# Seong-Ho Shinn (신성호)

#### RESEARCH INTERESTS

- Ultracold chemical reaction
- Quantum information
- Damping of collective oscillations in Bose-Einstein condensates
- Single and half quantum vortices in spin 1 Bose-Einstein condensates
- Spinor dipolar Bose-Einstein condensates

# PERSONAL DETAILS

Birth May 1, 1991

Address 104-904, 66 Nangok-ro, Gwanak-gu, Seoul, Republic of Korea

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# **EDUCATION**

#### PhD. in Physics

March 1, 2014 - August 29, 2022

Seoul National University

- Title: Multicomponent and Spinor-Dipolar Bose-Einstein Condensates as Laboratories for Fundamental Physics and Metrology
- Thesis supervisor: Professor Uwe R. Fischer
- Date of completion: August 29, 2022

#### BSc. in Physics

Seoul National University

- Date of completion: February 26, 2014

March 1, 2010 - February 26, 2014

#### WORK EXPERIENCE

Technical Research Personnel (전문연구요원)

March 1, 2017 - March 18, 2020

Military Manpower Administration of Korea

Korean government requires male citizens to perform compulsory military service. Among several options, I chose technical research personnel which started in March 1, 2017 and ended in March 18, 2020.

#### **PUBLICATIONS**

- 1. Quantum metrology with ultracold chemical reactions, Seong-Ho Shinn, Uwe R. Fischer, and Daniel Braun, arXiv:2208.06380v1 [cond-mat.quant-gas].
- 2. Stoner-Wohlfarth switching of the condensate magnetization in a dipolar spinor gas and the metrology of excitation damping, Seong-Ho Shinn, Daniel

Braun, and Uwe R. Fischer, Phys. Rev. A 102, 013315 (2020).

3. Mesoscopics of half-quantum vortex pair deconfinement in a trapped spinone condensate, Seong-Ho Shinn and Uwe R. Fischer, Phys. Rev. A 98, 053602 (2018).

### CONFERENCES/WORKSHOPS ATTENDED

- 1. Quantum Menorca 2019: Dynamics and Interactions in Quantum Gases, September 4, 2019, Menorca, Spain. I presented a poster.
- 2. **2018 5th SGPF Conference**, November 10, 2018, *Incheon, Korea.* I presented a poster and gave a short talk about my first paper, Phys. Rev. A 98, 053602 (2018).
- 3. **2016 Korea Global PhD Fellowship Conference**, December 21, 2016, *Sejong, Korea*. I presented a poster.

## **RESEARCH VISITS**

Institut für Theoretische Physik

Eberhard Karls Universität Tübingen

- Host: Professor Daniel Braun

Institut für Theoretische Physik

Eberhard Karls Universität Tübingen

- Host: Professor Daniel Braun

March 1, 2021 - August 30, 2021

June 17, 2019 - September 3, 2019

# **SKILLS**

Languages Korean (mother tongue)

English

Software LATEX, MATHEMATICA, C, OPENCL, MPI, GNUPLOT

## **AWARDS**

Global PhD Fellowship

National Research Foundation of Korea

March 1, 2015 - February 29, 2020

2nd Prize (최우수상) in 2017 National Supercomputing Challenge July 27 - 28, 2017 Korea Institute of Science and Technology Information

National Science & Technology Scholarship
National Research Foundation of Korea

March 1, 2010 - February 28, 2014