

Mark Watkins grew up in a suburb of Philadelphia. He earned his AB at Amherst College (1959) and his MA (1961) and Ph.D. (1964) in mathematics at Yale University under the supervision of Oystein Øre. After four years in the Mathematics Department at the University of North Carolina/Chapel Hill and one year in the Department of Combinatorics and Optimization at the University of Waterloo (Ontario), he came to Syracuse University as Associate Professor of Mathematics in 1968 and was promoted to Professor in 1976. In August 2012 at age 75, Mark officially retired after 44 years on the faculty of Syracuse University and now holds the title of Emeritus Professor of Mathematics.

He was Gastprofessor at the Technische Hochschule (now Technische Universität Wien) in Vienna 1973-74, visiting professor at Waterloo in the winter 1980 term, and professeur associé sur contingent national at Université de Paris-Sud in January-June 1986. He is fluent in French and conversant in German and has lectured in these languages in the appropriate venue.

His research interests lie in combinatorics and graph theory. In addition to over 60 research articles, he coauthored two books and a memoir. With his Syracuse colleague Jack Graver, he wrote the graduate text "Combinatorics with Emphasis on the Theory of Graphs" [Graduate Texts in Mathematics no. 54, Springer, 1977 (351 pp.)] and "Locally Finite, Planar Edge-Transitive Graphs" [Memoirs of the AMS vol. 126 no. 601, 1997 (75 pp.)]. The text was reviewed in the Bull. Amer. Math. Soc. 1 (1979), 380-388. With another Syracuse colleague, Jeffrey Meyer, he recently wrote the text "Passage to Abstract Mathematics" [Addison-Wesley, 2011 (231 pp.)] targeted to an undergraduate "transitions" course.

The main result of his doctoral dissertation is a characterization of finite planar geodesic graphs. His papers during the late 1960's and early 1970's concern connectivity in graphs, which evolved into the interaction of the connectivity and the automorphism group of a graph. He named the class of generalized Petersen graphs. His other main interest in the 1970's concerned the graphical regular representation (GRR) problem, another term which he coined. (The GRR problem asks, for which abstract groups  $G$  does there exist a graph  $X$  whose automorphism group is abstractly isomorphic to  $G$  and acts as a regular permutation group on  $V(X)$ .) By 1980, C.D. Godsil having completed the work on this problem, Mark turned his attention more fully to infinite graphs, inspired in part by H. A. Jung, with whom he would collaborate on five articles, all having something to do with infinite graphs.

Most of Mark's work of the 1980's concerns the end-structure and automorphism group action of infinite graphs. From the mid-1990's onward, he has been especially interested in infinite planar maps. The above-mentioned Memoir with Graver is his magnum opus in this vein, mainly because of its many consequences. It shows that every edge-transitive map, finite or infinite, on any surface whatever, belongs to exactly one of 14 types characterized by the combination of the permutation groups which are the stabilizers, respectively, of edges, vertices, faces, and Petrie walks. [See also his joint paper with J. Sirán and T.W. Tucker, publication #54.]

Mark attended the graph theory sessions at Oberwolfach in 1982, 1984, and 1986. He made study-visits to (West) Berlin supported by the German Academic Exchange Service (DAAD) in May-June 1980 and July 1989 and held a research grant from the Canada Council 1968. He organized the 3rd and 11th Northeast Symposium on Combinatorics and Graph Theory held at S.U. in 1988 and 1996, respectively, gave a minicourse of five lectures at the NATO Advanced Study Institute in Montréal in 1996, and gave plenary lectures at the meetings: "Algebraic and Topological Methods in Graph Theory" in Auckland, New Zealand (December 2000), "Colloque International en Théorie des Graphes et Combinatoire" in Marseille-Luminy, France 1986, and "International Conference on Combinatorial Theory" in Canberra, Australia 1977. He presented at special sessions of the AMS at the annual meetings in Boston in 2012 and Atlanta in 1988.

On the occasion of his 70th birthday, Mark was honored with his "day" at the 6th Slovenian

International Conference on Graph Theory, in Bled, Slovenia, (June 2007), where he again was an invited plenary speaker.

He is a member of AMS and a reviewer for Math. Reviews and Zentralblatt für Mathematik. He has been a reviewer for a number of grant applications for the National Security Agency, NSERCC (Canada), and FCAR (Québec).

His six Ph.D. students have been James Uebelacker (1972), Alwin Green (1972), John Kevin Doyle (1976), Jennifer Ann Bruce (2002), Adam McCaffery (2009), and Stephen Graves (2009).

In the Mathematics Department he participated in the Future Professoriate Program and served on a variety of committees. He was Associate Chair for Graduate Studies (1994-2001).

In the College of Arts and Sciences, he was a member of the Student Standards Committee (1991-94 and 2002-11), the Curriculum Committee (1983-86), and the very first College Committee on Tenure (1974-77), which he chaired in 1975-76. As Chair of the Curriculum Committee (1984-85), he proposed the plus/minus grading system adopted by the College and still in use.

In another collaboration with Jack Graver, for over two decades Mark and Jack had taken a number of graduate students on overnight canoe-camping trips to the Adirondacks and Ontario in May and in the Fall. He enjoys individual sports: canoeing, kayaking, hiking, cycling, and swimming.

Mark is an accomplished musician, having played oboe and English horn until January 2006, when a neurological problem (Parsonage-Turner syndrome) compromised the facility of his left thumb and forefinger. Until then he had performed as both soloist and member of the wind quintet The Lake Effect Winds and had earlier been a member of Syracuse Camerata. Unwilling to play no instrument at all, Mark has taken up the trombone, playing regularly with a community concert band, and doesn't miss reed-making at all.

Mark has been married to Brenda Silverman since 1990. He has three daughters by a previous marriage. At the time of this writing, he has five grandchildren.