The 1987 Engineer

Columbia University
New York, New York

applied physics and nuclear engineering

Applied Physics, huh. Most people only hear the second word of our department and recoil in horror. Maybe this is why there are only seven senior applied physicists this year (there are only 17 applied physicists including the juniors). But being a member of such a small department has more benefits than it does disadvantages. In fact, the only real disadvantage is that nobody has heard of Applied Physics and doesn't know what we do. But the camaraderie of being in such a small group easily offsets any troubles. We help one another and don't feel any need to compete among ourselves. Our department sponsors a weekly seminar in Applied Physics which brings us together informally, giving us an opportunity to explore the diverse area covered by our major.

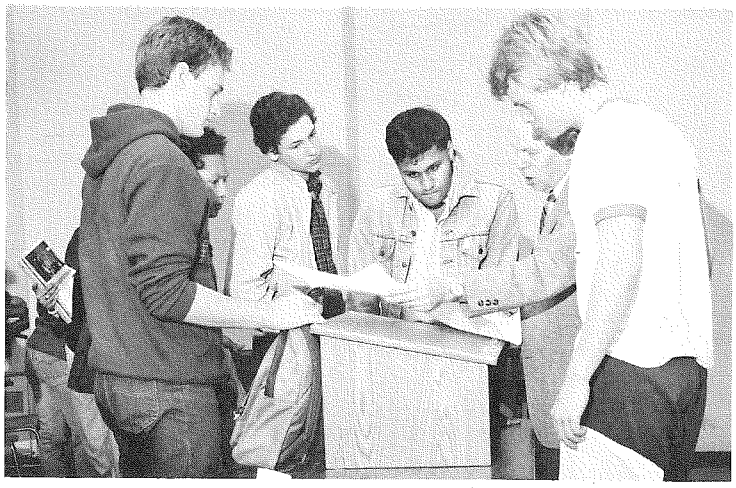
Speaking of the major, the Applied Physics department is almost as complex as the subject itself. The department actually subsumes three departments in one, the full title of our department is Applied Physics and Nuclear Engineering, but an Applied Math degree is also offered. Looking only at the Applied Physics section there are still five areas of further specialization. Applied Mechanics deals with the dynamics of microscopic systems (solids and fluids). Solid State Physics explores the microscopic physics of solids. Basic Physics is similar to the Physics degree offered by the College and emphasizes the more theoretical aspects of Physics. Quantum Electronics and Laser Systems investigates the physics of lasers and Quantum electronic systems. Plasma Physics uses physics to explore systems with extremely high energies. An Applied Physicist chooses a specialization and then takes a large number of technical electives in that specialization.

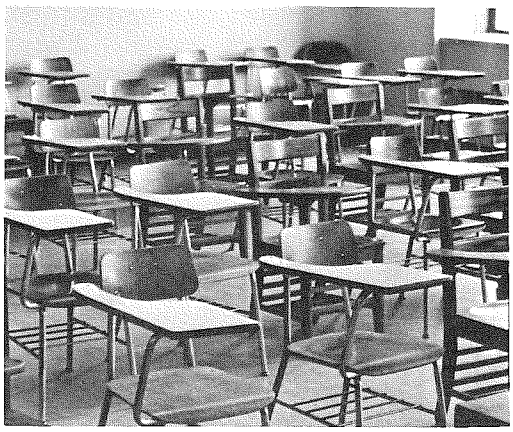
Aside from these considerations, one major problem still faces an Applied Physicist. Let me illustrate: Two years ago, as a sophomore, I decided that I wanted to major in Applied Physics.

My parents responded, "That's WONDERFUL . . . What does an Applied Physicist do???"

It sounded flip, but all I could say was, "Applied Physics."

