COURI SUMMER 2021
VIRTUAL SYMPOSIUM

TECHNICAL PROGRAM

August 4 – 6th | OPENCONF.COURI.UTEP.EDU
ENGINEERING, COMPUTATIONAL & APPLIED SCIENCES

1A Mitochondrial targeting mediated chemotherapeutic to overcome multi-drug resistant cancer
Efren Alvidrez*, Humayra Afrin, Md Nurunnabi#

2A Role of MJC13 as an inhibitor of prostate cancer
Eduardo Anaya*, Pershang Farshi, Marc Cox#

3A Evaluation of 3D-Printing strategy for co-culture of neural progenitor cells and cardiomyocytes
Stephanie Anujarerat*, Ines Bilkic, Binata Joddar#

4A Decadal landscape and species level greenness patterns in a northern Chihuahuan Desert Shrubland
William Beamon*, Gesuri Ramirez, Craig Tweedie#, Marguerite Mauritz#

5A Evaluation of 3D-Printing strategy for co-culture of neural progenitor cells and cardiomyocytes
Ines Bilkic*, Stephanie Anujarerat*, Binata Joddar#

7A Tools and techniques for efficient energy use in vertical farming
Briana Cardenas*, Sreenath Chalil Madathil#

8A Application of deep learning for dynamic Memasurements of fragment size during ballistic impact
Erwin Cazares*, Brian Elias Schuster#

10A Energy portfolio of power systems during winter storms
Alfredo Chaidez*, Yuanrui Sang#
11A Machine learning the ground state energy of iron-Vavnadium alloys from molecular dynamics simulations via cluster expansions
Cesar Diaz*, Jorge Munoz#

12A Increasing the accuracy of Anti-Sars-CoV-2 assay prediction models using multi-layer combinatorial fusion
Michael Dong*, Suman Sirimulla#

13A Fabrication and characterization of high-temperature niobium alloy coatings
Sourish Dutta*, Rebecca Romero, Paul Nalam, Debabrata Das#, Ramana Chintalapalle#

14A Simulation models for off-grid microgrid systems considering resilient operation
Yuly Garcia*, Sreenath Chalil Madathil#

15A Leveraging social media data during pandemics: A visual analytics approach
Arleth Guerrero*, Karen Gonzalez, Sergio Luna#

16A Investing the effect of pulmonary arterial hypertension cells on cardiomyocyte cells cultured using biocompatible piezoelectric material
Lina Hajir*, Arifur Khan#, Mahedi Hasan, Taslim Al-Hilal#

18A The development of a bypass valve targeted for use in a solid oxide fuel cell based system
Nicolas Herrera*, Norman Love#

19A Synthesis and characterization of indium doped gallium oxide for optoelectronic applications
Andrew Kwon*, Debabrata Das, Paul Gaurav Nalam, Francelia Sanchez, C.V. Ramana#

20A Analysis and visualization of national performance measures of El Paso Metropolitan Area infrastructure, traffic congestion, environmental sustainability and freight movement
Alan Licerio*, Cesar Tirado#

21A Risk and resilience metrics for infrastructure systems optimization
Jesús Maldonado*, Yuanrui Sang#

22A Software development for petal infill with varying geometry and composition Part 1: Hardware and Firmware Upgrades
Alan Melendez*, Jonathan Slager, Roger Gonzalez#

23A Impact of selective laser sintering print parameters on multi-material/fiber parts
Sarahi Mendivil*, Jonathan Slager, Joshua Green#
24A An overview of blockchain in the energy industry
Christian Odom*, Yuanrui Sang#

26A Simulation of isolated microgrids considering security-constraints and N-1 analysis
Omar Rodriguez*, Sreenath Madathil#

27A Construction and evaluation of portable circuit laboratory
Lisa Roth*, Cesar Yahir Sanchez Zambrano, Daniel Rodriguez, Raquel Zubia, Hector Erives-Contreras, David Zubia#

28A Thermoplastics and composites with radial and circumferential composition gradients
Ian Rybak*, Jonathan Slager, Joshua Green, Roger Gonzalez#

29A Simulation models to optimize off-grid microgrids design and operation
Benjamin Santiago Abreu*, Sreenath Chalil Madathil#

