Jessica C. De Silva

Department of Mathematics · California State University, Stanislaus

Curriculum Vitae

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Employment

Assistant Professor of Mathematics *Turlock, CA*
California State University, Stanislaus *August 2018 – current*

Education

Ph.D. in Mathematics *August 2018*
University of Nebraska–Lincoln
Dissertation Title: *Graphs with Few Spanning Substructures*

M.S. in Mathematics *December 2014*
University of Nebraska–Lincoln

B.A. in Mathematics *May 2013*
California State University, Stanislaus

Publications

Anti-Ramsey Multiplicities
Australasian Journal of Combinatorics Volume 73, Issue 2 (2019). J. De Silva, X. Si, M. Tait, Y. Tuncbilek, R. Yang, M.
Young. `http://ajc.maths.uq.edu.au/pdf/73/ajc_v73_p357.pdf`

Turán Numbers of Vertex-Disjoint Cliques in r-Partite Graphs
Discrete Mathematics Volume 341, Issue 2 (2017). J. De Silva, K. Heysse, A. Kapilow, A. Schenfisch, M. Young.
`https://authors.elsevier.com/a/1W53-,H-cBBFY`

Increasing Paths in Edge-Ordered Graphs: The Hypercube and Random Graph
The Electronic Journal of Combinatorics Volume 23, Issue 2 (2016). J. De Silva, T. Molla, F. Pfender, T. Retter, M.
Tait. `http://www.combinatorics.org/ojs/index.php/eljc/article/view/v23i2p15`

On the Distance Spectra of Graphs
Linear Algebra and Its Applications Volume 497, (2016), 66–87. G. Aalipour, A. Abiad, Z. Berikkyzy, S. Butler, J.
Cummings, J. De Silva, W. Gao, K. Heysse, L. Hogben, F. Kenter, J. Lin, M. Tait. `http://arxiv.org/abs/1509.01196`

Hat-Guessing Strategies and the Cooperative Card Game Hanabi
Mathematics Magazine, Volume 88, No. 5 (2015), pp. 323-336. C. Cox, J. De Silva, P. DeOrsey, F. Kenter, T. Retter,
R.J. Tobin. `http://www.jstor.org/stable/10.4169/math.mag.88.5.323`

The Combinatorics of Interval Vector Polytopes
The Electronic Journal of Combinatorics, Volume 20 Issue 3 (2013). J. De Silva, G. Dorfsman-Hopkins, J. Pruitt, A.
Ruiz, M. Beck. `http://www.combinatorics.org/ojs/index.php/eljc/article/view/v20i3p22`

The Alignment of Arbitrary Contours Using Area Difference Distance Measurement
SIAM Undergraduate Research Online, Volume 5 (2012). J. De Silva, K. Murata, J. An.
`http://www.siam.org/students/siuro/vol5/S01181.pdf`

Preprints

An analysis of a fair division protocol for drawing legislative districts
Submitted to *Social Choice and Welfare*. J. De Silva, B. Gales, B. Kagy, D. Offner.
`http://arxiv.org/pdf/1811.05705.pdf`

In Preparation

Graphs with Few Spanning Pseudoforests
J. De Silva, A. J. Radcliffe.

Preparing for the Academic Job Market
Invited submission for the AMS Blog *e-Mentoring Network in the Mathematical Sciences*. J. De Silva.

Grants & Awards

2019 Pacific Math Alliance Conference   *Summer 2019 – Spring 2020*
National Science Foundation DMS - 1931009 $28,000 *(funded)*

CSU Stanislaus College of Science Faculty and Staff Development Funds   *Spring 2019 – Summer 2019*
2019 PIC Math Summer Workshop Travel Grant $1,485 *(funded)*

2018 Lathisms Honoree   *Fall 2018*
Lathisms features prominently the extent of the research and mentoring contributions
of Latinxs and Hispanics in different areas of the Mathematical Sciences.

