

2021 Stanton Medal awarded to Gary Chartrand

Gary Chartrand has played a large part in popularizing graph theory. In particular, he has written eleven different text books (not counting editions) and three monographs, with various co-authors. These include books intended to introduce graph theory to various audiences, as well as several undergraduate texts on graph theory, discrete mathematics and mathematical proofs. He has also written more focused texts such as, for example, one on graph algorithms and applications, one on various topics in graph colorings and the classic *Graphs & Digraphs*.

Gary is also a prolific researcher: he has authored over 300 papers with a large number of co-authors and pioneered several research areas. Areas of most research interest are graph colorings and distance in graphs. Gary is also known for his pioneering work. For example, a very early result of his with Kronk and Wall shows that the vertices of a planar graph can be coloured with three colours in such a way that every color induces a forest. While this is not hard to show, it served as a precursor to generalized colorings of graphs, an area which has since prospered. He, together with Frank Harary, coined the term “outerplanar” - a class of graphs that has been widely studied. His other research interests include Ramsey-type questions, highly irregular graphs, dominating sets, convexity, and measures of distance between graphs. A pet project of his has been to characterize the tuples that can be achieved by the set of parameters under investigation: this has clarified the relationship among multiple parameters. He is also an exceptionally gifted writer. His clear, precise and concise style makes the most complicated proofs accessible to both the graduate student and the experienced mathematician.

At the same time, Gary has provided significant service to this community. He co-founded the *Journal of Graph Theory* and served as managing editor for eight years, organized multiple conferences, served on editorial boards and as Vice-President of the ICA. Gary has also had a profound impact on many people. These include his 22 doctoral students who subsequently pursued careers at universities and colleges across North America. He has generously given of his time to mentor and guide both students, new faculty at Western Michigan University and visiting mathematicians. Despite his many accomplishments, he remains an extremely humble man, willing to work with mathematicians of the calibre of Paul Erdős, Ron Graham, Fan Chung and the like, and yet equally willing to work with young graduate students by exposing them to research in graph theory.