30A Testing and characterizing polylactic acid-hydroxyapatite composite filament for 3D Printing
Caleb Tinajero*, Jonathan Slager, Joshua Green#

31A Additive manufacturing in space using robotics technology
Andrea Vargas*, Jennifer Chavez, Angel Flores Abad#

32A Thermoforming sockets for amputees using 3D-printed sheets of thermoplastics
Karla Vasquez*, Jonathan Slager, Joshua T Green#

34A Impact of charging element on performance of asphalt layer
Roberto Villalobos*, Christian Rodriguez, Nazarian Soheil#
LIFE & BIOMEDICAL SCIENCES

35A Optimizing Co-Expression of Human Circadian Protein Complex CLOCK/BMAL1
Sophia Adame*, Chuan Xiao#

36A Psychological stress induces depression-related behavior and increases BDNF in the hippocampus of adolescent male mice
Esmeralda Aguilera*, Sergio Iñiguez#

37A Differences of the carotid artery between three intensities of the back squat and running treadmill (3x2 anova RM)
Sabrina Arias*, Samuel Montalvo, Manuel Gomez, Alondra Lozano, Carlos De La Rosa, Corina Arroyo, Alvaro Gurovich#

38A Specific anitbody characterization as a gateway to alternative therapies for cancer
Ramon Benavides*, Jazmin Corral, Arlene Levario, Dr. Giulio Francia#

39A Phosphoprotein enrichment towards Jak3-Stat pathway to identify new phospho-regulatory domain
conrad bencomo*, Georgialina Rodriguez#

40A Population genetic structure in forty-three Madrean “sky island” bird species, with a focus on Bushtits (Psaltriparus minimus)
Bonnie Raechal Beres*, Michael Harvey#

42A A novel tool for assaying CQD intervention in the soluble-to-toxic transformation of amyloids
Ana Sofia Carreon*, Daisy Wilson, Jyoti Ahlawat, Mahesh Narayan#

43A Using the soil microbiome to enhance dryland restoration
Kimberly Casares*, Kelly Ramirez#
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<td>44A</td>
<td>The effects of eating a high fat diet on sensitivity of rats to methamphetamine-induced conditioned place preference</td>
<td>Isabella Castro*, Kayla Galindo, Paloma Serna, Katherine Serafine#</td>
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<td>45A</td>
<td>Prediction of ligand activity at subcellular location</td>
<td>Srija Chintalapalle*, Srijan Verma, Govinda KC, Giovanni Bocci, Tudor Oprea, Suman Sirimulla#</td>
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<td>46A</td>
<td>Early vascular aging, oxidative stress, and mental health in individuals recovering from Covid-19</td>
<td>Carlos De La Rosa*, Samuel Montalvo, Manuel Gomez, Alondra Lozano, Corina Arroyo, Sabrina Arias, Alvaro Gurovich#</td>
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<td>47A</td>
<td>Alcohol and nicotine differentially modulate neurite length and morphology in human neuronal cells SHSY5Y: The possible role of Gβγ in cytoskeletal alterations</td>
<td>Erika Denio*, Sara Bustamante, Michelle Aranda, Diana Olivas, Sukla Roychowdhury#</td>
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<td>48A</td>
<td>Social defeat stress induces depression-related behavior in male prairie voles</td>
<td>Elizabeth Diaz*, Andrick Perez, Miriam Escobedo, Carolina Amaya, Samuel Castillo, Bruce Cushing#, Sergio Iñiguez#</td>
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<td>50A</td>
<td>Effects of sleep deprivation on alcohol responses in Drosophila melanogaster</td>
<td>David Esparza*, Dilean Murillo, Aldo Pizana, Erick Saldes, Paul Sabandal, Kyung-An Han#</td>
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<td>51A</td>
<td>Detection of cytotoxicity of novel compound NC2559 on cancer cell lines</td>
<td>Cristina Guerena*, Edgar Borrego, Renato Aguilera#</td>
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<td>52A</td>
<td>Addressing the regulatory role played by the SUMO isoforms in an in vitro system</td>
<td>Isabel Gutierrez Zubiate*, Rebeca Orozco Sepulveda, Alejandra Flores, German Rosas Acosta#</td>
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<td>53A</td>
<td>Innate immune receptor recognition to Francisella tularensis</td>
<td>Rebekah Hightower*, Charles Spencer#</td>
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<td>54A</td>
<td>Body condition of the Western Marbled Whiptail (Aspidoscelis marmorata) from far West Texas</td>
<td>Matthew Jimenez*, Arturo Rocha, Vincente Mata-Silva#</td>
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<td>55A</td>
<td>Characterizing the function of mmachc during craniofacial development</td>
<td>Lourdes Jimenez Madrigal*, David Paz, Barbara Castellanos, Anita Quintana#</td>
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<td>56A</td>
<td>Vegetation influences on phosphorus access and availability in the Chihuahuan Desert</td>
<td>Mariana Lafon*, Kate Merrill*, Jennie McLaren#</td>
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Technical Program - COURI Summer 2021 Virtual Symposium