Women and Mathematics Ambassador for the IAS   *Fall 2017 – Spring 2018*
Support for weekend conference funded by the Institute for Advanced Study. $2,500 *(funded)*

Mini-Collaboration Grant   *Fall 2016 – Spring 2017*
Grant funded by the NSF and NSA to visit research collaborators. $1,500 *(funded)*

Walter Mientka Graduate Teaching Award   *Fall 2016*
Department award given annually to one graduate student for excellence in teaching. $500

Outstanding First Year Graduate Student Award   *Fall 2014*
Department award given annually to one successful first year student. $1,000

NSF Graduate Student Research Fellowship   *Fall 2013 – Spring 2018*
The NSF-GRFP recognizes and supports outstanding graduate students in $138,000 *(funded)*
NSF-supported science, technology, engineering, and mathematics disciplines.

J. Burton Vasche Award   *Spring 2013*
Awarded to one outstanding CSU Stanislaus senior at commencement.

Undergraduate Research Projects

Mathematics Course Scheduling   *Fall 2019 – current*
Arlena Gavino, Jacob Pierson.   *CSU Stanislaus*

Campus Walkability   *Spring 2019 – current*
Andrew Aguilar, Samantha Batham, Felice Dacpano, Morgan Hogue, Teresa Martin,   *CSU Stanislaus*
Jonathan Moss, Jasmin Rodriguez, Juan Valencia.

Summer Research Co-Advisor   *Summer 2017, 2018*
Summer Undergraduate Applied Mathematics Institute at Carnegie Mellon University.   *SUAMI*

Teaching

Mathematics Component Facilitator   *Summer 2019*
STEM Discovery Academy   *CSU Stanislaus*

Calculus I (MATH 1410)   *Fall 2018, 2019, Spring 2019*
3 sections, 32, 35, and 30 students respectively.   *CSU Stanislaus*

Calculus II (MATH 1420)   *Fall 2018, Spring 2019*
2 sections, 29 and 28 students respectively.   *CSU Stanislaus*

Operations Research (MATH 4430)   *Fall 2019*
1 section, 24 students.   *CSU Stanislaus*

Calculus I   *Summer 2018*
1 section, 32 students.   *Carnegie Mellon University*

Calculus II   *Spring 2017*
1 section, 13 students.   *University of Nebraska–Lincoln*

Math Modeling										*Fall 2016*
1 section, 36 students.										*University of Nebraska–Lincoln*

College Algebra										*Fall 2014, Spring 2015*
2 sections, 38 and 17 students respectively.							*University of Nebraska–Lincoln*

Invited Talks

Graphs with few Spanning Pseudoforests						*Spring 2019*
Algebra, Geometry, and Combinatorics Seminar						*San Francisco State University*

A Graph Theorist's Perspective on the Card Game SET				*Spring 2019*
Celebrating Women in Mathematics Colloquium Series					*CSU Fresno*

Mathematics and Nutrition								*Fall 2018*
Central California Mathematics Project							*CSU Stanislaus*

Inspiration from a Former CSU Fellow						*Fall 2018*
NSF-GRFP Writing Workshop								*CSUPERB Symposium*

Hat Guessing and Hanabi								*Spring 2017*
Distinguished Women in Mathematics Lecture Series					*San Francisco State University*

Transitioning to Graduate School							*Fall 2016*
New Graduate Student Welcome								*University of Nebraska–Lincoln*

AMS Southeastern Sectional Meeting							*Spring 2016*
The Complexity of ℓ-Hamilton Cycles in Hypergraphs				*North Dakota State University*

Hat Guessing and Hanabi								*Spring 2016*
Math Club										*Nebraska Wesleyan University*

If All You Have is Thor's Hammer							*Spring 2016*
ISU Discrete Math Seminar								*Iowa State University*

Hat Guessing and Hanabi								*Spring 2016*
Joint Mathematics Meetings								*Seattle, WA*

Flash Research Presentations							*Fall 2018 – Spring 2019*
Short talks for meetings and programs within the College of Science.			*CSU Stanislaus*

Contributed Talks and Panels							*2013 – 2018*
11 conference and seminar research talks and 11 invited graduate school panels.

