Havi Ellers
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Education:

Harvey Mudd College. B.Sc. May 2020; Major: Math; GPA: 3.946.

- Math courses completed – many including Abstract Algebra, Galois Theory, PDE's, Algebraic Geometry, Representation Theory, three courses in Analysis, Independent Studies in Model Theory and Applications of Representation Theory to Statistics.
- Physics courses completed – 9 including Quantum Mechanics, Special Relativity, and Electricity and Magnetism.
- Engineering courses completed – 2 including Digital Electronics and Computer Architecture.
- Non-science courses completed – 12 including 5 in Japanese Language, History and Linguistics

Research Experience:

- Michigan Research Experience for Graduate Students (MREG) in Weak Normality (2021)
- Senior Thesis Research Project in Representation Theory of Lie Algebras (2019/2020)
- Fields Undergraduate Summer Research Program (FUSRP) in Representation Theory of Lie Algebras (2019)
- Independent Study in Applications of Representation Theory to Statistics (2019)
- NSF REU in Number Theory at Texas A&M University (2018)
- Independent Study in Logic and Model Theory (2018)
- NSF REU in Number Theory at Wake Forest University (2017)

Teaching Experience:

- Tutor for introductory math courses at Harvey Mudd College 2018-2020.
- GSI for two semesters of Math 115 (Calculus 1) at the University of Michigan.

Honors and Awards:

- Barry M. Goldwater Scholarship for Math, Science and Engineering, 2019
- Giovanni Borrelli Mathematics Prize (Senior Mathematics Award), 2019
- Outstanding Poster award at MAA Undergraduate Student Poster Session, JMM, Jan. 2019
- Barry M. Goldwater Scholarship Math, Science and Engineering Honorable Mention, 2018
- The Robert James Prize (Freshman Mathematics Award), 2017

Leadership:

- Founder of Claremont Colleges Gymnastics Club, acted as President 2017-2020.

Presentations:

- *Weak Normality* (with A. Bauman, G. Hu & S. Nair). MREG Conference 2021.

- *On the Mysteries of Interpolation Jack Polynomials* (with X. Li). OMC 2021.
- *On the Mysteries of Interpolation Jack Polynomials* (with X. Li). JMM Denver 2020.
- *Interpolation Jack Polynomials* (with X. Li). FUSRP Mini-Conference 2019.
- *Effective Bounds for Traces of Maass-Poincaré Series* (with M. Kenney). JMM Baltimore 2019.
- *Effective Bounds for Traces of Singular Moduli* (with M.Kenney). REU Mini-Converence 2018.
- *Numbers Represented by a Finite Set of Binary Quadratic Forms* (with C.V. Donnay, K.A. O'Connor, K.E. Thompson & E.K. Wood.) JMM San Diego 2018.
- *Intersecting Finite Sets of Positive Definite Integral Binary Quadratic Forms.* WiMSoCal Pepperdine U. 2018.
- *Numbers Represented by a Finite Set of Binary Quadratic Forms* (Donnay, Ellers, O'Connor, Wood). Mock AMS Conference, University of Georgia, July 2017.
- Poster Presentations at HMC on summer's researches, Septembers 2017, 2018 & 2019.

Manuscripts: (recommended for publication, submitted, or online)

- Senior Thesis: Ellers, H. (2020). On the Mysteries of Interpolation Jack Polynomials. https://sites.google.com/g.hmc.edu/hellers/thesis?authuser=0
- Ellers, H., Kenney, M., Masri, R., & Tsai, W. L. (2020). Effective bounds for traces of singular moduli. *Journal of Number Theory*.
- Report online: Ellers, H., & Li, X. (2019). Lie algebras report. https://mysite.science.uottawa.ca/hsalmasi/
- Report online: Ellers, H., & Kenney, M. (2018). Effective Bounds for Traces of Maass-Poincaré Series. https://www.math.tamu.edu/undergraduate/research/REU/results/REU_2018/ellerskenneyreport.pdf
- Donnay, C., Ellers, H., O'Connor, K., Thompson, K., & Wood, E. (2017). Numbers Represented by a Finite Set of Binary Quadratic Forms. *arXiv preprint arXiv:1708.04877*. http://arxiv.org/abs/1708.04877. Manuscript submitted to Involve.