

Abstract Submitted
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DEEP: Discover, Explore, and Enjoy Physics & Engineering via High Impact Educational Experiences at Texas A&M and Beyond¹ TATIANA ERUKHIMOVA, EDWARD FRY, Texas A&M University — We will present the first results of an innovative program at Texas A&M University that aims to enhance the learning and research experiences of undergraduate and graduate students through their participation in high-profile outreach activities: principally the Texas A&M Physics and Engineering Festival and the Physics Shows. The goals are to enhance students' knowledge of fundamental physics concepts through collaborative hands-on research and educational activities, to teach them effective communication skills and responsibility, and to enhance their opportunities for interactions with their peers and professors outside the classroom. The program activities include (i) students working side-by-side with their peers and professors on research, concept, design, and fabrication of physics demonstration experiments, (ii) presentation of these exhibits during the Festival and Shows in teams of several students and faculty members, (iii) assessment of students teamwork, and (iv) incorporation of new demonstrations in core curriculum classes. Texas A&M Physics and Engineering Festival is a major annual outreach event at TAMU attracting over 4000 visitors and featuring over 100 interactive exhibits, public lectures by prominent scientists, and various hands-on activities.

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