

# Yusuke Araki

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Prof. Arima & Tokunaga group

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## Education

- B.En. Department of Applied Physics, The University of Tokyo, 2016
- M.Sc. Department of Advanced Materials Science, The University of Tokyo, 2018

## Research Interests

Multiferroics, Magnetic skyrmion

## Research Experience

- Single Crystal Growth
  - Floating zone melting method
  - Bridgmann melting method
  - Flux method
  - Chemical vapor transport method
- Macroscopic measurement
  - Magnetization
  - Electric polarization
  - AC permittivity
- Quantum beam measurement
  - X-ray crystal structure analysis
  - Small-Angle resonant X-ray magnetic scattering
  - Neutron magnetic scattering

## Fellowships

Program for Leading Graduate Schools (MERIT), The University of Tokyo (2016/10 ~)

## Awards

- Oral session Awards, Condensed-Matter Physics Summer School  
Best Speaker Presentation Award (2016/08)

## Memberships

- The Physical Society of Japan (JPS)
- "Toward a New Class Magnetism by Chemically-controlled Chirality" -JPSJ Core-to-Core program, A. Advanced Research Networks-

## Publications & Presentations

### Presentations (International conference)

1. Magnetic and magnetoelectric properties in a chiral polar magnet  $\text{Ni}_2\text{InSbO}_6$  (poster)  
CEMS-QPEC Symposium on "Emergent Quantum Materials", P28, Tokyo, Japan (2017/01)  
Y. Araki, N. Abe, M. Tokunaga, S. Kimura, Y. Tokunaga, and T. Arima
2. Magnetic and magnetoelectric properties in a chiral polar magnet  $\text{Ni}_2\text{InSbO}_6$  (poster)  
International Workshop "Dzyaloshinskii-Moriya Interaction and Exotic Spin Structure", P5, Peterhof, Russia (2017/05)  
Y. Araki, N. Abe, M. Tokunaga, S. Kimura, Y. Tokunaga, and T. Arima
3. Proper-screw type helimagnetism in a chiral polar magnet  $\text{Ni}_2\text{InSbO}_6$  probed by soft X-ray and neutron magnetic scattering (poster)  
The 9<sup>th</sup> APCTP Workshop on Multiferroics, Chiba, Japan (2017/11)  
Y. Araki, T. Sato, Y. Fujima, N. Abe, M. Tokunaga, S. Kimura, D. Morikawa, V. Ukleev, Y. Yamasaki, C. Tabata, H. Nakao, Y. Murakami, H. Sagayama, K. Oishi, Y. Tokunaga, T. Arima
4. Proper-screw type helimagnetism in a chiral polar magnet  $\text{Ni}_2\text{InSbO}_6$  probed by soft X-ray and neutron magnetic scattering (poster)  
JSPS Core-to-Core Program 2017 [S-5] "A Consortium to Exploit Spin Chirality in Advanced Materials", Hiroshima, Japan (2017/12)  
Y. Araki, T. Sato, Y. Fujima, N. Abe, M. Tokunaga, S. Kimura, D. Morikawa, V. Ukleev, Y. Yamasaki, C. Tabata, H. Nakao, Y. Murakami, H. Sagayama, K. Oishi, Y. Tokunaga, T. Arima

### Presentations (Domestic conference)

1. Magnetic and magnetoelectric properties in chiral polar magnet  $\text{Ni}_{2-x}\text{Mn}_x\text{InSbO}_6$  (oral)  
Japan Physical Society Autumn Meeting, 14aJB-9, Ishikawa, Japan (2016/09)  
Y. Araki, N. Abe, H. Sagayama, M. Tokunaga, Y. Tokunaga, T. Arima
2. Magnetic phase diagram in a chiral polar magnet  $\text{Ni}_2\text{InSbO}_6$  (oral)  
Japan Physical Society Spring Meeting, 18pH11-7, Osaka, Japan (2017/03)  
Y. Araki, N. Abe, T. Sato, M. Tokunaga, S. Kimura, Y. Tokunaga, T. Arima
3. Magnetic structure in a chiral polar magnet  $\text{Ni}_2\text{InSbO}_6$  (oral)  
Japan Physical Society Autumn Meeting, 22pF21-7, Iwate, Japan (2017/09)  
Y. Araki, T. Sato, Y. Fujima, N. Abe, M. Tokunaga, S. Kimura, D. Morikawa, V. Ukleev, Y. Yamasaki, C. Tabata, H. Nakao, Y. Murakami, H. Sagayama, K. Oishi, Y. Tokunaga, T. Arima

4. Proper-screw type helimagnetism in a chiral polar magnet  $\text{Ni}_2\text{InSbO}_6$  probed by soft X-ray and neutron magnetic scattering (poster)  
2017年度量子ビームサイエンスフェスタ, Ibaraki, Japan (2018/03)  
Y. Araki, T. Sato, Y. Fujima, N. Abe, M. Tokunaga, S. Kimura, D. Morikawa,  
V. Ukleev, Y. Yamasaki, C. Tabata, H. Nakao, Y. Murakami, H. Sagayama, K. Oishi,  
Y. Tokunaga, T. Arima

## Thesis

1. Master thesis, Department of Advanced Materials Science, The University of Tokyo  
Magnetic and magnetoelectric properties in a chiral polar magnet  $\text{Ni}_2\text{InSbO}_6$
2. Graduation thesis, Department of Applied Physics, The University of Tokyo  
Magnetoelectric effect in an antiferromagnet  $\text{Cu}_2\text{V}_2\text{O}_7$