

2021 DANA KNOX STUDENT RESEARCH SHOWCASE
PRESENTATION SCHEDULE
APRIL 21, 2021

Session Time	Project Title	Student Name (First/Last)	WebEx Link to Attend Presentation
9-9:30am	Measuring Entropy in Sleep EEG to Examine Complexity and Level of Biological Activity in Different Sleep Stages	Edgar Canario	https://tinyurl.com/2vemcjde
	Charge transport in 2D layered metal-organic frameworks, Correlating flexibility and Conductivity	Zeyu Zhang	https://tinyurl.com/ren5rn7r
9:30-10am	Microwave Catalysis-Enabled Membrane Processes for Simultaneous Pollutant Degradation and Microbial Inactivation	Fangzhou Liu	https://tinyurl.com/tx2ts9ds
	Degeneracy in oscillatory systems and their consequence for network dynamics	Guillermo Villanueva	https://tinyurl.com/8stk57j7
10-10:30am	Closing the Loop: Data Analytics for the Crisis of Plastic	Nesreen El-Rayes	https://tinyurl.com/pzdsnyyv
	Heart-rate tuned comb filters for processing photoplethysmogram (PPG) signals in pulse oximetry	Ludvik Alkhoury	https://tinyurl.com/bd4s643e
	Using Creo to Model Complex Mechanisms: Sarrus Mechanism Linkage	Brian Trivinos	https://tinyurl.com/e8sj4m58
10:30-11am	Parameter Estimation and Inference of Spatial Autoregressive Model by Stochastic Gradient Descent	Gan Luan	https://tinyurl.com/4p7mpm2x
	Modeling of Colloid-Polymer Mixtures in Microgravity	Lauren Barnes	https://tinyurl.com/3jds29r4
	From Ugly Duckling to Swan: CVC, Open Innovation, and the Advent of Unicorn Ventures	Xi Zhang	https://tinyurl.com/4pa6ev4c

11-11:30am	Larval zebrafish exhibit collective motion behaviors in constrained spaces'	Haider Zaki	https://tinyurl.com/ncjc85kt
	User Opinions of Effective Strategies Against Social Media Toxicity	Aashka Patel	https://tinyurl.com/c3jk6ta3
	Electronic Synapse Device for Neuromorphic Computation	Kelvin Azcatl	https://tinyurl.com/tfbkk6ps
11:30-12pm	Self-Assembling Peptides to Mitigate Familial Hypercholesterolemia	Sreya Sanyal	https://tinyurl.com/5e36fcka
	Single atom Pt Doping and Facet Dependent Photocatalytic Activity of La ₂ Ti ₂ O ₇ : A DFT study	Qingquan Ma	https://tinyurl.com/45ujwz73
12-12:30pm	Using FE Modeling to Infer Bone Health After SCI	Tyler Rodriguez	https://tinyurl.com/e2x49b5j
	Optimal Transport on the Sphere	Axel Turnquist	https://tinyurl.com/zvdx7kz4
12:30-1pm	Molecular Augmented Reality for Design and Engineering (MADE): Effectiveness of AR Models on Discovery, Learning, and Education	Nisha Mistry	https://tinyurl.com/2vz58r2y
	Population Modeling of Open-Circuit Continuous Milling Processes Using a Cell-Based Approach	Nontawat Muanpaopong	https://tinyurl.com/ne6uhxzh
	Inflammatory Response Between M2 Macrophages and Myofibroblasts in Infarcted Cardiomyocytes	Tatiana Excellent	https://tinyurl.com/6y5a8kw
1-1:30pm	A Data-Driven Stochastic Programming Epidemic Modeling Framework to Controlling the COVID-19	Xuecheng Yin	https://tinyurl.com/c6ys6nz8
1:30-2pm	Interactive and Scalable Layout Synthesis with Design Templates	Hameedullah Farooki	https://tinyurl.com/7jud8x37
2-2:30pm	Algorithm for Soot Aggregate Restructuring	Divjyot Singh	https://tinyurl.com/4s4smb4s

	On Machine Learning-based Resource Provisioning and Performance Optimization for Big Data Computing and Networking	Wuji Liu	https://tinyurl.com/w3s5ae32
2:30-3pm	Drone-Assisted Mobile Networking	Jehan Shalabi	https://tinyurl.com/uuzf6we2
	Mental Health in Twitch Gaming Streams	Reesha Gandhi, Nina LaMastra, and Jira Uttarapong	https://tinyurl.com/4vc56t3u
3-3:30pm	Forecasting coronal mass ejection arrival time using deep learning model	Khalid Alobaid	https://tinyurl.com/37s34cb5
	Application of computational topology to analysis of granular material force networks in the stick-slip regime.	Rituparna Basak	https://tinyurl.com/ve244ynr
3:30-4pm	Use of Bead Mixtures as a Novel Process Optimization Approach to Nanomilling of Drug Suspensions	Gulenay Guner	https://tinyurl.com/5wumvb8k
	Bacterial motion and spread in porous media	Yasser Almoteri	https://tinyurl.com/sxv2d2h3
4-4:30pm	Quantifying the Morphological Similarity between Social Parasites and their Hosts	Nitya Shah	https://tinyurl.com/kxdys8hs
	Recovery of Lithium and Cobalt from Spent Lithium-Ion Batteries Using Organic Aqua Regia (OAR): Assessment of Leaching Kinetics and Global Warming Potentials	Alexander Guillen	https://tinyurl.com/39b3ymrr
	Ettringite Energy Storage	George Ulerio II	https://tinyurl.com/ryhnhf5h