* Presenter # Faculty Mentor

58A Monitoring anxiety behavior in adult zebrafish carrying a heterozygous mutation in the hcfc1a gene using the novel tank diving test
Hope Lopez*, Erika Quezada*, Victoria Castro, Anita Quintana#

59A Comparison of carotid endothelial shear stress across three resistance training modalities and intensities
Alondra Lozano*, Samuel Montalvo, Manuel Gomez, Sabrina Arias, Corina Arroyo, Carlos De La Rosa, Alvaro Gurovich#

60A Vegetation influences on phosphorus access and availability in the Chihuahuan Desert
Kate Merrill*, Mariana Lafon*, Jennie McLaren#

61A Characterization of Slfn family subgroup III and anti-HIV-1
Valerie Moreno*, Carlos Valenzuela, Manuel Llano#

62A Social environment and dopamine interaction for alcohol-induced behavior
Dilean Murillo Gonzalez*, Jose Alvarado, Paul Sabandal, Kyung-An Han#

63A Gam1 inhibition of cellular SUMOylation
Ian Murphy*, Zhaobo Li, Chuan Xiao#

64A The effect of carbon quantum dots on the structure of intrinsically disordered proteins
Gyan Narayan*, Salvador Valdez*, Sofia Fodor, Mahesh Narayan#

66A Assessing the correlation between SUMO levels and survival to stress
Rebeca Orozco-Sepulveda*, Isabel Gutierrez Zubiate, Alejandra Flores, German Rosas-Acosta#

67A Monitoring anxiety behavior in adult zebrafish carrying a heterozygous mutation in the hcfc1a gene using the novel tank diving test
Erika Quezada*, Hope Lopez*, Victoria L. Castro, Anita M. Quintana#

68A Evaluation of mechanical stratification on germination rates of short-lived Chihuahuan Desert perennial species
Joshua Segoviano*, Kevin Floyd®, Michael Moody#

69A The role of Scully in aging-related synaptic plasticity
Adrián Sosa Ontiveros*, Paul Sabandal, Kyung-An Han#

70A Developing a high resolution routine blood test
Lham Tshering*, Afroz Karim, Chu-Young Kim#
71A The effect of carbon quantum dots on the structure of intrinsically disordered proteins
Salvador Valdez*, Gyan Narayan*, Sofia Fodor, Mahesh Narayan#

72A Extracting DNA from duck fecal samples to determine diet composition
Maya Vernick*, Marissa Kaminski, Flor Hernández, Joshua Brown, Philip Lavretsky#
PHYSICAL SCIENCES

74A  Data driven design of single-center molecular magnets
     Melinda Alvarado*, Zahra Hooshmand, Mark Pederson

75A  Exchange bias of FeO and Fe3O4 in a CoO shell.
     Arturo Andujo*, Ahmed El-Gendy#

76A  Using multi-scale computational approaches to study dengue virus
     Hector Apodaca*, Alan E Lope-Hernandez, Yixin Xie, Lin Li#

77A  Differences in the carotid artery sheer stress between three intensities of the bench press and arm crank
     Corina Arroyo*, Samuel Montalvo, Manuel Gomez, Sabrina Arias, Alondra Lozano, Carlos de la rosa de la rosa, Dr. Alvaro Gurovich#

