

# Preface

A legend says that Jack Edmonds shouted “Eureka – you shrink!” when he found a good characterization for matching (and the matching algorithm) in 1963, the day before his talk at a summer workshop at RAND Corporation with celebrities like George Dantzig, Ralph Gomory, and Alan Hoffman in the audience. During Aussois 2001, Jack confirmed: “Eureka – you shrink!” is really true, except that instead of ‘Eureka’ it maybe was some less dignified word.”

Aussois 2001 was the fifth in an annual series of workshops on combinatorial optimization that are alternately organized by Thomas Liebling, Denis Naddef, and Laurence Wolsey – the initiators of this series – in even years and the editors of this book in odd years (except 1997).

We decided to dedicate Aussois 2001 to Jack Edmonds in appreciation of his groundbreaking work that laid the foundations of much of what combinatorial optimizers have done in the last 35 years. Luckily, Jack is a regular participant of the Aussois workshops and, as ever, he cares a lot for young combinatorial optimizers who traditionally play a major rôle in the Aussois series.

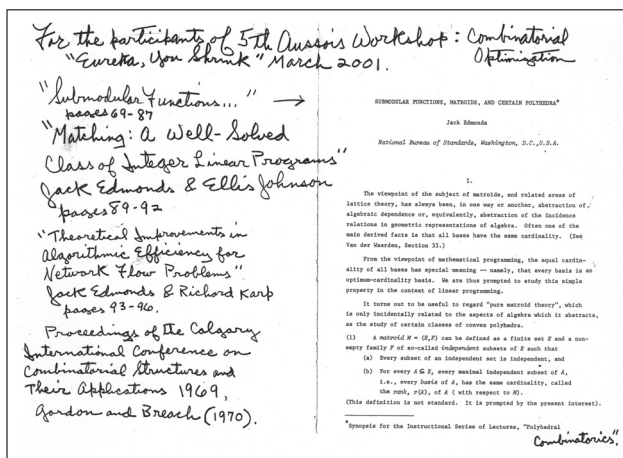


Fig. 1. Handout for the Aussois 2001 participants

Highlights of Aussois 2001 included a special session entitled “Eureka – you shrink!” in honor of Jack and a special lecture by Jack on “Submodular Functions, Matroids, and Certain Polyhedra” that closed the workshop.

In this book, we give an account of the “Eureka – you shrink!” session as well as reprints of three hardly accessible papers that Jack gave as a handout to the Aussois 2001 participants and that were originally published in the *Proceedings of the Calgary International Conference on Combinatorial Structures and Their Applications 1969*, Gordon and Breach (1970) – newly typeset by the editors and reprinted by permission.

We are happy that 13 speakers of Aussois 2001 agreed to dedicate revisions of the papers they presented during the workshop to Jack Edmonds. Their contributions have made this book possible.

As organizers and editors we would like to thank Jack Edmonds, the authors, Miguel Anjos for transcribing Bill Pulleyblank’s speech, and, in particular, Bill Pulleyblank for support that went well beyond the contribution you will find in the “Eureka – you shrink!” chapter!

When Jack gave an interview for the Kitchener-Waterloo Record of May 30, 1985, on the occasion of the award of the John von Neumann Theory Prize to him a month earlier, he said: “I hit it lucky by putting a poetic title on a paper that was mathematically a hit,” referring to his seminal paper entitled “Paths, Trees, and Flowers.” With the help of Matthias Elf, we found an artist whose proposal for a cover illustration immediately convinced all three of us: People who know Jack’s work will have the right association without reading the words. A special “Thank You!” to Thorsten Felden who contributed his own hommage à Jack!

