GUEST EDITOR'S INTRODUCTION

Special Issue Dedicated to Henry Crapo

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This issue of Advances in Applied Mathematics is dedicated to Henry Crapo, now that he is well into his sixth decade. Henry's domain of predilection is combinatorial geometry, a subject which he has investigated from many angles.

His early work, under the influence of Gian-Carlo Rota and Bill Tutte, is centered on Galois connections and the Möbius function on lattices, and on the development of a lattice theoretic approach to matroids, with their Tutte polynomials.

A search for applications of this mathematics led to an enlargement of horizons in 1973–1984, when he founded with Janos Baracs and Walter Whiteley the research group in Structural Topology, and turned to geometric problems arising in architecture and structural engineering. This story is told, in Henry's characteristically honest fashion, in the article “Structural Topology, or the fine art of rediscovery” [1].

In recent years, he has concentrated mainly on invariant-theoretic aspects of synthetic projective geometry, with a glance at convexity in Coxeter groups, and at self-crossing curves (lacets) on 2-manifolds.

Typically, Henry's role has been to bring to light the lattice-theoretic, projective geometric, and homological aspects of the subjects he has tackled. Traces of this influence can be seen in the articles here collected, articles prepared for this occasion by colleagues who have exchanged ideas with Henry over the years, and whose participation in the present volume is much appreciated.

Henry has held teaching and research positions at the University of Waterloo, Université de Montréal, INRIA Rocquencourt, and for shorter periods at the Massachusetts Institute of Technology, Northeastern University, Memorial University of Newfoundland, Université du Québec à Montréal, and at the Université du Maine (France). David Mowat, Alan Cheung, and Tiong Seng Tay were his graduate students while at Waterloo. He is currently chercheur at the Centre d’Analyse de Mathématique...
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