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UNM STUDENTS PRESENT AT AMERICAN NUCLEAR SOCIETY NATIONAL STUDENT CONFERENCE

Two Nuclear Engineering Senior Design Teams Receive National Awards

Every spring, the seniors of the Nuclear Engineering Department at the University of New Mexico are divided into groups to work on a senior capstone design project, under the guidance of Regents' Professor Mohamed El-Genk. The students in the senior design class are encouraged to submit papers based on their design projects for presentation at the American Nuclear Society Annual Student Conference. This year, the conference was held at the University of Wisconsin, Madison, WI, 30 March – 2 April, 2016. At the conference, UNM was represented by five design teams, constituting the entire NE senior class.

Fig. 1 Members of the entire NE senior class with Department Faculty

The five UNM senior designs presented at the conference are of Americian-241 Radioisotope Thermoelectric Generator (RTG) for future space exploration, a research nuclear reactor for the production of Molybnium-99 medical isotope, a small modular, liquid sodium cooled nuclear reactor for electricity generation and process heat to remote communities, a small nuclear reactor system for maritime electrical power and

propulsion, and a nuclear reactor power system for a submersible research vessel. All five projects were accepted for presentations by the conference committee, four were selected for technical podium presentations, and one for a poster presentation (Fig. 1).

Fig. 2. Members of the two ranked UNM-Nuclear Engineering Senior Design teams, with Professor Anil Prinja, NE Department Chair (far-left) and Regents' Professor Mohamed El-Genk (far-right). The two teams received best presentation awards in the respective technical tracks at the American Nuclear Society (ANS) Annual Student Conference in Madison, WI, 31 March – 2 April 2016.

Two of the UNM design teams (Fig. 2) received best presentation awards in their technical tracks. The members of the first team, Arnika Chidambaram, Joey Elmblad, James Pike, and Ryan Sharp are developing a Low Enriched High-Flux nuclear Reactor for the production Molybdenum-99 medical isotope. Chidambaram and Pike represented their team at the conference and received the best presentation award in the Isotopes and Radiation Technical track.

The members of the second ranked UNM team, Zackary Dodson, Cole Mueller, and Brittany Umbrage are developing an $^{241}Am_2O_3$ Coated Particle, 100 W_e RTG for Long-Life Planetary and Space Missions. Dodson and Umbrage represented their design team at the conference and received the best presentation awards in the Aerospace Nuclear Science and Technology Technical track. In addition, Dodson and Umbrage received an invitation and offered stipend to attend and present their team design at the Innovations in Nuclear Space Conference, to be held February 2017, in Orlando, FL.