Topics in Chromatic Graph Theory

Chromatic graph theory is a thriving area that uses various ideas of 'colouring' (of vertices, edges, etc.) to explore aspects of graph theory. It has links with other areas of mathematics, including topology, algebra and geometry, and is increasingly used in such areas as computer networks, where colouring algorithms form an important feature.

While other books cover portions of the material, no other title has such a wide scope as this one, in which acknowledged international experts in the field provide a broad survey of the subject. All 15 chapters have been carefully edited, with uniform notation and terminology applied throughout. Bjarne Toft (Odense, Denmark), widely recognized for his substantial contributions to the area, acted as academic consultant.

The book serves as a valuable reference for researchers and graduate students in graph theory and combinatorics and as a useful introduction to the topic for mathematicians in related fields.

LOWELL W. BEINEKE is Schrey Professor of Mathematics at Indiana University–Purdue University Fort Wayne (IPFW), where he has worked since receiving his Ph.D. from the University of Michigan under the guidance of Frank Harary. His graph theory interests include topological graph theory, line graphs, tournaments, decompositions and vulnerability. He has published over 100 papers in graph theory and has served as editor of the *College Mathematics Journal*. With Robin Wilson he has co-edited five books in addition to the three earlier volumes in this series. Recent honours include an award instituted in his name by the College of Arts and Sciences at IPFW and a Certificate of Meritorious Service from the Mathematical Association of America.

ROBIN J. WILSON is Emeritus Professor of Pure Mathematics at the Open University, UK, and Emeritus Professor of Geometry at Gresham College, London. After graduating from Oxford, he received his Ph.D. in number theory from the University of Pennsylvania. He has written and co-edited many books on graph theory and the history of mathematics, including *Introduction to Graph Theory, Four Colors Suffice* and *Combinatorics: Ancient & Modern*. His combinatorial research interests formerly included graph colourings and now focus on the history of combinatorics. An enthusiastic popularizer of mathematics, he has won two awards for his expository writing from the Mathematical Association of America.

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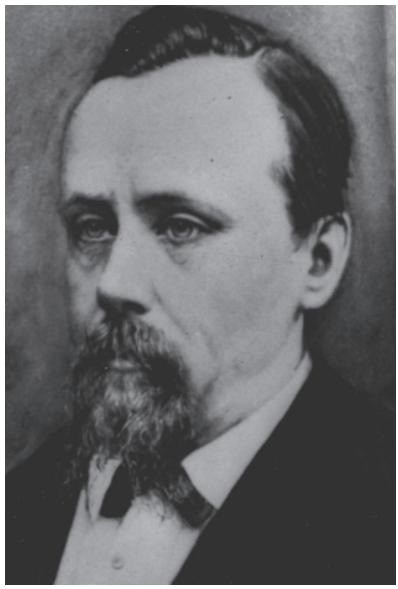
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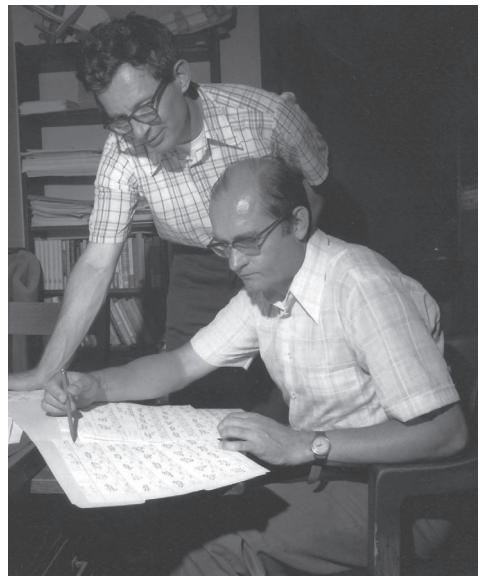
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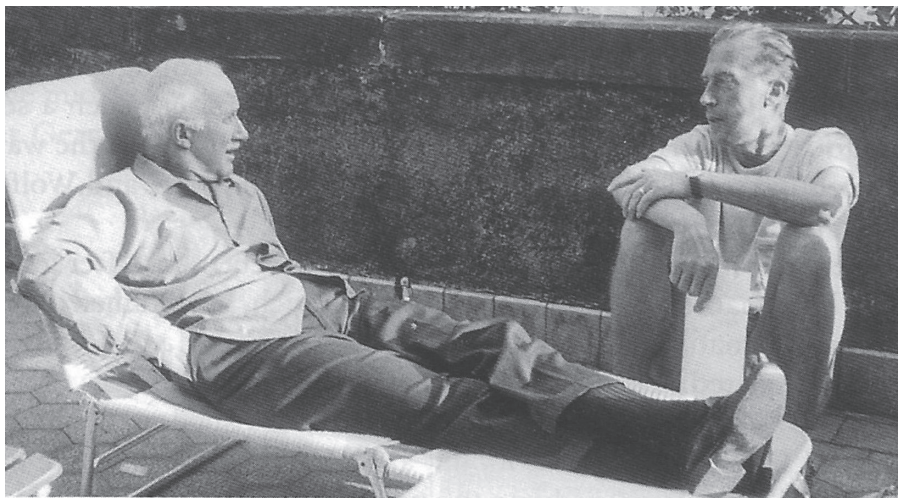
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Above: Francis Guthrie, who proposed the four-colour problem, and Kenneth Appel and Wolfgang Haken, who solved it. *Below*: Gerhard Ringel (right) and Ted Youngs, who solved the Heawood conjecture. (Courtesy of Robin Wilson.)

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