78A  Synthesis and characterization of an ibuprofen based chiral nematic liquid crystal
     Jessica Gomez*, Jose Rosales, Jeffrey Richards, James Salvador#

79A  Analysis of ash after prescribed forest fires
     Glen Montoya*, Jessica Gomez, James Salvador#

80A  Lead-free piezoelectric ceramics
     Omar Salas*, Hari Nair#
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<td>COVID-19 vaccination hesitation among pregnant women</td>
<td>Kimberly Anaya*, Carina Heckert#</td>
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<td>Behavioral changes caused by neurological activity disorders measured by decision-making tasks</td>
<td>Karen Arzola*, Andrea Macias, Gustavo Martínez, Rodrigo Ibanez-Alcala, Alexander Friedman#</td>
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<td>Investigating the impact of COVID-19 on older adults’ use of technology and their access to services at senior centers in El Paso</td>
<td>Daniel Calvo*, Christian Ruiz, Diana Becerra, Brianna Contreras, Gina Nunez-Mchiri, Natalia Villanueva-Rosales, Oscar Mondragon, Kelvin Cheu, Ashley S. Bangert#</td>
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<td>The relationship between individual adherence indicators, sociodemographics and personality traits during COVID-19 in a Latinx U.S. college student sample</td>
<td>Luis Corona*, Theodore Cooper#</td>
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<td>Homelessness during the time of COVID-19</td>
<td>Samuel Davenport*, Eva Moya#</td>
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<td>Assessing the quality of articles chosen for a systematic review on patient-provider prenatal satisfaction</td>
<td>Francisco Estrella*, Margaret Gomez, Ophra Leyser-Whalen#</td>
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<td>Comparing the efficacy of an online to a face-to-face research foundation course on students perception of their ability to conduct research and the probability to pursue</td>
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a career in science
Paulina Flores*, Jonathan Tipo, Christina D’Arcy, Thomas McCabe#

91A Assessing the quality of articles for a systematic review on patient-provider prenatal care satisfaction
Margaret Gomez*, Francisco Estrella, Ophra Leyser Whalen#

92A Female rats display greater approach responses to a port that delivers nicotine vapor exposure as compared to males
Isabella Liano*, Veronika Espinoza, Priscilla Giner, Ian Mendez, Laura O’Dell#

93A The sociolinguistic perception of ch weakening in Chihuahua Mexican Spanish
Valeria Macias*, Natalia Mazzaro#

94A Stress-induced decision-making affected by addiction, PTSD, and depression.
Gustavo Martínez*, Neftali Reyes, Juan Garcia, Rodrigo Ibanez-Alcala, Kryssia Villarreal Rodriguez, Alexander Friedman#

95A How do mentors benefit by participating in the “Yes, She Can” program?
Maria Morales*, Diane Golding#

96A Dietary and drug use habits of college students during the COVID-19 pandemic
Guillermo Ornelas*, Raymond Mendoza, Nora Charles, Stephanie Strong, Lauren Burns, Margaret Bullerjahn, Emily Cordova, Katherine Serafine#

97A Insulin resistance enhances the reinforcing effects of nicotine in a sex-dependent manner
Sebastian Ortegon*, Bryan Cruz, Priscilla Giner, Laura O’Dell#

99A The associations between social media addiction and ENDS use and psychosocial factors and personality factors in Latinx college students
Kevin Sandoval Medina*, Theodore Cooper#

100A The public understanding about inheritance among those who use fertility treatments
Andrea Sarinana*, Ophra Leyser-Whalen#

101A An examination of bilingual university students’ use of the native language in rehearsing new content
Yadira Torres*, Ana Schwartz#

102A Effects of nicotine vapor exposure on motivation for rewards in adolescent male rats
Miguel Urbina*, Lilliana Maynez-Anchondo, Olga Rohrer, Ian Mendez#
103A Perceptions, attitudes, and behavioral intentions related to e-cigarette in young adults and potential impact of the COVID-19 pandemic on use
Luis Urrea*, Dessaray Gorbett, Jessica Shenberger-Trujillo#