



Top LA Researchers Expanding Minds with STEM Education Connections

Kids of all ages love the change of pace when a guest speaker comes to the classroom. Students are quick to learn STEM concepts with hands-on lessons and absorb the contagious enthusiasm for research that presenters impart throughout the experience. Just the simple act of hearing the personal journey of how a researcher decided to go to college and become a researcher in a particular field, creates an instant spark in the minds of many students who had not been introduced to the idea of considering a STEM career.

Louisiana's Speaking of Science (SoS) program is a speakers' bureau that sends top researchers into the classrooms. Over the past five years, 20,300 students have participated. 2016 is proving to be a banner year, with over 4,800 students benefitting so far. New types of connections are being made through SoS, including an upswell of speaker requests at engineering and STEM clubs meeting after school or at the facilities of industry partners.

The SoS program is managed by Louisiana EPSCoR and funded by the National Science Foundation and the Louisiana Board of Regents. Speakers are available for kindergarten through college classrooms at no cost to the schools.

"SoS is a fantastic way to bring science to the masses," said Dr. Dhruva Chakravorty, Assistant Professor at the University of New Orleans



Dr. Dhruva Chakravorty (far left) and his assistants, Ms. Lise Auger, and Mr. Richie Prevost, congratulate the participants after the SoS presentation at the International School of New Orleans. Mrs. Karen Marshall and her middle school students successfully used chemistry during the presentation to solve the mystery of "Whodunit." (Inset) Mrs. Marshall at the summer RET poster session.

(UNO) Department of Chemistry.

"I have seen a tremendous impact on schools with a large ratio of minority groups or in low income areas. The students start the day not knowing what they plan to do after high school. After the presentations, the students tell me, 'I want to go to college.' This is an excellent opportunity to recruit these students to attend Louisiana colleges and choose STEM careers," added Chakravorty.

Face-to-face interactions are also valuable for encouraging high school seniors who have already decided to attend college to consider pursuing a STEM degree. Several seniors have made connections with SoS researchers in the classroom who later mentor them at the

university summer Research Experiences for Undergraduates (REU) programs.

Mentor-teacher connections are being developed through the SoS program as well. For instance, after Dr. Chakravorty provided presentations at the International School of New Orleans, he encouraged the science teacher, Mrs. Karen Marshall, to participate in the Research Experiences for Teachers (RET) program. That summer, Dr. Chakravorty mentored Mrs. Marshall as she developed a sustainable program for her students to learn about molecular interactions which included field trips to UNO to use supercomputers to run simulations.

View the SoS speaker catalog at:
<http://web.laregents.org/?p=390>.

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CIMM Researchers Deliver Huge Impact in SoS Classrooms with Cutting-Edge STEM Topics

The advanced manufacturing industry is rapidly growing in Louisiana, and several speakers from the NSF EPSCoR-funded Consortium for Innovation in Manufacturing & Materials (CIMM) have joined the SoS speakers' bureau. Below are the newest speakers and just a few of their presentation topics:



Dr. Dentcho Genov, Louisiana Tech, "The Magic of Science and How to Make the Harry Potter Invisibility Cloak."



Dr. Dentcho Genov presenting "How to Make the Harry Potter Invisibility Cloak" at Polaris Engineering in Lake Charles, Louisiana to the Young Engineers Society students from Our Lady Queen of Heaven School.



Dr. Samuel Ibekwe, Southern University, "3D Printing - the Future of Manufacturing."



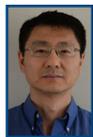
Dr. Daniela Mainardi, Louisiana Tech, "Exploring the Forms of Carbon With Molecular Modeling."



Dr. Naidu Seetala, Grambling State University, "Material Characterization Using Antimatter Positron Annihilation."



Dr. Ebrahim Khosravi, Southern University, "Use of Autonomous Humanoid Robot for Security and Mapping."



Dr. Wen Jin Meng, LSU, "Making Things Small."



Dr. Chester Wilson, Louisiana Tech, "Grand Challenge Scholar Program: Student Nanotechnology Research Opportunities to Get a Great Admission Offer From Universities."



Dr. Guoqiang Li, LSU, "Biomimetic Self-Healing Composite Materials."



Dr. Patrick Mensah, Southern University, "Increasing the Efficiency and Power Generating Capacity of Gas Turbines Using Ceramic Coatings."



Dr. Shizhong Yang, Southern University, "Refractory High Entropy Alloy Development: From Computer Design to Real Product."



Dr. Don Liu, LATech, "What is Computational Mathematics and How Is It Changing the World?"



Dr. Arden Moore, Louisiana Tech, "Making Phase Changes Work for Us!"