

Ada Nicole Morse

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Education

University of Vermont

PH.D. IN MATHEMATICS

Burlington, VT

expected May 2018

SUNY Potsdam

M.A. IN MATHEMATICS (*with distinction*)

B.A. IN MATHEMATICS (*summa cum laude*)

Potsdam, NY

May 2014

The Crane School of Music

B.M. IN PERFORMANCE (*summa cum laude*)

Potsdam, NY

May 2014

Publications

The Interlace Polynomial

2017

ADA MORSE, IN *Graph Polynomials*, ED. DEHMER ET AL, CRC PRESS

Design Tools for Reporter Strands and DNA Scaffold Strands

2016

ELLIS-MONAGHAN, PANGBORN, SEEMAN, BLAKELEY, DISHER, FALCIGNO, HEALY, MORSE, SINGH, WESTLAND,
Theoretical Computer Science, [HTTP://DX.DOI.ORG/10.1016/J.TCS.2016.10.007](http://dx.doi.org/10.1016/j.tcs.2016.10.007)

On weakly diameter-critical graphs

2014

O. DE LA CRUZ VITE, J. FOISY, C. GIBBONS, A. MORSE, C. NEGRON, *Graph Theory Notes of New York* (67), 1–16

Preprints

DNA Origami and Unknotted A-Trails in Torus Graphs

2017

A. MORSE, W. ADKISSON, J. GREENE, D. PERRY, B. SMITH, J. ELLIS-MONGAHAN, G. PANGBORN,
Journal of Knot Theory and Its Ramifications, SUBMITTED. ARXIV: 1703.03799

Research and Teaching

Graduate Research Assistant

VERMONT SPACE GRANT CONSORTIUM

University of Vermont

Jan. '16 - June '16, AY '16-'17

REU Mentor

DNA NANOSTRUCTURE SELF-ASSEMBLY REU

St. Michael's College

Summers 2015, 2016

- Responsible for problem design for and mentoring of a group of four undergraduates in 2016. A paper building on this work has been submitted.
- Mentored students on topological aspects of their research in 2015. One paper resulting from this summer has been published, another is in progress.

Graduate Teaching Assistant

DEPARTMENT OF MATHEMATICS AND STATISTICS

University of Vermont

AY '15-'16, Fall '16

- Sole instructor for *Math 19: Calculus I* (two sections, Fall '16)
- Sole instructor for *Math 17: Finite Math with Applications* (two sections, Fall '15 and Spring '16)

Selected Conferences/Talks

Tiered Mentoring in REUs

TALK, SIGMAA "UNDERGRADUATE ACTIVITIES IN MATHEMATICAL AND COMPUTATIONAL BIOLOGY", MATHFEST 2017.

Chicago, IL

Jul. 2017

Interlacement and Activities in Delta-matroids

TALK AT SUMMER COMBO IN VERMONT

Colchester, VT

Jul. 2017

(Invited) DNA Origami and Knots in Graphs

INVITED TO SPEAK IN THE MINISYMPOSIUM "TOPOLOGICAL AND GEOMETRIC ALGORITHMS" AT CANADAM 2017.

Toronto, ON

Jun. 2017

DNA Origami and Knots in Graphs

TALK AT THE GRADUATE STUDENT COMBINATORICS CONFERENCE

Lawrence, KS

Apr. 2017

(Invited) Graphs, Knots, and Nanostructures

INVITED TALK AT MIDDLEBURY COLLEGE

Middlebury, VT

Apr. 2017

Dagstuhl Seminar, "Graph Polynomials: Towards a Comparative Theory."

INVITED PARTICIPANT

Saarbrücken, Germany

June 2016

- Received a J. Kenney Award from the UVM Dept. of Mathematics and Statistics to fund participation in this seminar.

On weakly diameter- m -critical graphs

POSTER AT THE JOINT MATHEMATICS MEETINGS

Baltimore, MD

Jan. 2014

Linkless embeddings of total graphs

TALK AT MAA MATHFEST

Hartford, CT

2013

Service

AM I A (All Math Is Applied) Seminar

FOUNDER & CO-ORGANIZER

- Graduate student theoretical mathematics seminar at the University of Vermont.

University of Vermont

Aug. 2016 - May 2017

Dept. of Mathematics and Statistics Graduate Committee

GRAD STUDENT REPRESENTATIVE

University of Vermont

Aug. 2015 - May 2017

Peer Referee

EUROPEAN JOURNAL OF COMBINATORICS, RESEARCH IN THE MATHEMATICAL SCIENCES, CHAPMAN & HALL/CRC

Combinatorics Search Committee

GRAD STUDENT REPRESENTATIVE

University of Vermont

2015 - 2016

Outreach/Volunteering

MathILY

INVITED SPEAKER, RAN A WORKSHOP IN WHICH STUDENTS RE-CREATED A PUBLISHED RESULT.

Bryn Mawr, PA

Jul. 2017

MathCounts Middle-school Math Competition

INVITED SPEAKER

Burlington, VT

Feb. 2017

Women in STEM Panel

BURLINGTON KIDS AFTERSCHOOL PROGRAM - CP SMITH

Burlington, VT

May 2017

Friday Night (Youth) Group

FACILITATOR

Outright Vermont

2016 - present