

Tao Gaede Curriculum Vitae

Contact

Email: taogaede@uvic.ca
Phone: (250) 870-6151
Website: www.taogaede.com

Research Interests

Graph decomposition and partition problems	Refinement	Set system graphs and orderings
Structural properties of sequences	Modular arithmetic progressions	Combinatorial designs
Algebraic combinatorics	Extremal Combinatorics	Applied combinatorics to music composition

Current Research

- Classification of Erdős deep families of size 2 and other results. (MSc. thesis in collaboration with Dr. Peter Dukes)
- Structure of maximally even partitions (in collaboration with Dr. Anthony Quas)

Education

- MSc. Mathematics; University of Victoria (Expected Graduation Apr 2022)

Course	Date
MATH 529: Probabilistic Methods in Combinatorics	Jan 2022 - Present
MATH 599: Master's Thesis	Sep 2020 - Present
MATH 529: Algebraic Methods in Combinatorics	Sep - Dec 2021
MATH 522: Combinatorics	Jan - Apr 2021
MATH 529: Extremal Combinatorics	Jan - Apr 2021
MATH 523: Graph Theory	Sep - Dec 2020

- BSc. Mathematics & Biology; University of British Columbia Okanagan (Graduated Aug 2018)

Employment

- Teaching assistant; University of Victoria; Part time (Sep 2020 - Dec 2021)

Course	Position	Date
MATH 312: Abstract Algebra I	Marker	Sep - Dec 2021
MATH 212: Introduction to Algebra	Marker	Sep - Dec 2021
MATH 212: Introduction to Algebra	Zoom Assistant	May - Aug 2021
MATH 212: Introduction to Algebra	Marker	May - Aug 2021
MATH 322: Combinatorial Designs	Marker	Jan - Apr 2021
MATH 362: Elementary Number Theory	Marker	Sep - Dec 2020
MATH 161: Mathematics for Elementary School Teachers I	Marker	Sep - Dec 2020

Awards and Grants

- \$8,000.00 Graduate award, University of Victoria (Sep 2020)
- \$3,000.00 Graduate award, University of Victoria (Sep 2021)
- \$1,377.50 JJEM Graduate Award in Mathematics & Statistics (Nov 2021)

Written Works

Books

- All Harmonies in Twelve-Tone Equal Temperament (Aug 2021)

A harmonic dualist classification of harmonies based on integer composition evenness and chirality

Theses

- (MSc) Erdős deep families of Erdős deep sets (in progress)
- (Undergraduate) A survey on Euclidean rhythms and evenness measures on integer compositions (under guidance of Dr. Wayne Broughton)

Presentations

Title	Duration (min)	Location	Date	Context
Little Talk on Cayley Graphs	20	UVic	Apr 2021	Course
Interval-Permutation Segment Graphs Overview	25	UVic	Dec 2020	Course
Combinatorics and Music: Tonnetz Systems	40	UVic	Nov 2020	Seminar
Maximally Even Partitions	10	UVic	Sep 2020	Seminar
Introduction to the Fundamental Group	80	UBC-O	Mar 2018	Course

Conferences and Workshops

- Attended:

Title	Location	Date
CanaDAM 2021: The Canadian Discrete and Algorithmic Mathematics Conference	Online	May 2021
Fields Summer School on Topological Data Analysis for Banking and Finance	Western University	Jul 2018

Memberships

Canadian Mathematical Society American Mathematical Society