Nanosensor Arrays

Nanosensor arrays have been developed to allow for the detection of heavy metals on an in-situ basis, without reagents. The technology was developed and patented in collaboration with Sandia National Labs. The science behind the technology is based on the work of six Nobel laureates and has demonstrated detection of Zn, Tl, Cd, Pb, Cu, Hg, As, Cr / Cr(VI), Se, and Mn. Today, thanks to advances in Deep UV Lithography, these sensors can be made inexpensively and are capable of detection of heavy metals down to the parts per trillion. These sensors are capable of monitoring the environment and identifying pollutants. The public and regulators would be able to view snapshots of pollution in real time. The goal is to use these advanced materials to build a nervous system for the planet, so incidents like the water crisis of Flint Michigan never happen again.

Shobhan Paul is the Director of Zetanostics Inc., working on the development of nanotechnology for the detection of pollutants, specifically, heavy metals. Shobhan has 42 years of experience, having worked at E.M. Jorgensen Heat Treat and Forge Shop, and later continuing on to Rockwell International as Project Manager for the B1-B Bomber. At Rockwell he helped engineer the world’s largest aluminum precision forging, developed new materials for the Advanced Launch System, set up a robot to X-ray welds of the B1-B bomber, and investigated diffusion bonding. He was also a lead engineer on the Space Shuttle Main Engine Program for Rocketdyne and worked on the computational modelling of welds. He has consulted for the US Department of Energy and the State of California. Shobhan received a B.S. in Metallurgical Engineering and has taken graduate courses in Nuclear Engineering, Materials Science, Mathematics, Plasma Physics, and Computer Science at NCSU, the University of Washington and UCLA.

| WHERE: | CSUN University Student Union  
|        | East Conference Center, 1st Floor  
|        | Panorama City Room |
| TIME:  | 6:30pm – Social (snacks & refreshments will be provided)  
|        | 7:00pm – Presentation |
| WHEN:  | Thursday, October 25th, 2018 |
| COST:  | FREE |
| QUESTIONS: | Eunice Lee  
|          | asmsfvchapter@gmail.com  
|          | 818-624-9954 |

We thank our Sustaining Members and Corporate Sponsors for their support of the 2018/2019 Season.
Specific Directions to the Panorama City room.

1. Enter campus from Zelzah on Prairie Street.
2. Purchase parking pass at Booth #3 (If closed the automated teller must be used.)
3. Turn right on Matador Drive (North) pass the athletic field.
4. Turn right in Lot G4. (An automated parking pass teller is in the far north west corner of the lot. It is past the pathway in the far corner (as far as possible in the top left corner of the lot as depicted on the map)
5. You must get to the opposite side of the Student Recreation Center SRC on map.
6. Walk south and around the SRC to the main pathway of the USU plaza. The location is in zone F4.
7. Now use the more detailed University Student Union map.
8. The East Conference Center is next to the Student Recreation Center.
9. The meeting room is on the 1st floor.
10. If you become lost, call my cell phone 818-624-9954 and provide your grid position.