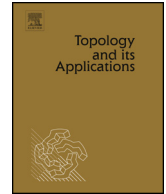




Contents lists available at ScienceDirect

Topology and its Applications

www.elsevier.com/locate/topol


Editorial

Guest editorial (preface) for the special issue in honor of Alan Dow



This special issue of *Topology and Its Applications* is dedicated to the mathematics of Alan Dow. The impetus for this special issue came from a meeting organized at Cornell University in December of 2015 to mark Alan's 60th birthday. The event included a walk around the campus lake escorted by a Scottish highland piper hired by Alan's family for the occasion. This issue includes many papers presented at that conference, but is not a proceedings of that conference and includes several papers by people who did not attend the meeting.

What is the mathematics of Alan Dow? A good place to start in answering this question would be the survey article by van Mill and Hart. A reader of this survey will learn that a large part of Alan's interests focus on the Čech–Stone compactification of the integers, as well as compactifications of other spaces. So it is to be expected that this volume contains a number of articles on the Čech–Stone compactification, articles that range from those by Hindman and Strauss or Blass on the combinatorial aspects of spaces of ultrafilters or particular ultrafilters, to model theoretically motivated studies such as the paper by Malliaris and Shelah on the lower cofinality spectrum of ultrafilters.

Another essential aspect of “the mathematics of Alan Dow” comes from his interest in the more abstract set theoretic topology, in addition to the study of the properties of some particular space, such as $\beta\mathbb{N}$. As befitting an issue of *Topology and Its Applications*, this special issue includes a wide range of articles that reflect this side of Alan's mathematical interests. The papers of van Mill, Tall, Junilla and Nyikos, Arhangel'skii, Chase and Gruenhage, Comfort and Remus all fall into this category.

It is a testament to the depth and significance of his work, that Alan's admirers range well beyond the areas with which he has become associated. A criticism one might make of this special issue is that it does not contain any articles on functional analysis, an area in which Alan's work has had considerable influence. Nevertheless, it does contain articles on Ramsey theory, by Dobrinen, the combinatorics of the uncountable, by Kojman, and classical analysis, by Burke. While none of these topics would be first to come to mind when discussing the mathematics of Alan Dow, the chain of connections from his work to them is not very long.

Our hope is that this collection of articles provides a fairly accurate answer to the question: What is the mathematics of Alan Dow? But the answer provided here also answers the question: What does a distinguished career in mathematics look like? In Alan's case, his is a career with roots in the study of $\beta\mathbb{N}$ and set theoretic topology but, because of the depth of his insights, with an influence that extends much farther.

We would like to finish by saying that this volume would not have been possible without the generous contributions made by the authors and the excellent work of the referees.

Guest Editors
Michael Hrušák
Justin Tatch Moore
Juris Steprāns