: **not specified**

Higgs Parity, Strong CP, Dark Matter, and Leptogenesis

Wednesday, 15 January 2020 16:30 (30 minutes)

Presenter: Mr DUNSKY, David (Berkeley)

Contribution ID: **34** Type: **not specified**

banquet

Thursday, 16 January 2020 17:30 (2h 30m)

Contribution ID: **35** Type: **not specified**

Models of Core-Collapse Supernovae and Shock Breakout

Thursday, 16 January 2020 15:30 (30 minutes)

Presenter: Dr BERSTEN, Melina (National Scientific and Technical Research Council-Argentia)

Contribution ID: **36** Type: **not specified**

The origin of elements in the Universe

Thursday, 16 January 2020 16:00 (30 minutes)

Presenter: Prof. KOBAYASHI, Chiaki (University of Hertfordshire)

Contribution ID: **38** Type: **not specified**

Non relativistic effect on indirect probe of EWIMP at LHC

Thursday, 16 January 2020 16:30 (30 minutes)

Presenter: Mr KATAYOSE, Taisuke (Kavli IPMU)

Contribution ID: **40** Type: **not specified**

Q-ball DM and its decay through A-term

Thursday, 16 January 2020 10:30 (30 minutes)

Presenter: Mr NAKATSUKA, Hiromasa (ICRR)

Contribution ID: **41** Type: **not specified**

Integrability at Large Quantum Number

Friday, 17 January 2020 16:00 (30 minutes)

Presenter: Prof. HELLERMAN, Simeon (Kavli IPMU)

Contribution ID: **42** Type: **not specified**

How to apply to a postdoc position

Tuesday, 14 January 2020 13:30 (30 minutes)

Presenter: Mr MCGEHEE, Robert (Berkeley)

Contribution ID: **43** Type: **not specified**

How to succeed outside Japan

Friday, 17 January 2020 13:30 (30 minutes)

Presenter: Prof. MURAYAMA, Hitoshi (Berkeley, Kavli IPMU)

Contribution ID: **44** Type: **not specified**

Minimal gauged $U(1)_{L_\alpha - L_\beta}$ models driven into a corner

Friday, 17 January 2020 15:30 (30 minutes)

Presenter: Mr TSENG, Shih-Yen (Hongo)

Contribution ID: **45** Type: **not specified**

Flowing to the Bounce

Tuesday, 14 January 2020 16:30 (30 minutes)

Presenter: Mr CHIGUSA, So (Hongo)

Contribution ID: **46** Type: **not specified**

On the infinite gradient-flow for the domain-wall formulation of chiral lattice gauge theories

Wednesday, 15 January 2020 12:00 (30 minutes)

Presenter: Mr AGO, Taichi (Hongo)

Contribution ID: **47** Type: **not specified**

Life in Japan

Thursday, 16 January 2020 13:30 (30 minutes)

Presenter: Mr TSENG, Shih-Yen (Hongo)

Contribution ID: **49** Type: **not specified**

Life in Japan

Wednesday, 15 January 2020 13:30 (30 minutes)

Presenters: Prof. ORLANDO, Domenico (INFN division of Turin); Prof. REFFERT, Susanne (University of Bern)

Contribution ID: **51** Type: **not specified**

Breakfast

Friday, 17 January 2020 09:00 (30 minutes)

Contribution ID: **52** Type: **not specified**

Breakfast

Thursday, 16 January 2020 09:00 (30 minutes)

Contribution ID: **53** Type: **not specified**

Breakfast

Wednesday, 15 January 2020 09:00 (30 minutes)

Contribution ID: **54** Type: **not specified**

Breakfast

Tuesday, 14 January 2020 09:00 (30 minutes)

Contribution ID: **55** Type: **not specified**

Break

Tuesday, 14 January 2020 11:00 (30 minutes)

Contribution ID: **56** Type: **not specified**

Group Photo and Break

Wednesday, 15 January 2020 11:00 (30 minutes)

Contribution ID: **57** Type: **not specified**

Break and another group photo with Kajita (11:15)

Thursday, 16 January 2020 11:00 (30 minutes)

Contribution ID: **58** Type: **not specified**

Break

Friday, 17 January 2020 11:00 (30 minutes)

Contribution ID: **60** Type: **not specified**

Galactic Archaeology: Unveiling the nature of dark matter

Friday, 17 January 2020 12:00 (30 minutes)

Presenter: Dr HAYASHI, Kohei (ICRR)

Contribution ID: **61** Type: **not specified**

Constraints on Primordial Black Holes with Microlensing: Wave & Finite Source Effects / PBH from Multiverse

Friday, 17 January 2020 16:30 (30 minutes)

Presenter: Mr SUGIYAMA, Sunao (Kavli IPMU)

Contribution ID: **62** Type: **not specified**

Temporal Bell inequality violations in cosmological perturbations

Thursday, 16 January 2020 10:00 (30 minutes)

Presenter: Mr ANDO, Kenta (ICRR)

Contribution ID: **63** Type: **not specified**

Dark Matter Heating vs. Rotochemical Heating in Old Neutron Stars

Thursday, 16 January 2020 09:30 (30 minutes)

Presenter: Prof. HAMAGUCHI, Koichi (Hongo)

Contribution ID: **64** Type: **not specified**

New Type of String Solutions with Long Range Forces

Tuesday, 14 January 2020 14:00 (30 minutes)

Presenter: Prof. IBE, Masahiro (ICRR)