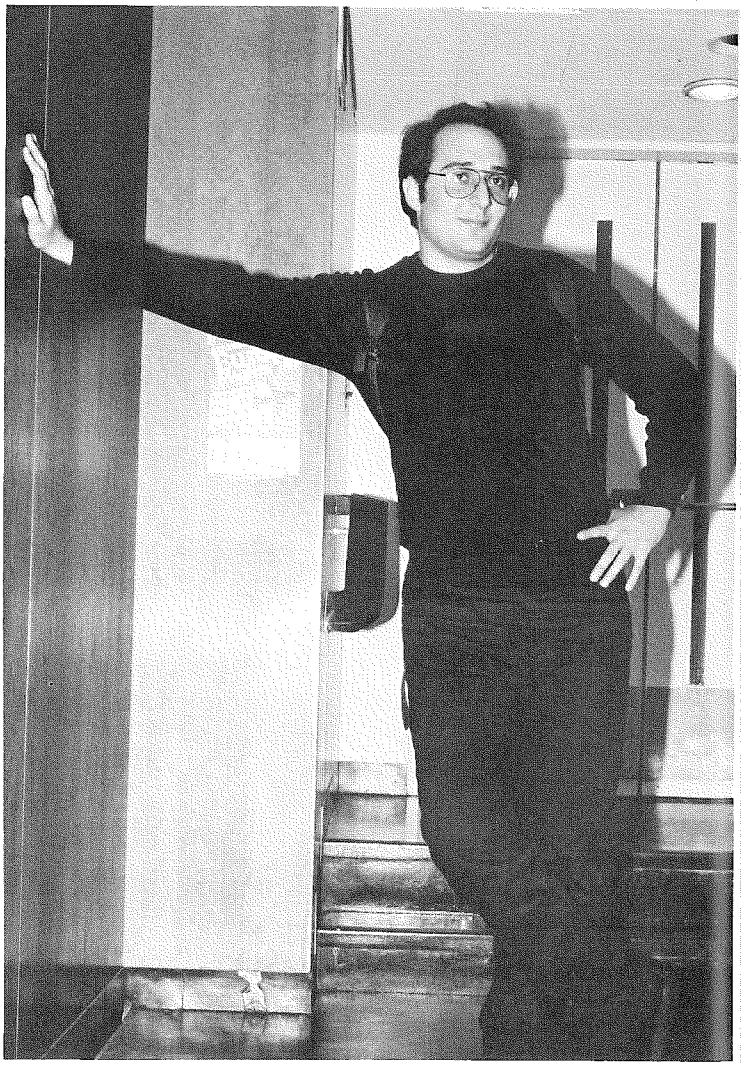
I know of no other major which has such problems. Other engineers build bridges, design circuits, and write programs. We just apply physics.



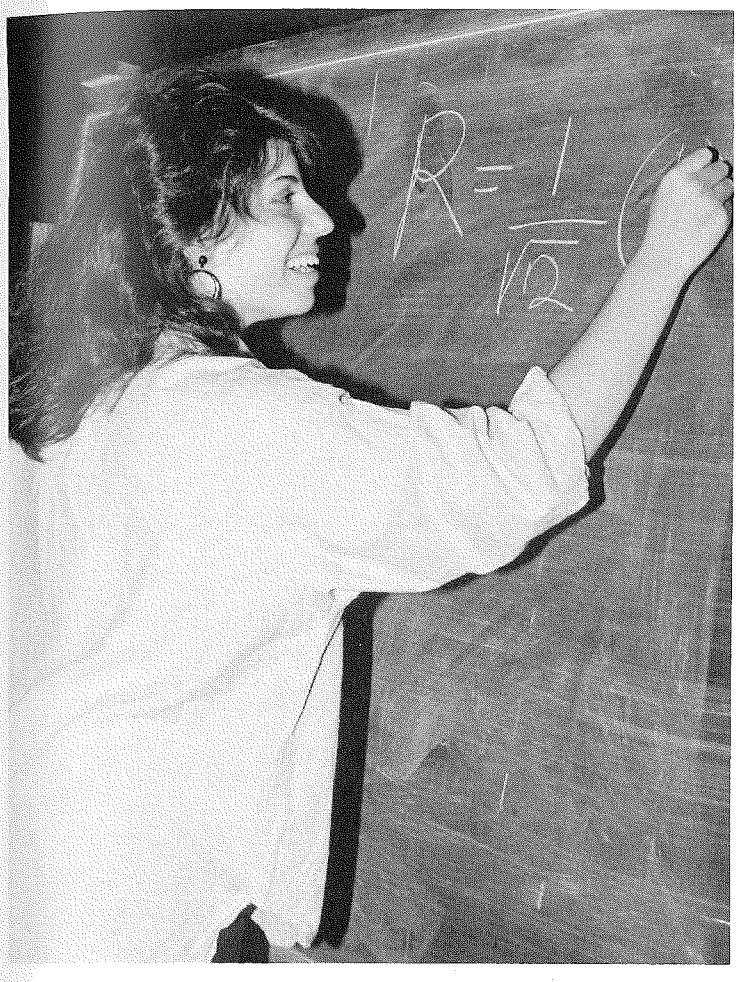


Professor Lidofsky counsels underclassmen in the art of Fortran programming. (top)

(above) **A sign** of the second floor.