January 2003

Cologne  
Heidelberg  
Rome

Michael Jünger  
Gerhard Reinelt  
Giovanni Rinaldi

# Participants

Aardal, Karen (University of Utrecht)  
Ahr, Dino (University of Heidelberg)  
Amaldi, Edoardo (Politecnico di Milano)  
Békési, Jozsef (University of Szeged)  
Bixby, Robert E. (Rice University, Houston)  
Buchheim, Christoph (University of Cologne)  
Cameron, Kathie (Wilfried Laurier University, Waterloo)  
Caprara, Alberto (University of Bologna)  
Edmonds, Jack (University of Waterloo)  
Elf, Matthias (University of Cologne)  
Euler, Reinhardt (University of Brest)  
Evans, Lisa (Georgia Institute of Technology, Atlanta)  
Farias, Ismael de (University at Buffalo)  
Feremans, Corinne (University of Brussels)  
Fischetti, Matteo (University of Padova)  
Fleischer, Lisa (Columbia University, New York)  
Fortz, Bernard (University of Brussels)  
Galambos, Gábor (University of Szeged)  
Gruber, Gerald (Carinthia Tech Institute, Villach)  
Hemmecke, Raymond (University of Duisburg)  
Johnson, Ellis (Georgia Institute of Technology, Atlanta)  
Jünger, Michael (University of Cologne)  
Kaibel, Volker (University of Technology, Berlin)  
Labbé, Martine (University of Brussels)  
Lemaréchal, Claude (INRIA Rhône-Alpes)  
Letchford, Adam (Lancaster University)  
Liers, Frauke (University of Cologne)  
Lodi, Andrea (University of Bologna)  
Lübbecke, Marco (University of Braunschweig)  
Luzzi, Ivan (University of Padova)  
Maffioli, Francesco (Politecnico di Milano)  
Martin, Alexander (University of Technology, Darmstadt)  
Maurras, Jean François (Université de la Méditerranée, Marseille)  
Meurdesoif, Philippe (INRIA Rhône-Alpes)

## VIII Participants

Möhring, Rolf H. (University of Technology, Berlin)  
Monaci, Michele (University of Bologna)  
Mutzel, Petra (University of Technology, Vienna)  
Naddef, Denis (ENSIMAG, Montbonnot Saint Martin)  
Nemhauser, George (Georgia Institute of Technology, Atlanta)  
Nguyen, Viet Hung (Université de la Méditerranée, Marseille)  
Ortega, Francois (CORE, Louvain-la-Neuve)  
Oswald, Marcus (University of Heidelberg)  
Percan, Merijam (University of Cologne)  
Perregard, Michael (Carnegie Mellon University, Pittsburgh)  
Pulleyblank, William (IBM Yorktown Heights)  
Reinelt, Gerhard (University of Heidelberg)  
Remshagen, Anja (University of Texas at Dallas)  
Rendl, Franz (University of Klagenfurt)  
Richard, Jean Philippe (Georgia Institute of Technology, Atlanta)  
Riis, Morton (University of Aarhus)  
Rinaldi, Giovanni (IASI-CNR Rome)  
Rote, Günter (Free University of Berlin)  
Salazar-González, Juan-José (University of La Laguna, Tenerife)  
Schultz, Rüdiger (University of Duisburg)  
Skutella, Martin (University of Technology, Berlin)  
Spille, Bianca (EPFL-DMA Lausanne)  
Stork, Frederik (University of Technology, Berlin)  
Toth, Paolo (University of Bologna)  
Uetz, Marc (University of Technology, Berlin)  
Vandenbusse, Dieter (Georgia Institute of Technology, Atlanta)  
Verweij, Bram (Georgia Institute of Technology, Atlanta)  
Weismantel, Robert (University of Magdeburg)  
Wenger, Klaus (University of Heidelberg)  
Woeginger, Gerhard (University of Twente)  
Wolsey, Laurence (CORE, Louvain-la-Neuve)  
Zimmermann, Uwe (University of Technology, Braunschweig)



<http://www.springer.com/978-3-540-00580-3>

Combinatorial Optimization -- Eureka, You Shrink!  
Papers Dedicated to Jack Edmonds. 5th International  
Workshop, Aussois, France, March 5-9, 2001, Revised  
Papers

Jünger, M.; Reinelt, G.; Rinaldi, G. (Eds.)

2003, X, 214 p., Softcover

ISBN: 978-3-540-00580-3