UNM Physics Day 2018

- Undergraduate Research Conference
- Physics and Astronomy Open House

Saturday, April 7th, 9am-6pm

Physics and Astronomy Department

9.00 – 9.15	**Welcome and Opening Remarks**	
9.15 – 9.45	**Prof. Kate Brown** *Sage Advice and a Series of Vignettes from a UNM Physics Alum*	
9.45 – 10.45	**1st Oral session**	
	9.45 – 10.00	**Patrick Brown** *Non-Standard Cosmological Histories*
	10.00 – 10.15	**Kylar Greene** *Mira Variable Stars and SiO Masers*
	10.15 – 10.30	**Ryan Gibbons** *Shielding for Detecting Neutrino-Less Double Beta Decay*
	10.30 – 10.45	**Daniel Puentes** *X-Ray Scattering and Reflectivity Studies*
	10.45 – 11.00	**Ryan Hamblin** *Characterization and Applications of the Nanoscale Structure of Amphiphilic Block Copolymers*
11.00 – 11.15	**Break**	
11.15 – 12.30	**2nd Oral session**	
	11.15 – 11.30	**Lauren Zundel** *Flat Top Surface Plasmon Polariton Beams*
	11.30 – 11.45	**Amy Soudachanh** *Optical Measurements of SiN Coupled Ring Resonators for Optomechanical Gyroscopes*
	11.45 – 12.00	**Bryan Rubio-Perez** *Engineering the Optical Properties of Aluminum Oxide*
	12.00 – 12.15	**John Keeney** *Optical Rogue Wave Generation in Dielectrics with Correlated Fluctuations of Refractive Index*
	12.15 – 12.30	**Asher May** *Extraordinary Enhancement of Dipole-Forbidden Transitions Using Nanostructured Graphene*
12.30 – 14.00	**Lunch and barrel implosion** (in the lobby of the P&A department)	
14.00 – 15.30	**Lab Tours** Lidke Lab, Becerra Lab, Sheik-Bahae Lab, and Center for Advanced Research Computing	
15.30 – 17.30	**Poster session**	
	Bradley Malko (NAU) *Thermal Infrared Planetary Science Imager*	
	Eric Putney *Analysis of Diffusion of a Rhodium Adatom on a Tungsten (111) Surface*	
	Dilys Ruan *Analysis of Diffusion of a Rhodium Adatom on a Tungsten (111) Surface*	

	Lauren Zundel *Spatially Resolved Optical Sensing Using Graphene Nanodisk Arrays*
	Christian Roberts *Probabilistic and Statistical Modeling of Nanoparticle Diffusion Processes*
	Bryan Rubio-Perez *Engineering the Optical Properties of Aluminum Oxide*
	Brady Spears *Computer Modeling of Subsurface Density Structures*
	Daniel Puentes *Automation of a High Precision Stage For X-Ray Grazing Incidence Small-Angle Scattering (GI-SAXS) and Reflectivity (XR) Studies*
17.30 – 18.00	**Concluding remarks and awards**
18.00 – 20.00	**Dinner** (in the lobby of the P&A department)
20.00 – 21.00	**Observing at the campus observatory**

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