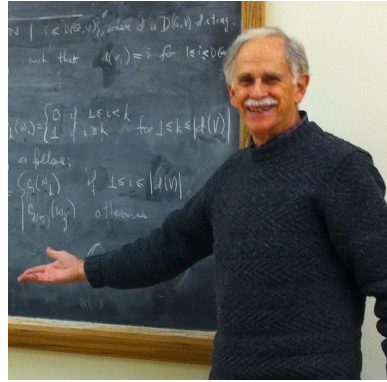




A Tribute to Mark E. Watkins on the Occasion of his 80th Birthday

A generation of undergraduate students passing through the halls of Carnegie Library at Syracuse University recall the name of Prof. Watkins as synonymous with rigorous Calculus classes taught by a passionate and engaging man with a moustache. Doctoral students likely have more personal memories of Mark, whether they be of his mentorship through coursework in graph theory and combinatorics, fall campouts in the Adirondacks, or simply conversations in the corridors.



Outside of the classroom, Mark was a constant presence at department colloquia and the much appreciated Coffee Time, where students and faculty take some time in the afternoon to relax and mingle. Mark could often be found on these afternoons regaling the graduate students with stories of some of the great names in graph theory, along with his close friend and collaborator Jack Graver. For many years, Mark and Jack were the conveners of a weekly combinatorics seminar at Syracuse, drawing together colleagues from neighboring universities as well as from neighboring departments within Syracuse University. Many students (this author included) were drawn to first appreciate and then to deeply love topics in graph theory and combinatorics through this seminar.

A native of the suburbs of Philadelphia, Pennsylvania in the United States, Mark first earned an AB at Amherst College in Massachusetts before proceeding to graduate study at Yale University, where he completed a PhD in 1964 under the direction of Oystein Øre [11]. He then spent several years at the University of North Carolina at Chapel Hill and one year at the University of Waterloo before arriving at Syracuse University as an Associate Professor in 1968. He has worked for the entirety of his career in the field of graph theory, beginning his work in areas of connectivity (e.g., [8]) before moving to more algebraic graph theory (e.g., [1, 5, 7]). Among the highlights of an excellent career, Mark is responsible for naming the generalized Petersen graphs ([1, 12]), for posing the problem of graphical regular representations ([9, 10, 15]), and for a long series of articles and investigations into the nature and structure of various families of infinite graphs (e.g., [3, 4, 6, 7, 13]). Mark has mentored six Ph.D. students through his career: James Uebelacker and Alwin Green 1972, John Kevin Doyle in 1976, Jennifer Ann Bruce in 2002, and finally Adam McCaffery and me in 2009. Mark has traveled extensively pursuing his love of mathematics, with academic terms in Vienna, Waterloo, and Paris, as well as scholarly visits to Oberwolfach, West Berlin, Montréal, Auckland, Marseille-Luminy, Canberra, Leoben, and Ljubljana. Mark has coauthored three books, *Combinatorics with Emphasis on the Theory of Graphs* in 1977 with Jack Graver [2], the AMS Memoir *Locally Finite, Planar Edge-transitive Graphs* in 1997 also with Jack Graver [3], and *Passage to Abstract Mathematics* in 2011 with Jeffrey Meyer [14].



Beyond academia, Mark spent many years playing oboe and English horn until 2006, when due to the effect of medical difficulty he was required to take up trombone. He is an avid outdoorsman, having been a hiker, camper, canoeist, and kayaker for many years, as well as a swimmer and cyclist. For many years, Mark and Jack Graver sponsored a weekend camping trip for graduate students to the Adirondack mountains of New York, and he still enjoys such adventures. In 2012 Mark retired from Syracuse University, and is now an Emeritus Professor of Mathematics. His mathematical contributions have not retired, however, and he continues to work and publish with several prior coauthors.

Stephen J. Graves

The University of Texas at Tyler

References

- [1] R. Frucht, J. E. Graver and M. E. Watkins, The groups of the generalized Petersen graphs, *Proc. Cambridge Philos. Soc.* **70** (1971), 211–218.
- [2] J. E. Graver and M. E. Watkins, *Combinatorics with Emphasis on the Theory of Graphs*, volume 54 of *Graduate Texts in Mathematics*, Springer-Verlag, New York-Berlin, 1977.
- [3] J. E. Graver and M. E. Watkins, Locally finite, planar, edge-transitive graphs, *Mem. Amer. Math. Soc.* **126** (1997), doi:10.1090/memo/0601.
- [4] S. Graves, T. Pisanski and M. E. Watkins, Growth of edge-homogeneous tessellations, *SIAM J. Discrete Math.* **23** (2008/09), 1–18, doi:10.1137/070707026.
- [5] W. Imrich and M. E. Watkins, On automorphism groups of Cayley graphs, *Period. Math. Hungar.* **7** (1976), 243–258, doi:10.1007/bf02017943.
- [6] H. A. Jung and M. E. Watkins, On the structure of infinite vertex-transitive graphs, *Discrete Math.* **18** (1977), 45–53, doi:10.1016/0012-365x(77)90005-x.
- [7] H. A. Jung and M. E. Watkins, Fragments and automorphisms of infinite graphs, *European J. Combin.* **5** (1984), 149–162, doi:10.1016/s0195-6698(84)80029-3.
- [8] D. M. Mesner and M. E. Watkins, Some theorems about n -vertex connected graphs, *J. Math. Mech.* **16** (1966), 321–326.
- [9] L. A. Nowitz and M. E. Watkins, Graphical regular representations of non-abelian groups, I, *Canad. J. Math.* **24** (1972), 993–1008, doi:10.4153/cjm-1972-101-5.
- [10] L. A. Nowitz and M. E. Watkins, Graphical regular representations of non-abelian groups, II, *Canad. J. Math.* **24** (1972), 1009–1018, doi:10.4153/cjm-1972-102-3.
- [11] M. E. Watkins, *A Characterization of the Planar Geodetic Graph and Some Geodetic Properties of Non-Planar Graphs*, Ph.D. thesis, 1964.
- [12] M. E. Watkins, A theorem on Tait colorings with an application to the generalized Petersen graphs, *J. Combinatorial Theory* **6** (1969), 152–164.
- [13] M. E. Watkins, Edge-transitive strips, *Discrete Math.* **95** (1991), 359–372, doi:10.1016/0012-365X(91)90347-5.
- [14] M. E. Watkins and J. L. Meyer, *Passage to Abstract Mathematics*, Addison-Wesley, 2011.
- [15] M. E. Watkins and L. A. Nowitz, On graphical regular representations of direct products of groups, *Monatsh. Math.* **76** (1972), 168–171, doi:10.1007/bf01298284.