

# Curriculum Vitae

So Chigusa

January 30, 2020

## 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: University of Tokyo  
Postcode: 113-8654  
Address: 7-3-1, Hongo, Bunkyo, Tokyo  
Phone: +81-3-5841-4138  
E-mail: [chigusa@hep-th.phys.s.u-tokyo.ac.jp](mailto:chigusa@hep-th.phys.s.u-tokyo.ac.jp)  
Homepage: <https://sochigusa.bitbucket.io>

## Education

Date	Degree	University
Mar. 24, 2017	Master of Science (Physics)	University of Tokyo
Mar. 2015	Bachelor of Science (Physics)	University of Tokyo

## Professional experience

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. 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. B* **800** (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. “Flowing to the Bounce”, 2019/10/24, Seminar, Tohoku University
2. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/7/23, Seminar, Osaka University
3. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/5/16, Seminar, University of Florida
4. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/5/10, Seminar, Florida State University
5. “Indirect Studies of Electroweakly Interacting Particles at 100 TeV Hadron Colliders”, 2019/4/9, Seminar, KEK
6. “Solutions to Domain Wall Problem in Models with Discrete Flavor Symmetry”, 2019/1/11, Seminar, Hokkaido University
7. “Probing Electroweakly Interacting Massive Particles with Drell-Yan Process at 100 TeV Hadron Colliders”, 2018/10/16, Seminar, 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
2. “Bottom Tau Unification in Supersymmetric Models (Poster)”, 2017/7/4, Les Houches Summer School 2017