2018 UNDERGRADUATE RESEARCH POSTER SESSION

September 6, 2018
Student Center Atrium
It is my great pleasure to welcome you to the poster session of the 2018 Undergraduate Summer Research Award Program.

We use this event to raise awareness of the amazing research and scholarship being conducted at CSU, as well as highlight its relevance for personal, academic, and professional development.

This summer CSU’s Office of Research sponsored 55 research projects from six colleges, involving 77 of our finest undergraduate students. The advisors of these projects are among the most outstanding faculty at CSU. The projects comprise a fascinating and diverse snapshot of the research and scholarship at the University, spanning areas such as cancer research, social media use, sexual health, rehabilitation, climate change, diversity issues, human tissue generation, and many others.

Some of this research will appear in professional conferences, and some will be published in academic research journals. Some of these students will go on to earn graduate degrees here or elsewhere. All of them will be able to use this experience as a springboard to even bigger and better accomplishments in their future academic efforts and careers. Thank you for coming to the 2018 Undergraduate Research Poster Session – I know that you’ll enjoy seeing and hearing about CSU’s undergraduate research and scholarship!

Jerzy T. Sawicki
Vice President for Research
Cleveland State University

Research is thriving at Cleveland State University! Our annual Undergraduate Research Poster Session highlights the outstanding contributions that CSU undergraduates are making to knowledge creation and its application to real-life issues, for the benefit of our community, our nation and our world. Please join me in celebrating the accomplishments of our student-scholars and the world-class faculty who advise them.

Harlan M. Sands
President
Cleveland State University
This showcase celebrates the breadth and depth of undergraduate research being conducted at CSU. Please use this map to explore all of the amazing research being highlighted.
Map Key

See pages 6-7 for poster details.

- **COLLEGE OF EDUCATION AND HUMAN SERVICES**: 1-3
- **COLLEGE OF LIBERAL ARTS & SOCIAL SCIENCES**: 4-12
- **COLLEGE OF SCIENCES & HEALTH PROFESSIONS**: 13-55
- **MAXINE GOODMAN LEVIN COLLEGE OF URBAN AFFAIRS**: 56-58
- **MONTE AHUJA COLLEGE OF BUSINESS**: 59
- **WASHKEWICZ COLLEGE OF ENGINEERING**: 60-74

- Information & Evaluation Forms
- Refreshments
Undergraduate Research Posters

1. **King-White, Dakota**  
   Assessing the social, emotional, and mental health needs in urban schools

2. **Liao, Kelly Yu-Hsin**  
   The harmful effects of the strong black women ideal: A mediation model

3. **Chan, Paula**  
   Evaluating three methods for recruiting student feedback in the college classroom

4. **Berry, Anne / DeBoth, Kelle / Schaefer, John**  
   How can content management systems be customized for better user experience?

5. **Li, Qian**  
   Bubble suit animation

6. **Novisky, Meghan**  
   The impacts of trauma exposure and differential access to medical services on the incarceration experience

7. **Wanyerka, Phil**  
   Archaeological investigations at the Fort Hill earthwork complex

8. **Rose, Shelley / Souther, Mark**  
   Oral histories: Out of the archive and into the classroom

9. **Olszewski, Carol**  
   RAS expanded: Visual and tactile cueing for individuals with gait disorders

10. **Lieske, Joel**  
    Trumped: How Donald J. Trump defied the odds and won the presidency

11. **Fuller, Kimberly / Clonan-Roy, Katie**  
    How does current sex education perpetuate rape culture?

12. **Medina-Rivera, Antonio**  
    Intercultural bilingual education in the urban Andes
42. Goncy, Elizabeth
   The impact of the mother-daughter relationship on teen pregnancy

43. Naser, Shereen / Goncy, Elizabeth
   Perspectives on adolescent drug use: Interviews with community providers

44. Rowlett, Maria
   Perception of time and post-surgery physical rehabilitation

45. Smith, Albert F.
   The impact of adjacent-letter flanking bigrams on lexical decision performance

46. Smith, Albert F.
   Reading between the bigrams

47. Smith, Albert F.
   Programming to transition psychological experiments from SuperLab to MATLAB

48. Espy, Debbie
   Development of a controlled harness system to increase flexibility

49. Hammonds, Michael / Sahley, Tony / Woodside, Brian
   Learning to do in vivo neural responses in mice

50. Jeziorski, John
   Case concentration: An academic arcade game for physical therapist education

51. Knackstedt, Rebecca
   Indication of abdominal wound complication within breast cancer reconstruction

52. Lammers, Andrew
   Effects of greater palatine nerve anesthesia on hyoid musculature

53. Reinfhal, Ann / Ekelman, Beth
   Balance training using the multi-directional harness system

54. Wendland, Madalynn / Giuffre, Suzanne / DeMarco, Jodi
   The T.E.A.M approach to interprofessional education

55. Yorke, April
   Reading-related phonological processing interventions

56. Rubado, Meghan / Kaufman, Sanda
   Environmental certification program ISO 14001

57. Tighe, J. Rosie
   Effectiveness of anti-discrimination policies: An analysis of housing advertisements

58. Wukich, Clayton
   The formation of Twitter networks among U.S. city mayors

59. Gallagher, Vickie Coleman / Porter, Tracy / Valcea, Sorin / Baran, Ben
   Socioeconomic mobility of local refugees: An analysis of Syrian, Congolese and Ukrainian / Russian refugees

60. Ao, Geyou
   Surface functionalization of pure-chirality carbon nanotubes

61. Damaser, Margot
   Treatment of non-epithelial vaginal cells from lysyl oxidase

62. Gatica, Jorge
   Multi-phase waste gasification – reaction engineering for sustainable living environments

63. Gumma, Sasidhar
   Investigating particle size manipulation for the metal organic framework Cu-BTC

64. Holland, Nolan
   Characterizing complexes of DNA and elastin-like polypeptides

65. Kothapalli, Chandra Sekhar / Fodor, Petru / Borkar, Tushar
   Methodology development for the implementation of microfluidic mixers

66. Kothapalli, Chandra Sekhar / Fodor, Petru / Borkar, Tushar
   Implementation of a reverse staggered-herringbone microfluidic mixer for high-throughput polymer nanoparticle synthesis

67. Lee, Moo-Youl
   Prediction of metabolism-induced neurotoxicity on a 384-piller plate

68. Lee, Moo-Youl
   A 3D cancer cell migration assay on a 384-piller plate with sidewalls

69. Tewari, Surendra
   Dendrite morphology of Pb-5.8 Sb alloy

70. Wirth, Christopher / Ryan, Shawn
   Boundary effects on the locomotion of active Janus particles

71. Jenkins, Jacqueline
   Civil engineering surrounds you

72. Zhao, Wenbing
   Virtual reality based serious games for STNA training

73. Borkar, Tushar
   Spark plasma sintering of soft magnetic materials

74. Borkar, Tushar
   Comparative study of the microstructure and mechanical properties of high entropy alloys