Afternoon Contributed Paper Sessions

Time	Presenter(s)	Presentation title
	Golden Eagle Ballroom; Mathematics Education II	
13:00–13:20	Satish C. Bhatnagar	PERSPECTIVES ON STUDY GUIDES ?!
13:20–13:40	Tim McEldowney	Knowledge-GAP: Barriers to Applying to Graduate School in Mathematics
13:40–14:00	Snow (Patil) Kaptanian	Beyond Graphs: Exploring Instructors' Beliefs and Their use of Multiple Representations
	Montebello Room; Geometry, Topology, and Graph Theory	
13:00–13:20	Kyle Hansen	Simple Tilings of Nilpotent Lie Groups
13:20–13:40	Matthew Paek	A Computational Tool for Link/Topological Graph Invariants
13:40–14:00	Max Hlavacek	Probability distributions of lattice polytopes
	San Gabriel Room; Graph Theory	
13:00–13:20	John Clairmont	Toward a new proof of the four Color theorem
13:20–13:40	Tutlalee Wines	Path Enumeration and Cyclotomic Factorizations on Finite Hexagonal Tessellations
13:40–14:00	Kevin Iga	A human studies an AI proof of the Cycle Double Cover conjecture
	Pasadena Room; Counting and Random Walks	
13:00–13:20	Omid Khormali	Who Stays on the Ship? A Medieval Counting Puzzle, Secret Sentences, and the Automata That Find Them
13:20–13:40	Elizabeth DeWitt	Counting Leading Shifted Tableaux
13:40–14:00	Owen Xu	Recurrence and transience of excited random walks on trees and lamplighter groups

Time	Presenter(s)	Presentation title
	Los Angeles Room; Analysis and Mathematical Explorations	
13:00–13:20	John Rock	JEOPARDY! and Arbitrarily Close
13:20–13:40	Brandon Miranda, Omar Garcia, Nathan Hicks, Mark Mun and Andy Zhang	Finding the limit of the recurrent sequence: $a(1) = 0, a(2) = 1, a(3) = 1/2, a(4) = 3/4, a(5) = 5/8, a(6) = 11/16, \ldots$ where $a(n) = [a(n-2) + a(n-1)]/2$ for $n = 3, 4, 5, \ldots$
13:40–14:00	Armando Pena, Adrienne Robertson	Attacking ECDSA with Fourier Analysis
	Alhambra Room; Modeling, Prediction, and Dynamical Systems	
13:00–13:20	Christopher Wang	The quality of a reservoir computer is determined by its relationship to causal states
13:20–13:40	Yi-Szen Tang	From Least Squares Regression to Sensor Fusion: A Mathematical Derivation and Application of the Kalman Filter
13:40–14:00	Marcelo Amaral	Memory, Prediction, and Energy Cost in Spiking Neural Networks
	Boardroom South; Markov Chains and Stochastic Structures	
13:00–13:20	Sofia Vasquez, Evelyn Jimenez	Suppose P^n equals a matrix whose rows are constant for all positive integers $n > N - 1$ where P is the one-step transition matrix of a finite chain and N is some fixed integer.
13:20–13:40	Abel Soto	Creating and Justifying a Metric on Markov Chains
13:40–14:00	Evan Johnson, Kasper Kajewski, Mark B. Mun, Abdel Somera-Fuentes, Theodore De Santos	When can a Markov Chain First Reach its Steady-State Matrix in a Finite Number of Time-Steps
	Boardroom North; Langlands Program	
13:00–13:20	Shanna Dobson	An Introduction to Langlands: A Tale of Two Geometries