

Preface

Every 2 years, the MOQESM conference takes place in Brest (France), in the framework of the SeaTech Week Conference. MOQESM is the meeting point of specialists from two fields, namely coastal hydrography and marine robotics. This is a unique opportunity for industrials and academic scientists to present their respective works to each other. It often leads to very rich scientific exchanges during and after the presentations. Indeed, many hydrographic applications can be performed by AUVs (Autonomous Underwater Vehicles), and, reciprocally, many navigation methods can benefit from the advances in hydrography for localization purpose, target identification, or path planning. The conference is also open to more general marine robotic presentations in fields like design and operation. This book gives to the reader an overview of some of the topics addressed during the MOQESM 16 Conference (October 11–12, 2016). This book is more than the proceedings of the conference, as it includes also original papers that have not been presented during MOQESM, but have been selected by the editors. The topics covered by this book include the following:

1. Acoustics: sonar tracks registration
2. Localization and navigation: simultaneous localization and mapping, range only localization, interval analysis for trajectory estimation, and electric sense for navigation
3. Multi-vehicles methods: securing an area with AUVs and performing adaptive sampling with autonomous sailing boats
4. Design: optimization of propulsion systems, and design and control of an underwater vehicle.

If this is not already the case, we hope that this book will convince you of the interest of bringing coastal hydrography and marine robotics together and we hope that it will make you as enthusiastic as we are to participate to next MOQESM editions.

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