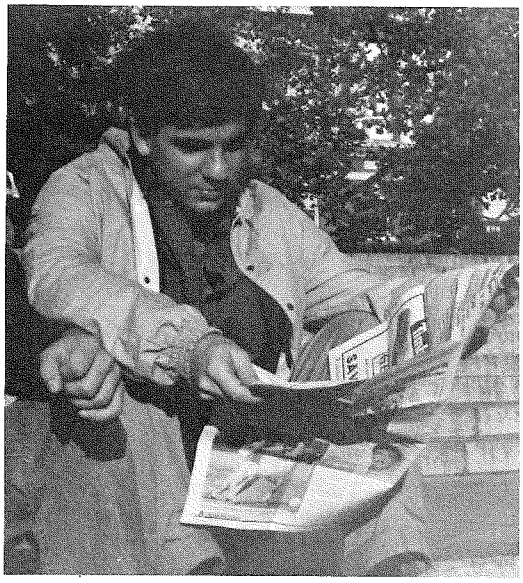


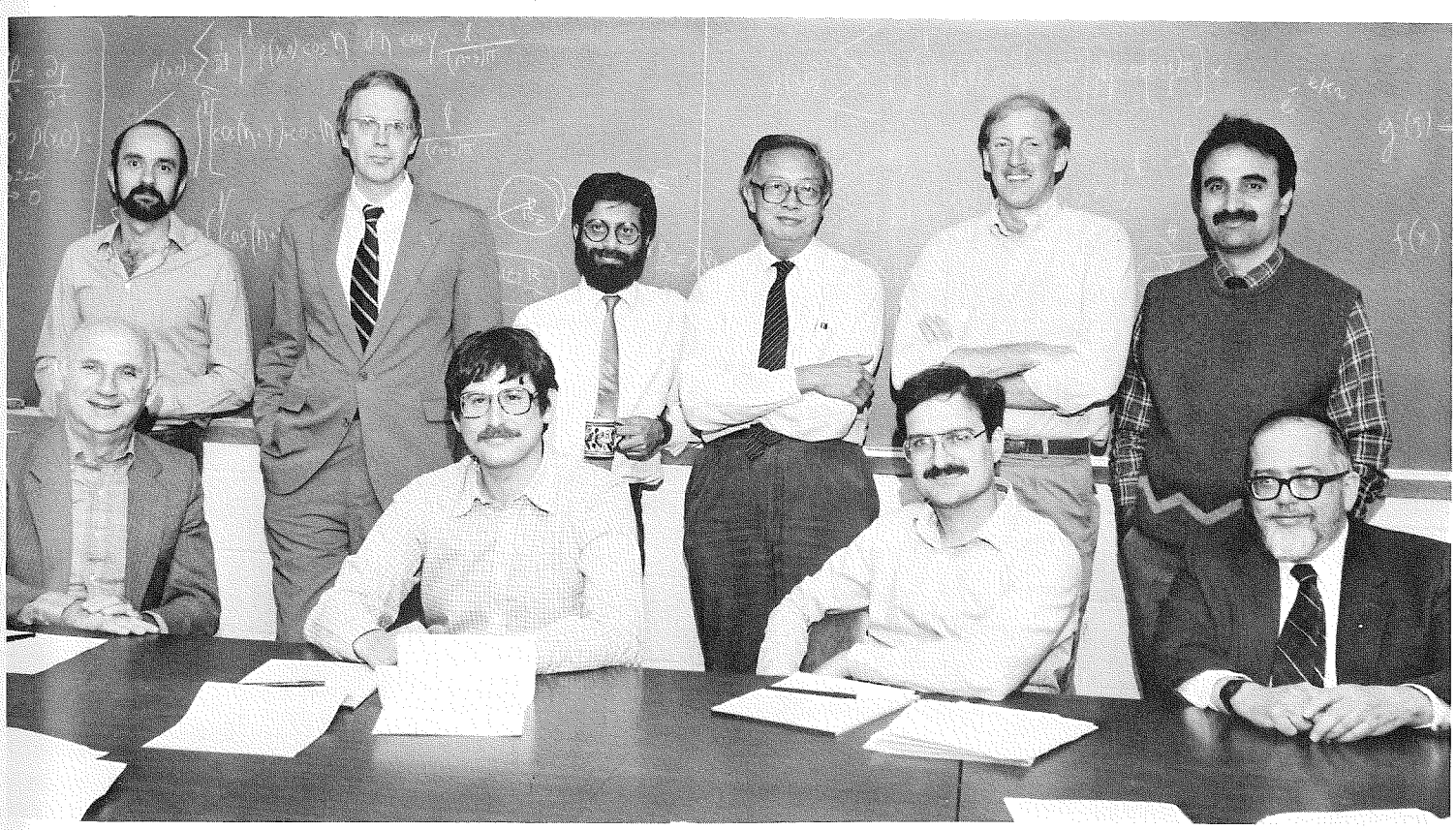
Tom Gellhorn contemplates the acceleration necessary for an electron to penetrate the wall of the Mudd building.



Quantum anyone? (left)

Alfredo Cubina searches the help wanted section for an applied physicist position. It is listed right after gene splicer, Fred.





APNE Department Faculty: *(standing left to right)* Michael Tabor, Thomas Marshall, Amitava Bhattacharjee, C.K. Chu (CHAIRMAN), Michael Mauel, Alireza Sedaghat, *(seated left to right)* S. Perry Schlesinger, Irving Herman, Gerald Navratil, Herbert Goldstein, *(missing)* Leon Lidofsky