Curriculum Vitae

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1 Education

I have a B.S. from Georgetown University (1968) and an M.A. (1970) and Ph.D. (1972) from the University of Pittsburgh, all in Mathematics.

2 Employment

In the fall of 1972 I joined the Mathematics Department of The Catholic University of America (CUA), Washington, D.C., as an Assistant Professor. In 1978 I was tenured and promoted to Associate Professor. In 1983 I became a Full Professor. I was chairman of that department from 1983 to 1986. I also co-chaired the Program in Computer Science that became the present-day Department of Computer Science.

In 1986 I left CUA to join the Mathematics Department at what is now The University of Massachusetts Lowell. I was hired at the rank of Full Professor and received tenure the following year. From 1987 to 1990 I was the department chairman.

Throughout most of the 1980's I was a part-time consultant to the U.S. Naval Research Laboratory and the Office of Naval Research, in the area of acoustic signal processing. In 1986 I spent a month in Australia, as a consultant to their Department of Defence. From 1990 to 2008 I was a consultant to the Department of Radiology, University of Massachusetts Medical Center, in the area of computed tomography.

3 Research

My thesis work was in the areas of topology and functional analysis. I moved into signal processing in the 1980's and, most recently, iterative image reconstruction and optimization. I have published two graduate-level books and over sixty research papers in refereed journals. The publications listed below are refereed journal articles and books. I have not included articles that have appeared in proceedings of conferences and workshops, although some of these were refereed. I have also omitted book reviews, short courses and abstracts of talks given at conferences. Many of the publications listed are available on my web site (http://faculty.uml.edu/cbyrne/cbyrne.html).

4 Teaching

During my nearly forty years of teaching I have taught most of the courses in the undergraduate mathematics program, as well as several in the undergraduate computer science program. At the graduate level I have taught topology, functional analysis, calculus of variations, numerical methods, signal processing, probability and random processes, real analysis, complex analysis, optimization, medical imaging, abstract algebra, wavelets, information theory, and probably others that I have forgotten to list. Since joining Catholic University nearly forty years ago I have taught courses in programs for the preparation of secondary school mathematics teachers. I currently teach about half of the courses in our Masters' Program for high school math teachers, including Mathematical Analysis, Probability and Statistics, History of Math, Geometry, Problem Solving and Discrete Structures. I recently introduced Mathematics of Tomography, partly for our own students, and partly as a service course for doctoral students in our Radiological Sciences program in the Department of Physics.

5 Department and University Service

In addition to chairing the mathematics departments at both CUA and UML, and co-chairing the computer science program at CUA, I served a term on the CUA Faculty Senate and chaired the committee to find a Dean for the College of Arts and Sciences at UML. For ten years I was the coordinator of the UML Masters' Program for high school mathematics teachers. From 2001 to 2009 I served as the Graduate Coordinator for the master's degree program in Mathematics.

6 Advising of Doctoral Students

At CUA I was the thesis advisor for a doctoral student in topology, who received his Ph.D. in 1976. At UML we have no doctoral program in Mathematics. I have, however, participated actively in the advising of several doctoral students in our Electrical Engineering Department.

7 Miscellaneous

Over the past forty years I have given numerous seminar talks, presentations to conferences and workshops, and several invited talks at meetings. I review technical articles for SIAM, IEEE, JOSA and Inverse Problems. For the last few years I have been a member of the organizing committee for the annual IEEE Medical Imaging Conference, helping to select speakers.

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