

INTRODUCTION

This volume represents a collection of articles that were solicited from the participants at the Special Session on Homotopy Algebras at the joint RSME-AMS meeting in Sevilla, June 2003. Several papers by authors who were unable to attend are also included.

The articles reflect a variety of points of view that relate to algebraic structures up to homotopy, such as A_∞ algebras, L_∞ algebras, A_∞ Hopf algebras, and Batalin-Vilkovisky algebras. Homotopy invariance properties, homological perturbation theory, as well as some applications to mathematical physics are among the additional topics that are included here.

All involved in the conference express their gratitude to Pedro Real and his research group at the University of Sevilla for their gracious hospitality.

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