

## Editorial

The exploitation of present and future large scale surveys, such as Gaia, PanStarrs, 2MASS, and many others, will lead to new perspectives on the formation of our Galaxy. Deriving theoretical understanding about galaxy formation and evolution from these observations is however a tremendous challenge. It involves modelling of many different physical processes, including star formation, chemical evolution and dynamics. The resolution of this puzzle requires exchange between astrophysics experts in each of these physical aspects. The topics of this volume span a wide range from the Halo of the Milky Way, the thin and the thick disc, the galactic Bulge, star formation and interstellar medium and also cover large scale and/or dedicated observations of our Galaxy as well as different approaches of Galaxy modelling. It aims at giving a fresh view on the formation and evolution of our Galaxy reinforcing the usefulness of the Milky Way as a testbed for understanding galaxy formation at cosmological scale.

This volume offers contributions given by world experts in this field during the international conference “Assembling the Puzzle of the Milky Way” held in April 2011 in the French Alps. The latest results – observational, theoretical, and numerical – are presented and discussed. Therefore, we trust this book is a valuable reference for researchers and students and is a constructive view of the Milky Way properties and up-to-date scenarios of its formation before the Gaia launch.

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