Chinese Institute of Engineers - USA
NEW MEXICO CHAPTER

新墨西哥州华人科工会

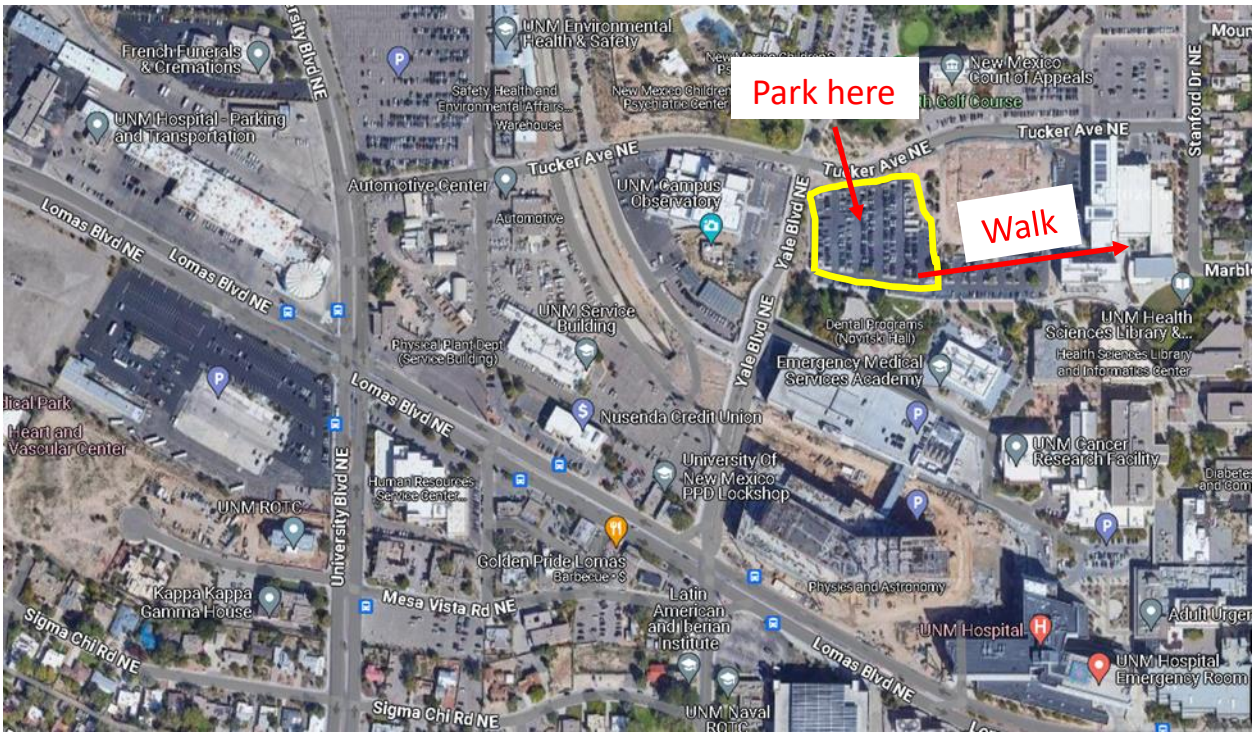
Association of Chinese-American Engineers and Scientists NM

ACES-NM/CIE-NM 2024 Spring Seminar

10am, April 27, 2024 (Saturday)

Room 2720, UNM Domenic Center for HSE

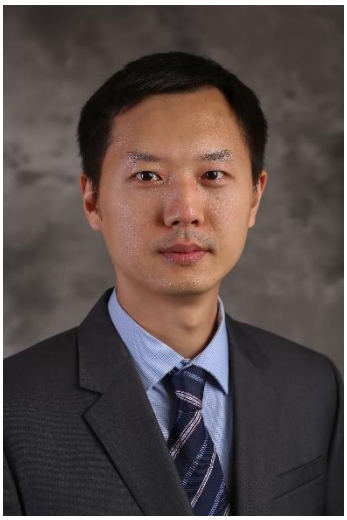
1001 Stanford Dr NE, Albuquerque, NM 87106



