최인혁

이력서/2022년 12월 최종 수정

대전광역시 유성구 대학로 291 한국과학기술원 수리과학과

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연구 관심사

제 연구는 기하위상수학, 기하군론 및 동역학 등에 걸쳐 있습니다. 핵심 키워드는 다음과 같습니다. Teichmüller space, mapping class groups, Outer space, $\operatorname{Out}(F_N)$, Gromov hyperbolic spaces, $\operatorname{CAT}(0)$ spaces, random walks, dynamics of groups acting on spaces.

학력

09/2018- **KAIST**

수리과학과 석박사통합과정

지도교수: 백형렬

03/2015-08/2018 **KAIST**

물리학, 수리과학 및 생명과학 학사 졸

최우등 졸업

기타 경력

12/2018-02/2019 Tokyo Institute of Technology 교환학생

08/2017-02/2018 École Polytechnique Féderale de Lausanne 교환학생

12/2015-06/2017 KAIST Biomedical Optics Lab 학사연구원

지도교수: 박용근

06/2015-08/2015 University of California, Berkeley 교환학생

Awards and Honors

08/2022 Best TA Award, 2022 Spring semester, Dept. of Mathematical Sciences, KAIST

03/2017 Dean's list, 2016 Fall semester, College of Natural Sciences, KAIST

12/2016 Silver Prize, Korean Undergraduate Mathematics Competition (전국

대학생수학경시대회), Korean Mathematical Society

03/2015-08/2018 Korea Presidential Science Scholarship (대통령과학장학생), Korea Student Aid

Foundation

03/2015–08/2018 KAIST Presidential Fellowship

노무

- 1. Limit laws on Outer space, Teichmüller space, and CAT(0) spaces Preprint (2022). arXiv:2207.06597.
- 2. Random walks on mapping class groups (survey paper) With $Hyungryul\ Baik.$

Preprint (2021). arXiv:2110.04868.

- 3. Pseudo-Anosovs are exponentially generic in mapping class groups Preprint (2021). To appear in **Geometry & Topology**. arXiv:2110.06678.
- 4. Central limit theorem and geodesic tracking on hyperbolic spaces and Teichmüller spaces Preprint (2021). arXiv:2106.13017.

5. Linear growth of translation lengths of random isometries on Gromov hyperbolic spaces and Teichmüller spaces

With Hyungryul Baik and Dongryul M. Kim.

Preprint (2021). arXiv:2103.13616.

 Simple length spectra as moduli for hyperbolic surfaces and rigidity of length identities With Hyungryul Baik and Dongryul M. Kim. Preprint (2020). arXiv:2012.05652.

- 7. On the surjectivity of the Symplectic representation of the mapping class group With *Hyungryul Baik and Dongryul M. Kim.*Preprint (2020). To appear in **Topology and its Applications**. arXiv:2008.10142.
- Topological entropy of pseudo-Anosov maps from a typical Thurston construction
 With Hyungryul Baik and Dongryul M. Kim.
 Online published in International Mathematics Research Notices, https://doi.org/10.1093/imrn/rnab167 (2021).
- 9. Inhyeok Choi, KyeoReh Lee, and YongKeun Park. Compensation of aberration and speckle noise in quantitative phase imaging using lateral shifting and spiral phase integration. *Optics Express*, 25(24) pp. 30771-30779 (2017).

연구 발표

초청 발표

- 2022.11.08. Random subgroup is quasi-isometrically embedded. *Geometry and Topology Seminar, CUNY.*
- 2022.11.08. The log-regularity of the hitting measure on the Gromov boundary. *Group actions, Geometry and Dynamics Seminar, Yale University.*
- 2022.11.02. Asymmetry of a typical outer automorphism. Geometry and Topology Seminar, Temple university.
- 2022.10.27. Simple length spectrum of a hyperbolic surface. Hyperbolic lunch, University of Toronto.
- 2022.10.24. Mapping class group, Teichmüller space and Bers' proof of Nielsen-Thurston's classification. *Dynamics Seminar, University of Toronto.*
- 2022.05.12. Typical behavior of random mapping classes and outer automorphisms. Fudan Topology Seminar. (온라인)
- 2022.04.11. Limit laws beyond hyperbolic spaces. AIM Workshop "Random walks beyond hyperbolic groups".
- 2021.12.03. Limit laws for random walks on mapping class groups. Conformal Dynamics and Groups Seminar, BICMR. (온라인)
- 2021.11.29. Random walks on mapping class groups favor pseudo-Anosovs. *Dynamics Seminar*, University of Toronto. (온라인)
- 2021.11.18. Random walks, counting problems and genericity of loxodromics. Geometry and Topology Seminar, Technion. (온라인)
- 2021.10.06. Random walks on Gromov hyperbolic spaces and Teichmüller spaces. *Tokyo Tech Topology Seminar*. (온라인)
- 2021.07.22. Random walks on Gromov hyperbolic spaces and Teichmüller spaces. *Pacific Dynamics Seminar.* (온라인)
- 2021.02.03. Simple length spectra of a generic hyperbolic surface determine its isometry class. Virtual Seminar on Geometry and Topology. (온라인)

참가 발표

2022.05.31. Frequently contracting geodesics and random mapping class. PK2 Topology Workshop.

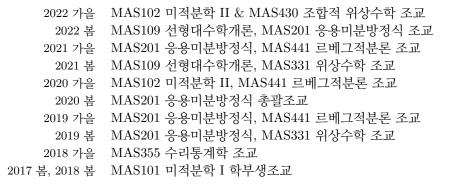
2022.04.25. Limit laws and their consequences on MCG and Out(Fn). 5-min lightning talk, IHP Conference "Mapping Class Groups and Out(Fn)".

2022.01.18. Random mapping classes are pseudo-Anosov. The 17th East Asian Conference on Geometric Topology. (온라인)

2021.01.26. Rigidity of length Identities of hyperbolic surfaces. The 16th East Asian Conference on Geometric Topology. (온라인)

2020.10.30. Random walks and mapping class groups. 10-minute talk at Geometric Group Theory in East Asia. (온라인)

교육



봉사 및 대외활동

- 다음 저널에 심사 의견 제출: Annales Henri Lebesgue
- 고등과학원 웹진 (Horizon)에 수학 만화 연재