

Tao Gaede Curriculum Vitae

Contact

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Research Interests

Set families and related (hyper)graphs Algebraic combinatorics Partition problems
Structural properties of sequences Graph decompositions Combinatorial designs
Applied combinatorics to music composition

Education

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

Employment

- Graduate student; University of Victoria; Full time (Sep 2020 - Present)

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

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

Course	Position	Date
MATH 312: Abstract Algebra I	Marker	Present
MATH 212: Introduction to Algebra	Marker	Present
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 Graduate award, University of Victoria (Sep 2020)
- \$3,000 Graduate award, University of Victoria (Sep 2021)

Written Works

Books

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

Description: A musically aware classification of harmonies based on the combinatorics of integer necklace evenness and chirality

Theses

- (MSc) Erdős deep families of Erdős deep sets (in progress)
- (BSc) Euclidean Rhythms: An Investigation into the Structure of Maximal and General Evenness of Rhythms (Aug 2018)

Presentations

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

Conferences and Workshops

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