



## Preface

## Special issue in honor of the 60th birthday of Amihood Amir



We are honored and delighted to serve as guest editors for this Festschrift issue in honor of Amihood Amir's 60th birthday. Amir's high research standards and outstanding contributions to the algorithms and data structures community are celebrated in this special issue.

This volume consists of seventeen papers, written by Amir's friends, colleagues and students. All papers have been reviewed according to the standards and procedures that TCS applies to its normal submissions.

As Amir's students we remain deeply indebted to him for his inspirational qualities as a supervisor, his deep care for his students and for having shared with us his insights, stories and his original thoughts on diverse topics.

Amihood Amir received his Ph.D. in Computer Science from Bar-Ilan University in 1983. From 1983 to 1985 he was a research fellow at MIT and from 1984–1998 a faculty member at Tufts, University of Maryland and Georgia Institute of Technology, where he was also a research fellow from 1998–2007. Since 2007 he is a research fellow at John Hopkins University.

In 1996 Amir joined the department of Mathematics and Computer Science at Bar-Ilan University, where he was among the founders of the independent Computer Science department in 2001 and served as its chair (2002–2007). He was dean of Exact Sciences at Bar-Ilan from 2008–2010. Over the years Amir advised 22 Ph.D. students and numerous M.Sc. and postdoctoral students.

Amir coauthored approximately 150 peer-reviewed scientific papers. His research has been funded by most of the major Israeli funding agencies, and by bi-national grants of Israel–US, Israel–Italy, Israel–Korea, Israel–UK, Israel–Finland, Israel–France. He has also been PI or co-PI 10 times for US National Science Foundation grants. He serves on the Information and Computation editorial board and has served on numerous program committees, including STOC, CPM, SPIRE, LATIN, ESA, WABI and LATA. He co-chaired the Conference for Pattern Matching in 2001 and 2010 and the Symposium on String Pro-

cessing and Information Retrieval in 2008. Amir is one of the founders of the Israel Stringology Workshop. He was invited to be the keynote speaker in WSP 1997, CompBioNets 2004, PSC 2004, CPM 2006, AWOCA 2008, and SPIRE 2012.

Amir's primary research is on algorithms and data structures of strings. His seminal work has contributed to numerous major directions in the field, including two-dimensional matching, compressed matching, scaled and functional matching, approximate indexing, approximate periodicity, and the rearrangement model. His research has also introduced and strengthened many of the foundational methods of the field, such as convolutions, dueling, orthogonal range searching and sophisticated uses of error-correcting codes, communication complexity and polynomial system solving. It is hard to imagine the field without Ami's contributions.

Beyond all his technical achievements, Ami (as he is known to all) is a source of inspiration to many others. He infuses ideas through humor and storytelling, which are legendary in his classes. He cares deeply for those around him, especially for his students.

The Jerusalem Talmud tells the following story:

רבי אבהו נחת לטבריה. חמוניה תלמידיו דר' יוחנן אפוי נהירין. אמרון קומי ר' יוחנן אשכח ר' אבהו סימה. אמר לון למה. אמרין ליה אפוי נהירין. אמר לון דילמא אוריתא חדתא שמעתה. סליק לגביה א"ל מאי אוריתא חדתא שמעת. א"ל תוספתא עתיקתא וקרא עליו חכמת אדם תאיר פניו.

(in free translation:)

Rabbi Abahu went to Tiberius. The students of Rabbi Yochanan saw that his face was shining, and said to Rabbi Yochanan: "Rabbi Abahu found a treasure". Rabbi Yochanan asked: "why do you say so?" The students replied: "since his face is shining". Rabbi Yochanan said: "perhaps he learned something new." Rabbi Yochanan approached Rabbi Abahu and asked him: "What new thing did you learn", to which Rabbi Abahu replied "I learned of some ancient (Torah) wisdom". And, Rabbi Yochanan called upon him the verse "a man's wisdom will make his face shine" (Ecclesiastes 8:1).

Ami's face shines, indeed glows, with wisdom and the love thereof. And there is nothing that makes him happier than a new discovery, or some old wisdom. May he, and we, be blessed with many more years of this shining star.

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