

# Jacob (Jacinda) Terkel

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## Education

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- **Gettysburg College, Bachelor of Arts**

- Major: Mathematics
- Graduated in May 2024.
- Departmental Honors
- Magna Cum Laude

## Publications

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### Accepted/Published

- **An Investigation Into Complete  $(k, l)$ -Sum-Free Sets**

- Published in Gettysburg College's Research Papers In Mathematics, Volume 23 in May 2021 (email me for a copy).

- **Dissociativity in Finite Abelian Groups** With Benjamin Shepard

- Published in Gettysburg College's Research Papers In Mathematics Volume 24 in May 2022 (Email me for a copy).

- **Fuchs' Problem For Linear Groups** With Keir Lockridge

- Published in [Communications in Algebra](#), February 2024.

### Submitted/In Progress

- **Restricted sums of sets of cardinality  $2p + 1$  in  $\mathbb{Z}_p^2$**

- Submission in progress
- [Preprint](#)

- **Exact  $h$ -spanning sets over finite abelian groups** With Béla Bajnok and Victor Greene

- In Progress (Preprint very soon).

- **The Minimum Size of Restricted Sumsets  $\mathbb{Z}_2^r$**

- In Progress (Preprint soon).

- **Dissociativity in Finite Abelian Groups** With Béla Bajnok & Benjamin Shepard

- In Progress (Email Me For a Copy).

- **Maximum Size Zero- $h$ -Sum-Free Sets In Finite Abelian Groups**

- In Progress.
- Given as Capstone for Bachelor's Degree
- **Assorted Results In Additive Combinatorics**
  - In Progress (Email Me For a Copy).

## Awards & Honors

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- **Pi Mu Epsilon Math Honors Society Inductee/Chapter President**
  - Inducted in Spring 2021.
  - Elected as Chapter President in Fall 2022.
- **Hirsch Research Grant**
  - Grant paid to conduct mathematics research.
  - Awarded during the Summers of 2021, 2022, and 2023
- **Malcolm R. Dougherty Mathematical Award**
  - *Awarded to the student who had the highest average in mathematics during his or her first year of college and who is working to earn part of his or her college expenses.*
  - Awarded in 2021.
- **Baum Mathematical Prize**
  - *Given to the student showing the greatest proficiency in mathematics through his or her sophomore year.*
  - Awarded in 2022.
- **J. Rogers Musselman Award**
  - *Awarded to a student majoring in mathematics who is proficient in the study of mathematics during his or her third year of enrollment.*
  - Awarded in 2023
- **Sarah and Tena Goldstein Memorial Fund Recipient**
  - *Extremely competitive scholarship awarded by The Jewish Federation of Greater Pittsburgh Pittsburgh Jewish students are outstanding in the four categories of academic achievement; financial need; personality; and worthiness, with respect to honesty, integrity, and good reputation as a student.*
  - Awarded Summer 2023.

## Talks

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- **An Investigation Into Complete  $(k, l)$ -Sum-Free Sets**

- Talk was given as a part of the Gettysburg College Mathematics Research Symposium in Spring 2021.
- **On The Maximum Size of Zero-h-Sum-Free Sets**
  - Talk was given as a Colloquium talk in Fall 2021 for the Gettysburg College Mathematics Colloquium Series.
- **Characterizing Dissociativity**
  - Talk was given as a part of the Gettysburg College Mathematics Research Symposium in Spring 2022.
- **Maximum Size Zero-h-Sum-Free Sets**
  - Presented at Philadelphia Area Undergraduate Mathematics Conference in April 2022
- **On The Maximum Size of Zero-h-Sum-Free Sets**
  - Presented at Joint Mathematics Meetings 2023.
- **Fuchs' Problem For Linear Groups**
  - Talk was given as a Colloquium talk in Fall 2023 for the Gettysburg College Mathematics Colloquium Series.
- **Fuchs' Problem For Linear Groups**
  - Presented at Joint Mathematics Meetings 2024.

## Posters

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- **Dissociated Sets in Abelian Groups**
  - Presented at the Philadelphia Area Undergraduate Mathematics Conference, April 2024.

## Teaching Experience

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- **Freelance Math Tutor**
  - Worked with students grades K-12, and into college on mastering the math encountered in class, and on standardized testing.
  - Been taking clients since 2013.
- **Kumon Learning Center Assistant**
  - Worked as an employee at Kumon Learning Center of Scott Township. Here, I assisted students aged 3-18 with math and reading work.
  - Held position from late 2018 to early 2020.
- **CalcAid Tutor** Gettysburg College Mathematics Department
  - Held Walk-In hours to assist struggling calculus students.

- Position held for one semester.
- **Peer Learning Associate For Abstract Math (215)**
  - Held biweekly office hours where students would learn the process of mathematical problem-solving
  - Position held for 3 semesters at Gettysburg College.
- **Peer Learning Associate For Mathematics Research (201/301/401)**
  - Assisted students in conducting mathematics research in the field of additive combinatorics during bi-weekly office hours.
  - Gave lectures on the preliminary knowledge needed for conducting research in additive combinatorics (number theory, combinatorics, and group theory).
  - Position held for 2 semesters at Gettysburg College.
- **Mathnasium Instructor**
  - Worked at the Mathnasium Math Learning Center in Pittsburgh PA.
  - Carried out the typical responsibilities of a mathematics tutor for ages ranging from kindergarten to college.

## Other

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- **Gettysburg College Math Department Hiring Student Panel**
  - Panel Member during Summer 2022 and Spring 2023.
- **Gettysburg College Math Student Panel for Get Acquainted Day**
  - Panel Member in 2024.
- **Reviewed and Contributed to "A Supplement To Additive Combinatorics" by Béla Bajnok**
  - Made standard editorial suggestions and provided substantial mathematical content.

*JT*