Agenda

1. 10:00 – 10:15 Sign-in & Registration
2. 10:15 – 10:20 Introduction
3. 10:20 – 11:20 Presentation 1
4. 11:20 – 12:20 Presentation 2
5. 12:20 – 13:20 Lunch

Presentation 1: Development, Comparison, and Interpretation of Temporal Lifestyle Behavior Patterns



Luotao Lin, Ph.D., University of New Mexico

Bio:

Luotao Lin is an Assistant Professor in the Nutrition and Dietetics Program of Department of Individual, Family, and Community Education in College of Education and Human Sciences at University of New Mexico. He achieved his PhD in Nutrition Science and Registered Dietician Nutritionist at Purdue University and Master of Science in nutrition science at University of Massachusetts Amherst. His research focuses on nutrition epidemiology including temporal lifestyle behavior pattern and food insecurity. He is currently a member of the American Society of Nutrition and Academy of Nutrition and Dietetics.

Abstract:

Diet and physical activity (PA) are independent risk factors for obesity and chronic diseases such as type 2 diabetes mellitus (T2DM). Integration of their temporal sequence over time can be used to identify clusters of U.S. adults with similar lifestyle temporal patterns of these behaviors in relationship to health indicators. The objectives were to develop, compare, and interpret temporal lifestyle behavior patterns. Dynamic time warping, coupled with a kernel k-means clustering algorithm were used to derive temporal patterns from 24-h dietary recall and a random day of accelerometer data of U.S. adults from the cross-sectional NHANES 2003–2006 (n=1,836) or 2007-2016 (n=17,915). Multivariate regression models determined associations between the clusters and health and disease status indicators, controlling for potential confounders and adjusting for multiple comparisons. A temporal lifestyle pattern cluster with 3 evenly spaced eating occasions and higher energy intake during 2 main eating occasions from 11:00 to 13:00 and 17:00 to 20:00 and higher PA counts from 08:00 to 20:00, was associated with significantly lower BMI ($P < 0.0001$), waist circumference ($P = 0.0001$), total cholesterol ($P = 0.02$), and odds of obesity than a cluster with higher overall energy intake, an energy peak from 17:00 to 21:00 and lower PA counts throughout a day. Both temporal lifestyle and dietary patterns had stronger and more numerous associations with health indicators compared with temporal PA patterns. Concurrent validity of the temporal dietary patterns was shown using descriptive cut-offs, holding promise for obesity interventions and translation to dietary guidance.

Presentation 2: Activism Engineering: Advocating for Cultural Change at a National Laboratory

Arnold Eng, Los Alamos National Laboratory

Bio:

Arnold Eng is a Senior Systems Engineer in the Plutonium Infrastructure Engineering Division at Los Alamos National Laboratory (LANL). Additionally, Arnold also serves as the Chair of LANL's Asian and Pacific Islander Employee Resource Group. Arnold Eng first came to New Mexico as a Fellow from Pacific Northwest National Laboratory's (PNNL) National Nuclear Security Administration Graduate Fellowship Program in 2019. Arnold was enchanted by New Mexico and has been with LANL ever since 2020. Prior to New Mexico, Arnold was a nuclear safeguards research associate with the Next Generation Safeguards Initiative at Pacific Northwest National Laboratory.

Arnold Eng received his Bachelor of Science in Chemical & Biomolecular Engineering from the Georgia Institute of Technology. He also received a Master of Science in Chemical Engineering from Purdue University and a Master of Engineering in Nuclear Engineering from the University of California at Berkeley. Arnold is a Licensed Professional Engineering in New Mexico and is part of the National Society of Professional Engineer's Emerging Leadership Program.

Abstract:

Common reasons people are motivated to pursue engineering include solving problems and making a better world. This reasoning is the core motivation behind activists pursuing social changes. This talk will not delve into the exquisite details behind an analytical technique or newly designed product. Instead, this talk will go into how an engineer can support both technical and social cultural change at a national laboratory. Los Alamos National Laboratory believes diversity fuels an "innovative, agile, and principled workforce that is essential to solving problems of global importance." Arnold Eng will go over his experiences and observations of how both LANL engineering organizations and employee resources groups put those words into action.