

ADOPT-A-PHYSICIST CLASS GROUPS

Class Name: Period 4

<p style="text-align: center;">Group 1</p> <p><i>Dr. Alan Cook</i> Plasma Science & Fusion Center, Massachusetts Institute of Technology (MIT PSFC)</p> <p>I am a Postdoctoral Associate at the Plasma Science & Fusion Center at MIT. I work on research related to particle accelerator technology, high-power microwave sources, and plasma physics.</p> <p>It is common for scientists to do "postdoctoral research" after finishing the Ph.D. degree. This is a few years of continued research experience. The research I did during my education was directly related to what I am doing currently. I am learning quite a bit, and I feel that this experience will prepare me for a more permanent job in the near future.</p>	<p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>
<p style="text-align: center;">Group 2</p> <p><i>Alyssa Garrelts</i> Purdue University (Purdue)</p> <p>Right now I am a third-year graduate student at Purdue University in Physics working toward my PhD. This program by-passes the Master's degree and usually takes six and a half years (though I have my fingers crossed for five!).</p> <p>I work in the Single Molecule group where we image a reporter molecule very accurately (~30nm) at video speeds (30 frames per second) or faster. This allows us to probe the mechanisms behind biological systems. For a while I worked on figuring out how the phi-29 virus functioned by trying to watch part of the system rotate. Now I'm looking at the membrane structure and behavior of E. coli by watching a lipid diffuse.</p> <p>I still take some classes occasionally. I am also responsible (though not this semester) for teaching college physics classes. Usually I am just a teaching assistant which means I would run labs or recitations (sessions where we work example problems and review concepts) but during the past few semesters I have gotten to lecture classes and next fall I'll get to teach a class on teaching physics.</p> <p>Being a graduate student is fairly typical for someone with a B.S. in physics (though there are many other options!). Being a grad student in physics who studies biological systems is a bit less typical. My physics background really prepared me for my courses and the theory behind my research but, since my last biology class was during my freshman year of high school, I've found I need to brush up on that knowledge.</p> <p>The biggest benefit to a physics education is that it teaches you to think critically. Solving a problem using physics is not about using this equation or that technique to evaluate the situation, but about understanding things at their most basic level. This is a very powerful tool and allows people with physics backgrounds to do everything from basic science to model the stock market.</p> <p>Also, since physics is kind of hard, it gives you a lot of confidence! Sometimes I remind myself, if I can get through all those physics classes, I can do anything!</p>	<p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>

<p style="text-align: center;">Group 3</p> <p><i>Dr. Carlos F. Sopena</i> College or University : National Spanish Research Council and Catalonia Institute for Space Sciences (CSIC and IEEC)</p> <p>I did my PhD (1996) at the University of Barcelona (Spain) in the area of the general theory of relativity, working mainly on the search of exact solutions of Einstein's equations for cosmology and relativistic astrophysics. After working at the same university as an assistant professor I moved (1998) to the Institute for Theoretical Physics of the Friedrich Schiller University of Jena (Germany) as an Alexander von Humboldt Fellow. After that I moved (2000) to the Institute of Cosmology and Gravitation of Portsmouth University (United Kingdom) as a Marie Curie Fellow, where I worked in higher-dimensional models of gravity and also in the description of sources of gravitational waves. To continue work in the last subject I went (2003) to the Institute of Gravitational Physics and Geometry of Penn State University (United States of America). In 2006 I went to Guelph University (Canada) where I continued work mainly on the simulations of some sources of gravitational radiation and how to use it to increase our understanding of the cosmos and its history. In 2007, I moved back to Spain, where I work at the Institute of Space Sciences.</p>	<p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>
<p style="text-align: center;">Group 4</p> <p><i>Dr. Kristine Larsen</i> Central Connecticut State University (CCSU)</p> <p>I am an astronomy professor and director of the University's Honors Program. I teach classes in introductory astronomy, observational astronomy, astrophysics, and science and society (including science and science fiction). Universities are a major source of jobs for PhD's in physics. My particular university is a state school with a heavy teaching load and where quality teaching is valued over original research. My experiences working in the planetarium and observatory, along with my physics courses and my experiences as an astronomy teaching assistant (TA) in graduate school, have all shaped my career. I have found each of the aspects of my "education" to be valuable in different ways.</p>	<p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>
<p style="text-align: center;">Group 5</p> <p><i>Tom Jones</i> Private/ Government Funded Research Lab : Los Alamos National Laboratory (LANL)</p> <p>Currently, I work as a certified Nuclear Explosive Safety Study Group Member for Los Alamos National Laboratory. This job entails using a broad spectrum of physics and engineering knowledge to evaluate nuclear explosive operations for safe practices. My work is not really typical, I seldom work on the same projects two days in a row, I get to work mechanical problems one day, electrical the next, and manufacturing the next. I have a broad-based physics and engineering education (both my degrees were interdisciplinary), and this helps TREMENDOUSLY with my job.</p>	<p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>