

Curriculum Vitae

So Chigusa

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Personal Data

First Name: So
Last Name: Chigusa
Date of Birth: May 22, 1992
Place of Birth: Kobe, Japan
Nationality: Japanese
Age: 27
Sex: Male

Affiliation: High Energy Accelerator Research Organization (KEK)
Postcode: 305-0801
Address: 1-1, Oho, Tsukuba, Ibaraki
Phone: +81-29-864-1171
E-mail: schigusa@post.kek.jp
Homepage: <https://sochigusa.bitbucket.io>

Education

| Date | Degree | Institution |
|---------------|--------------------------------|---------------------|
| Mar. 23, 2020 | Doctor of Philosophy (Physics) | University of Tokyo |
| Mar. 23, 2017 | Master of Science (Physics) | University of Tokyo |
| Mar. 25, 2015 | Bachelor of Science (Physics) | University of Tokyo |

Professional experience

Apr. 2020 – : Postdoc, High Energy Accelerator Research Organization (KEK)
Apr. 2015 – Mar. 2020 : Ph.D. Student, Department of Physics, University of Tokyo
(Dr. Takeo Moroi)

Teaching experience

Apr. 2015 – Sep. 2015 : Teaching Assistant for Undergraduate Class “Quantum Mechanics II”
at Department of Physics, University of Tokyo

Grants

Apr. 2020 – : JSPS, Research Fellowships for Young Scientists (PD)
Apr. 2017 – Mar. 2020 : JSPS, Research Fellowships for Young Scientists (DC1)
Amount: 2800000 JPY
Oct. 2015 – Mar. 2020 : MEXT, Program for Leading Graduate Schools

Honors and Awards

1. Best Poster Award @ HPNP 2019

Publications

- [1] S. Chigusa, T. Moroi and K. Nakayama, *Detecting Light Boson Dark Matter through Conversion into Magnon*, 2001.10666.
- [2] S. Chigusa, Y. Hosomi, T. Moroi and M. Saito, *Determining Wino Lifetime in Supersymmetric Model at Future 100 TeV pp Colliders*, 1912.00592.
- [3] S. Chigusa, T. Moroi and K. Nakayama, *Signals of Axion Like Dark Matter in Time Dependent Polarization of Light*, 1911.09850.

- [4] S. Chigusa, T. Moroi and Y. Shoji, *Bounce Configuration from Gradient Flow*, *Phys. Lett.* **B800** (2020) 135115, [1906.10829].
- [5] S. Chigusa, S. Kasuya and K. Nakayama, *Novel Flavon Stabilization with Trimaximal Neutrino Mixing*, *Phys. Rev.* **D100** (2019) 015030, [1905.11517].
- [6] T. Abe, S. Chigusa, Y. Ema and T. Moroi, *Indirect studies of electroweakly interacting particles at 100 TeV hadron colliders*, *Phys. Rev.* **D100** (2019) 055018, [1904.11162].
- [7] S. Asai, S. Chigusa, T. Kaji, T. Moroi, M. Saito, R. Sawada et al., *Studying gaugino masses in supersymmetric model at future 100 TeV pp collider*, *JHEP* **05** (2019) 179, [1901.10389].
- [8] S. Chigusa, Y. Ema and T. Moroi, *Probing electroweakly interacting massive particles with Drell–Yan process at 100 TeV hadron colliders*, *Phys. Lett.* **B789** (2019) 106–113, [1810.07349].
- [9] S. Chigusa, S. Kasuya and K. Nakayama, *Flavon Stabilization in Models with Discrete Flavor Symmetry*, *Phys. Lett.* **B788** (2019) 494–499, [1810.05791].
- [10] S. Chigusa and K. Nakayama, *Anomalous Discrete Flavor Symmetry and Domain Wall Problem*, *Phys. Lett.* **B788** (2019) 249–255, [1808.09601].
- [11] S. Chigusa, T. Moroi and Y. Shoji, *Decay Rate of Electroweak Vacuum in the Standard Model and Beyond*, *Phys. Rev.* **D97** (2018) 116012, [1803.03902].
- [12] S. Chigusa, T. Moroi and Y. Shoji, *State-of-the-Art Calculation of the Decay Rate of Electroweak Vacuum in the Standard Model*, *Phys. Rev. Lett.* **119** (2017) 211801, [1707.09301].
- [13] S. Chigusa and T. Moroi, *Bottom-Tau Unification in Supersymmetric SU(5) Models with Extra Matters*, *PTEP* **2017** (2017) 063B05, [1702.00790].

