

# 4th International Conference on Variable Neighborhood Search (ICVNS'16)

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## Abstract

In this issue we present a peer-reviewed selection of short papers that were accepted for presentation in the 4th International Conference on Variable Neighborhood Search (ICVNS'16) which was held in Málaga, Spain, during October 3-5, 2016. This conference is devoted to the Variable Neighborhood Search metaheuristic which was originally proposed by Nenad Mladenović and Pierre Hansen. This methodology is currently consolidated as a general framework to solve hard optimization problems and it is widely used all around the world.

*Keywords:* Variable Neighborhood Search, Metaheuristics, Discrete Optimization, Nonlinear optimization.

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## 1 Introduction

The 4th International Conference on Variable Neighborhood Search is devoted to the Variable Neighborhood Search (VNS) metaheuristic which is currently

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consolidated as a general framework to solve hard optimization problems. This methodology is based on systematic changes in the neighborhood structure within the search. VNS has been successfully used for solving various combinatorial and global optimization problems [1]. The main goal of ICVNS'16 is to provide a stimulating environment in which researchers coming from various scientific fields can share and discuss their knowledge, expertise and ideas related to the VNS Metaheuristic and its applications.

Topics of interest for ICVNS'16 are: methodological or experimental analysis of VNS, new deterministic and stochastic variants of VNS, VNS for nonlinear optimization, matheuristics with VNS, VNS Decomposition search, Variable Formulation space search, Parallel VNS, and VNS hybrids. The conference program included 59 talks across 14 contributed sessions during the three days of the conference, and it was attended by 60 participants.

The General Chair was Nenad Mladenović, (Serbia), while Pierre Hansen, (Canada) was the Honorary Chair of the conference. Moreover, the conference was chaired by Eduardo G. Pardo, (Spain) and Abraham Duarte, (Spain). Also, the following plenary talks were given by invited speakers at the conference:

- Emilio Carrizosa, Universidad de Sevilla, (Spain): “Addressing Model Selection with VNS”.
- José Andrés Moreno, Universidad de La Laguna, (Spain): “The role of VNS in Logistics Optimization”.
- Enrique Alba, Universidad de Málaga, (Spain): “Parallel Experiences in Solving Complex Problems”.

This was the fourth edition of the International Conference on Variable Neighborhood Search. The previous edition of the conference (VNS'14) was held during October 8-11, 2014, in Djerba, Tunisia [2]. The second edition, the EURO Mini Conference (MEC XXVIII) on Variable Neighborhood Search, was held during October 4-7, 2012, in Herceg Novi, Montenegro [3]. Finally, the first EURO Mini Conference (MEC XVIII) on VNS, was held during November 23-25, 2005, in the city of Puerto de La Cruz, in the island of Tenerife, Spain.

## 2 Organizers and Sponsors

The conference was organized by the Group for Research in Algorithms For Optimization (GRAFO), from Universidad Rey Juan Carlos (Spain). Sponsors of ICVNS'16 were the Universidad Rey Juan Carlos, the EURO working

group on Metaheuristics (EU/ME), the Association of European Operational Research Societies (EURO), and the Group for Research in Decision Analysis (GERAD) in Montreal (Canada).

### 3 Program Committee

The Program Committee of the conference consisted of the following members:

Daniel Aloise (Canada)	Martine Labbé (Belgium)
Antonio Alonso-Ayuso (Spain)	Leo Liberti (France)
Ada Alvarez (Mexico)	Vittorio Maniezzo (Italy)
John Beasley (United Kingdom)	Anna Martínez-Gavara (Spain)
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Emilio Carrizosa (Spain)	José A. Moreno-Pérez (Spain)
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Karl Doerner (Austria)	Dionisio Pérez-Brito (Spain)
Abraham Duarte (Spain)	Justo Puerto (Spain)
Abdelkarim Elloumi (Tunisia)	Günther Raidl (Austria)
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Matteo Fischetti (Italy)	Jesús Sánchez-Oro (Spain)
Michel Gendreau (Canada)	Marc Sevaux (France)
Jose Luis González-Velarde (Mexico)	Patrick Siarry (France)
Saïd Hanafi (France)	Angelo Sifaleras (Greece)

Pierre Hansen (Canada)	Kenneth Sörensen (Belgium)
Richard Hartl (Austria)	Thomas Stützle (Germany)
Bassem Jarboui (Tunisia)	Raca Todosijević (Serbia)
Hichem Kamoun (Tunisia)	Dragan Urošević (Serbia)
Yuri Kochetov (Russia)	Qihong Zhao (China)
Vera Kovačević-Vujčić (Serbia)	

## 4 Organizing Committee

The Organizing Committee members of the conference are as follows:

Abraham Duarte (Spain)	Eduardo G. Pardo (Spain)
Jesús Sánchez-Oro (Spain)	Borja Menéndez (Spain)
José Manuel Colmenar (Spain)	

## 5 Acknowledgments

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