# Special Edition 2020 Online SRS







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11:00 AM - 12:15 PM ONLINE POSTER SESSION 1

Click to go to POSTER GALLERY AND LIVE SESSIONS



- Environmental degradation of diclofenac in the presence of sunlight and minerals Room 1 Author(s): Nishanthi Ellepola • NMT Chemistry Department Mechanofluorescent N-AryI-2,3-Napthalimide based dyes as structurally-sensitive probes for fluorescence lifetime characterization of G4 quadruplex topologies Author(s): Susantha Ganegamage, Michael Heagy, and Susantha Ganegamage • NMT Chemistry Department Long-term effects of Cement Kiln Dust (CKD) on erosion control of slopes Author(s): Hamid Ranjkesh Adarmanabadi • NMT Mineral Engineering Department Room 2 Geant4 monoenergetic electron beam simulations of runaway electrons in streamer discharges Author(s): John Pantuso • NMT Physics Department Data-constrained simulations of the temperature inside a lightning channel Author(s): Michael Taylor • NMT Atmospheric Physics Department Assessment of Wet Bulb Globe Temperature (WBGT) monthly changes in New Mexico – a case study Author(s): Arezou Rasti • NMT Mineral Engineering Room 3 Dolphin jawphone phantom Author(s): Robin Reinhard, Taelyr Bailon, Evelyn Byrd, Chase Ferrone, and Cameron Zielinski • NMT Chemical Engineering Department Hybrid detachable amphibious UAV-UUV for marine environment applications Author(s): Christopher Dinelli, Jarod Fisher, and Brenden Herkenhoff • NMT Mechanical Engineering Department Fast and efficient removal of microplastics in water using acoustic waves Author(s): Nelum Perera • NMT Analytical Chemistry Department A study of abandoned mine lands in New Mexico Room 4 Author(s): Nicholas Harrison • NMT Geology Department Biogas to syngas for ammonia production: Water gas shift Author(s): Kilkee Flynn, Kavon Mojtabai, Sorcha Sterritt, Aaron Plant, and Connor Cole • NMT Chemical Engineering Department Biogas to syngas scale-up
  - Author(s): Magdelyn Rich NMT Chemical Engineering Department

# 12:30 PM - 1:45 PM ONLINE POSTER SESSION 2

Effects of breast cancer lipid changes on membrane oxygen permeability Room 1 Author(s): Qi Wang, Rachel Doston, Sally Pias • NMT Chemistry

> Comparing salt concentrations of different irrigation and nitrogen treatments Author(s): Robin Reinhard, Evangelina Carabotta, and Sarah Krenzel • Advisor: Dr. Benjamin Duval • NMT Biology Department

Simulation studying of formation damage during hydraulic fracturing for shale gas reservoirs Author(s): Dung Bui • NMT Petroleum Engineering Department

Optimization of Poly(3-alkylthiophene) crystallinity through alkyl side chain and annealing temperature variations Room 2 Author(s): Taegan Gaultney, Nicole Penners, John Davies, and Kumail Rizv • NMT Chemical Engineering Department

> Hydrogen fuel cell Author(s): Adam Lopez, Christopher Catanach, and Braci Chester • NMT Chemical Engineering Department

Dispersion of nanoparticles in an optically transparent matrix design Author(s): Rebecca Castillo, Kamryn Gordon, Alexander Logan, and Brian Ortiz • NMT Chemical Engineering Department

Dandelion inspired robots for climate monitoring and exploration on Mars Room 3 Author(s): Michelle Sherman • NMT Electrical Engineering and Mathematics Departments

> Detecting the use of slang for deception in DarkWeb communications for organizing cyber attacks Author(s): Celia Pacheco, Spencer Merrill • NMT Computer Science Department

Using natural language processing to categorize cyber security related text Author(s): Donovan Jenkins • NMT Computer Science Department

## 2:00 PM ONLINE ORAL PRESENTATIONS

Click to go to PRESENTATION GALLERY AND LIVE Q&A SESSIONS

Fluorescent lipid coated beads for the sensitive detection of disease biomarker Phospholipase A2 and Annexin-3 Author(s): Shahriare Hossain • NMT Chemistry Department

Social media marketing techniques in corporations and small businesses Author(s): Jade Baca • NMT Technical Communication

Tracking the spread of carbapenem-resistant pathogens in the Rio Grande Author(s): Kimberly McNair • NMT Biology Department

Cooperative swarming fixed-wing drones with attachment capabilities: Bioinspiration and mutualism Author(s): Niyem Bawana • NMT Mechanical Engineering Department

Utilizing drone technology to improve safety and productivity in underground mining Author(s): Javad Shahmoradi • NMT Mineral Engineering Department

#### CIVIL ENGINEERING DESIGN SHOWCASE 2:00 PM

Click to go to CICIL ENG. SHOWCASE GALLERY AND LIVE Q&A

### 2020 concrete canoe design team

Author(s): Samantha Fredericks, Elsa Baldonado, Jacob Barker, Christopher Schneider, and Matthew Chavez • Advisor: Dr. Claudia Wilson • NMT Civil Engineering Department

### NMT steel bridge design team

Author(s): Marcus Roberts, Jutin Varner, Michael Policastro, Jarred Thomas, Bradley Wakasugi, and James Marchand • Advisor: Dr. Claudia Wilson • NMT Civil Engineering Department

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