

Projects in experimental physics at the University of Calabria

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The Department of Physics at the University of Calabria, Italy, has recently introduced projects in experimental physics within existing courses at both the bachelor's and master's levels. This teaching experimentation is a low-cost adaptation to the Italian university system of a class started in 1975 by Yves Couder and his colleagues at Université Paris Diderot [1,2,3]. Groups of students design, build, and use a tabletop experimental setup, trying to answer questions issued by interesting physical phenomena. The instructors may not have any experience with the proposed topics and accompany the students in developing their projects. This method is intrinsically non-procedural and thus different from most courses in experimental physics. I will give details about the main features of the method we used, and report what we learned from this teaching experience. Specifically, I will present some successful and unsuccessful ideas for student projects, report on students' feedback, and discuss how the method could be further implemented and improved in light of research in physics education. Specific attention will be devoted to projects that are leading to articles in physics education.

References

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