PHYSICISTS' FAREWELL

After a combined 83 years of service to Lawrence University, physics professors David Cook and John Brandenberger are retiring. *Lawrence Today* caught up with these distinguished professors and asked them about their amazing careers.

LT: *What were the keys to establishing a physics program that is so well-respected within the college ranks?*

DC: I think our initial motivation was the realization that we ought to be dealing with larger numbers of students. In order to attract larger numbers of students we needed to have something that was unusual, something that wasn't available at many places, if any.

JB: In the early '80s we knew we weren't having as much fun as we would if we had five times as many good students. We really had to scratch our heads and think about a way to turn that situation around. We decided we should put most of our eggs in just a few baskets to make something distinctive here.

LT: *Did you ever imagine the physics department would be what it is today — with a one-of-a-kind laser laboratory (the Laser Palace) and a computational physics laboratory?*

DC: I hoped it would; it's hard to imagine what might happen. Essentially these facilities have played a key role in helping us to double the number of physics graduates each year.

JB: And increasing their commitment and degree of engagement in physics.

DC: Our efforts would not have succeeded without the administrative support that we have received over the years. We've incubated the ideas and they've emerged from the department, but there has never been any question that the administration has been prepared to assist and provide matching funds when necessary. I think we would not have made the inroads or developed the program that has emerged if we had not been in an institution that was not generally supportive of these activities.

Lower left: David Cook, professor of physics and Philetus E. Sawyer Professor of Science, left, with John Brandenberger, Alice G. Chapman Professor of Physics.

GO FIGURE: PHYSICS BY THE NUMBERS

According to Cook, the numbers reveal the strength of Lawrence's physics program.

600
U.S. universities that award undergraduate degrees in physics

6
Percentage of those universities with 10 or more students majoring in physics each year

25
The percentage of those universities with five or more physics graduates each year

2-3
The average number of physics graduates per school annually

14
Lawrence physics graduates in 2008

15
Lawrence physics majors on course to graduate in 2009

LT: *What kept you at Lawrence all these years?*

DC: Part of what I like is the interaction with people who aren't physicists. Particularly in my case I'm talking about the conservatory; it was a major factor in my decision to come here, and has been an important component. I never thought about leaving. Lawrence is a very special place, partly because the academic program is strong but mostly because of the relationships among the people — students, faculty, administrators, and even the relationship with the town.

JB: We, as faculty members in a small liberal arts institution such as Lawrence, value our broad interaction with the historians, mathematicians, musicians, and so forth; it is something that is natural here, and we truly value it.

LT: *Of which accomplishment are you most proud?*

DC: We've made quite a difference in the lives of a fair number of students and, in my mind, that's the most important thing that has been accomplished. When certain students were here we were mentors for them; but as students graduate and have gone on to significant things, the tables are turned and those students have come back and been mentors for us in our program. That reversal of roles is highly rewarding. I'm also proud that our efforts to incorporate laser and computational physics into our curriculum have drawn attention to Lawrence. As a result of the attention, I've been elected to a national office (vice president of the American Association of Physics Teachers) which will keep me busy for the next four years — that's a reflection of the respect that the collegiate physics community has for the program that we carry out here at Lawrence.

JB: What we will recall most often is thinking back on the interactions we have had with various students — students whom we enjoyed working with at the time and who have gone on to substantial accomplishments. We can live vicariously through them and bask in the reflected glory of those students. That role reversal is very important to me. It's seeing students develop very impressive careers, then getting back together with them after 20, 25 years and being on the receiving end and living through them, savoring their successes. What better way to have spent a career than to feel you have had a hand in shaping their success!

LT: *How would you describe Professor Cook?*

JB: It would be virtually impossible to find a more conscientious colleague with such high standards. He's fast at the board; sometimes students say he's so fast he's working with two hands at the board. It's his standards, the dedication, and conscientiousness, the giving of extra time to the program and to the students.

LT: *Describe Professor Brandenberger.*

DC: We're very much cut from the same cloth in that regard; I have difficulty saying much different about John than he just said about me. He's a fabulous colleague, we work well together. When one of us asks something of the other, it gets done fairly promptly. John steadfastly encouraged my efforts in the computational direction and did yeoman's service in editing and commenting on the proposals that I had written to the foundations that provided funding.

LT: *What does life after Lawrence hold for each of you?*

DC: We will be around. John is retaining a laboratory; he's talking about jointly teaching a course next fall. I'm going to be around and continuing — more in conjunction with my national office than specific things here — but I'm sure we'll both have our arms twisted into teaching a course once in awhile and continue to be involved in the department.

JB: It is difficult to distance ourselves. We were workaholics for 20, 25, 30 years and took pride in what emerged as the result of that work, and it's going to be hard to completely pass it off to our younger colleagues. ■