

Masao Oi

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Education

- Doctor, Mathematics, University of Tokyo, April 2016–March 2019
Thesis: *On depth in the local Langlands correspondence*
Supervisor: Yoichi Mieda
- Master, Mathematics, University of Tokyo, April 2014–March 2016
Thesis: *On the endoscopic lifting of simple supercuspidal representations*
Supervisor: Yoichi Mieda
- Bachelor, Mathematics, University of Tokyo, April 2010–March 2014

Academic Positions

- Assistant Professor (program-specific), Kyoto University, October 2019–present
Mentor: Atsushi Ichino
- JSPS postdoctoral fellow, Kyoto University, April 2019–September 2019
Mentor: Atsushi Ichino

Research Interests

- Harmonic analysis and representation theory of reductive groups over local/global fields
- Langlands correspondence and Langlands functoriality

Grants/Fellowships

- JSPS KAKENHI Grant Number 20K14287, April 2020–March 2024.
- JSPS Research Fellow (PD), Japan Society for the Promotion of Science (Grant Number: 19J00846), April 2019–September 2019.
- JSPS Research Fellow (DC2), Japan Society for the Promotion of Science (Grant Number: 17J05451), April 2017–March 2019.
- FMSP course student, The Leading Graduate Course for Frontiers of Mathematical Sciences and Physics, September 2014–March 2019.

Awards

- Takebe Katahiro Prize for Encouragement of Young Researchers, The Mathematical Society of Japan, September 2019.
- Dean's Award (Doctor's course, valedictorian), Graduate School of Mathematical Sciences, the University of Tokyo, March 2019.
- Dean's Award (Master's course), Graduate School of Mathematical Sciences, the University of Tokyo, March 2016.

Papers

- Published or Accepted:

- [1] (with Kazuki Tokimoto) *Local Langlands correspondence for regular supercuspidal representations of $GL(n)$* , [arXiv:1912.07851](#), to appear in Int. Math. Res. Not. IMRN.
- [2] *Depth preserving property of the local Langlands correspondence for non-quasi-split unitary groups*, [arXiv:1807.08232](#), to appear in Math. Res. Lett.
- [3] *Unramified base change of simple supercuspidal L -packets of quasi-split classical groups*, Algebraic Number Theory and Related Topics 2017, RIMS Kôkyûroku Bessatsu B83 (2020), 061-081.
- [4] *Endoscopic lifting of simple supercuspidal representations of unramified $U(N)$ to $GL(N)$* , Publ. Res. Inst. Math. Sci. 55 (2019), 895-938.
- [5] *Endoscopic lifting of simple supercuspidal representations of $SO(2n + 1)$ to $GL(2n)$* , Amer. J. Math., 141 (2019), 169-217.

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- Preprints:

- [6] (with Ryotaro Sakamoto and Hiroyoshi Tamori) *New expression of unramified local L -functions by certain Hecke operators*, [arXiv:1903.07613](#), 27 pages, preprint.
- [7] *Depth preserving property of the local Langlands correspondence for quasi-split classical groups in a large residual characteristic*, [arXiv:1804.10901](#), 35 pages, preprint (submitted).
- [8] *Simple supercuspidal L -packets for quasi-split classical groups*, [arXiv:1805.01400](#), 140 pages, preprint (submitted).

Invited talks in Seminars/Workshops/Conferences

- MIT Lie Groups Seminar, MIT (online), December 2, 2020.
- 65th Symposium of Algebra, Chiba University (online), September 4, 2020.
- Number theory seminar, Kyoto University (online), May 22, 2020.
- Kyoto University Colloquium, Kyoto University, January 15, 2020.
- Mathematics seminar, KIAS, January 6, 2020.
- 22nd Hakuba Autumn Workshop on Number Theory "Application of Arthur's multiplicity formula to Siegel modular forms", November 2, 2019.
- Oberwolfach workshop "New Developments in Representation Theory of p -adic Groups", Oberwolfach, October 1, 2019.
- Regulators in Niseko 2019, Hilton Niseko Village, Hokkaido, September 9, 2019.
- 10th Kurashiki Number Theory Meeting, Kurashiki Seaside Hotel, July 26, 2019.
- Workshop on Shimura varieties, representation theory, and related topics, Hokkaido University, July 18, 2019.
- Number theory seminar, Kyoto University, April 12, 2019.
- Workshop on arithmetic geometry, Tokyo-Princeton at Komaba, the University of Tokyo, March 20, 2019.

- On the Langlands Program: Endoscopy and Beyond, National University of Singapore, December 26, 2018.
- Kagawa Seminar, Kagawa university, October 21, 2018.
- 9th Kurashiki Number Theory Meeting, Kurashiki Seaside Hotel, September 19, 2018.
- The 4th Japan-Taiwan Joint Conference on Number Theory, Campina Hotel, Fukue, Goto-city, September 3, 2018.
- 17th Sendai-Hiroshima Workshop on Number theory, Tohoku University, July 13, 2018.
- 5th Kyoto conference on automorphic forms, Kyoto University, June 29, 2018.
- Mathematical Society of Japan Spring Meeting 2018, the University of Tokyo, March 18, 2018.
- Algebraic Number Theory and Related Topics 2017, RIMS, December 6, 2017.
- 8th Kurashiki Number Theory Meeting, Kurashiki Seaside Hotel, July 24-25, 2017.
- 4th Kyoto conference on automorphic forms, Kyoto University, June 17, 2017.
- On the endoscopic character relation, Kinoshita seminar 2017, Kinoshita, Japan, February 15, 2017.
- Automorphic forms and related topics, RIMS, February 10, 2017.
- Number theory seminar, Waseda University, January 20, 2017.
- Representation theory seminar, Hokkaido University, January 17, 2017.
- Workshop on Shimura varieties, representation theory and related topics, Kyoto University, November 22, 2016.
- 7th Kurashiki Number Theory Meeting, Kurashiki Seaside Hotel, July 21-22, 2016.
- 15th Sendai-Hiroshima Workshop on Number theory, Tohoku University, July 14, 2016.
- Number theory seminar, Kyoto University, May 13, 2016.
- Number theory seminar, the University of Tokyo, April 27, 2016.
- Algebra seminar, Tohoku University, April 21, 2016.
- Langlands and Harmonic Analysis, Kyushu University, March 7, 2016.

Conferences/Workshops I have co-organized

- “Arithmetic Geometry and Representation Theory”, Toyama, Japan, December 16–18, 2019.