Professional Development

PIC Math Summer Workshop in Data Science						*Summer 2019*
Preparing for Industrial Careers in Mathematical Sciences				*Brigham Young University*

CIENCIA Summer Institute								*Summer 2019*
The Collaboration for Inclusive and Engaging Curriculum, Instruction, and		*CSU Stanislaus*
Achievement

USTARS Early Career Faculty Workshop						*Spring 2019*
Underrepresented Students in Topology and Algebra Research Symposium			*Iowa State University*

Certificate in Inclusive Teaching							*Spring 2019 – current*
											CSU Stanislaus

Service

Club Advising and Mentoring

SACNAS Club Co-Advisor								*Fall 2019 – current*
Society for the Advancement of Chicanos/Hispanics and Native Americans in Science	*CSU Stanislaus*

SIAM Club Advisor   *Fall 2018 – current*
Society for Industrial and Applied Mathematics   *CSU Stanislaus*

LGBTQ+ Faculty Mentor   *Fall 2018 – current*
Stan State LGBTQ+ Faculty Mentor Program   *CSU Stanislaus*

Program, Seminar, and Conference Committees
Stan State Data Science Seminar   *Fall 2019 – current*
With Tom Carter.   *CSU Stanislaus*

BAD Math Conference Organizer   *Summer 2019 – current*
Bay Area Discrete Math Conference

PMA Funding and Conference Committee Member   *Fall 2018 – current*
Pacific Math Alliance

Graduate Student Ambassador   *Fall 2015-Spring 2018*
Assist with graduate student recruitment and outreach initiatives.   *University of Nebraska–Lincoln*

Lead Conference Organizer   *Fall 2017 – Spring 2018*
One-day event for undergraduate women in mathematics at Carnegie Mellon   *WAM@CMU*
University supported by the IAS and CMU.

Conference Planning Committee Member   *Fall 2015 – Spring 2017*
Nebraska Conference for Undergraduate Women in Mathematics   *NCUWM*

Steering Committee Member   *Fall 2016 – Spring 2018*
Center for the Integration of Research, Teaching, and Learning   *CIRTL@Nebraska*

Application Evaluator   *Spring 2016, Spring 2017*
UCARE funds undergraduate research at UNL.   *University of Nebraska–Lincoln*

Graduate Student Advisory Board Representative   *Fall 2013 – Spring 2015*
Department of Mathematics   *University of Nebraska–Lincoln*

Conference Sessions and Workshops Organized
Works of Students in the Pacific Math Alliance   *Spring 2020*
With Andrea Arauza, Mario Banuelos, and John Rock.   *AMS Sectional Meeting*

Productive failure: What can we learn from our teaching mistakes?   *Fall 2018*
With Sarah Loeb, Emily Meehan, and Kimberly Ayers.   *Joint Mathematics Meetings*

Early Career Women in Discrete Mathematics   *Fall 2018*
With Jessalyn Bolkema.   *Joint Mathematics Meetings*

NSF-GRFP Workshop   *Fall 2018*
With Matt Cover and Koni Stone.   *Stan State CEGE*

Square One: The First Year of Graduate School   *Fall 2017*
Webinar series with the Office of Graduate Studies.   *University of Nebraska–Lincoln*

Mathematics and Statistics Breakout Session   *Summer 2016, 2017*
UNL Campuswide TA Workshop   *University of Nebraska–Lincoln*

Mathematics Graduate Student Seminar   *Fall 2014 – Spring 2015*
With Nathan Poppelreiter.   *University of Nebraska–Lincoln*

Journal Reviews
Discrete Applied Mathematics
Discrete Mathematics