

# 2022 MAA MathFest Undergraduate Student Poster Session Honorable Mentions

# 1, Bifurcus Semigroups With Finitely Many Atoms

Robert Dolan

# **4,** The Spectrum of Complete Local Rings

Ricardo Garcia, Mehek Mehra, Joelle Ocheltree, Rodrigo Smith

#### 7, Nonlocal Optimization Problems

Michael Pieper

#### 8, An Exploration of Fixed Point Theory

Julianan Sims

# 13, The Optimal Age To Start Your Supplemental Security Income (SSI)

Linh Khuat, G	ienesis [	Dominguez,	Alexander	Skowron
---------------	-----------	------------	-----------	---------

22,	An Analysis	of Social C	Choice Fur	nctions &	The Mathe	matics o	f Voting
Bra	ındon Calia						
DI d	illuuli Calla						

# **23,** A Statistical Analysis of Stream Litter Accumulation in the Oklahoma Metropolitan Area Considering Levels of Biodegradability

Tianna Samuel

# **24,** Modeling Influence of Urban Development on Litter Accumulation in Metropolitan Waterways

**Oday Shwayyat** 

#### **25,** Data Augmentation for Tabular Data Sets

Christina Dietrich, Jeffrey Roberts, Jason White

# **30,** A Quantum Resource Theory for One-Way Information

Jack Rausch

#### **31,** Utilizing Markov Chains to Estimate Allele Progression through Generations

Ronit Gandhi, Clay Cressler

# **32,** Neuronal Activity and Graph Theory

Ally Larsen

35, The effect of non-exponentially	distributed infectious	periods on cost-
effective chlamydia treatments		-

Jack Farrell, Owen Spolyar

**36,** An Agent-Based Model of COVID-19 Transmission at Lewis University

Austin Kind

**37,** Dynamics of a Stage-Structured Predator-Prey Model with Cannibalism Kasey Cooper, Ava Dreher, Caroline McCrorey

**49,** Three Colored Bipartite Ramsey Numbers of Small Double Stars Ella Oren-Dahan

**60,** The Effectiveness of Three Promising Psychological Interventions on Math Anxiety and Academic Performance

Kim Ngan Huynh, Allison Hope

**65,** Developing Solutions For Two Diophantine Equations And Their Behaviors Arnold Rosas

#### 66, Monodromy Groups of Belyi Lattes Maps

Zoe Batterman, Ines Chung-Halpern, Ebenezer Semere, John Clark

# **67,** Valuation Trees and Primitive Prime Divisors

Malike Conteh, Michaela Fitzgerald, Sarah Szafranski, Jasmine Camero

#### 68, Galois Groups of Fields Generated by Points of Curves

Quincy Alston, Gesa Nestler, Jack Straus, Kayla Gibson

#### 72, Analyzing High-Pressure Moments in Tennis and Competitive Esports

Jakob London, Leobardo Rodriguez

#### 73, A Pandemic of Mental Health

Sarah Kircher, Edward Coleman, Jhavon Innocent, McKade Trauger

#### **76,** Modeling Parcheesi Using Markov Chains

Emily Sarro, Namuka Ishii, Isabel Dinan