- [14] S. Chigusa and T. Moroi, *Bottom-tau unification in a supersymmetric model with anomaly-mediation*, *Phys. Rev.* **D94** (2016) 035016, [1604.02156].

Invited Seminar Presentations

1. “Detecting Light Boson Dark Matter through Conversion into Magnon (Online)”, 2020/5/20, IBS
2. “Detecting Light Boson Dark Matter through Conversion into Magnon (Online)”, 2020/6/2, Kyushu University
3. “Detecting Light Boson Dark Matter through Conversion into Magnon (Online)”, 2020/5/14, TDLI and INPAC
4. “Flowing to the Bounce”, 2019/10/24, Tohoku University
5. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/7/23, Osaka University
6. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/5/16, University of Florida
7. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/5/10, Florida State University
8. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/4/9, KEK
9. “Solutions to Domain Wall Problem in Models with Discrete Flavor Symmetry”, 2019/1/11, Hokkaido University
10. “Probing Electroweakly Interacting Massive Particles with Drell-Yan Process at 100 TeV Hadron Colliders”, 2018/10/16, Nagoya University

Presentations at International Conferences

(Oral)

1. “Flowing to the Bounce”, 2020/1/14, Berkeley Week, IPMU
2. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/8/20, SI2019, Gangneung, Korea
3. “Flowing to the Bounce”, 2019/8/9, NHWG26, Osaka
4. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/5/22, SUSY 2019, Texas
5. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/5/6, Pheno 2019, Pittsburgh
6. “Flavon Stabilization in Models with Discrete Flavor Symmetry”, 2018/12/6, KEK-PH 2018 winter, Tsukuba
7. “Decay Rate of the Electroweak Vacuum in the Standard Model and Beyond”, 2018/5/24, Planck 2018, Bonn
8. “Bottom-Tau Unification in Supersymmetric Models”, 2017/2/6, New Physics Forum, IPMU
9. “Bottom-Tau unification in Supersymmetric Model with Anomaly-Mediation”, 2016/7/05, SUSY 2016, Melbourne

(Poster)

1. “Probing Electroweakly Interacting Massive Particles with Precision Measurements at 100 TeV Hadron Colliders (poster)”, 2019/2/21, HPNP2019, Osaka

Presentations at Domestic Conferences

(Oral)

1. “Flavon Stabilization without Domain Wall Problem in Discrete Flavor Symmetry Models (in Japanese)”, 2019/6/11, Neutrino Oscillation and Flavor Physics, Nagoya
2. “Zero Mode Problem in the Calculation of Decay Rate of the SM Electroweak vacuum”, 2018/9/15, JPS 2018, Shinshu
3. “Bottom-Tau unification in Supersymmetric Model with Anomaly-Mediation”, 2016/9/21, JPS 2016, Miyazaki

(Poster)

1. “Indirect Search of WIMP Dark Matter at Future 100 TeV Collider (Poster)”, 2018/8/9, PPP 2018, Kyoto
2. “Bottom Tau Unification in Supersymmetric Models (Poster)”, 2017/8/3, PPP 2017, Kyoto

Poster Presentations at International Summer Schools

1. “Decay Rate of the Electroweak Vacuum in the Standard Model and Beyond”, 2018/7/12, Cargese Summer School 2018, Kyoto
2. “Bottom Tau Unification in Supersymmetric Models (Poster)”, 2017/7/4, Les Houches Summer School 2017, Kyoto