

# Special Issue

## From Dark Haloes to Visible Galaxies

### Message from the Guest Editors

The aim of this Special Issue is to give a broad and organic review, in this very special stage where models are being adapted to fully exploit forthcoming percent accuracy in clustering and lensing measurements, of the modeling of dark matter haloes and its interaction with cosmology. The first part will focus on reviewing recent results from numerical simulations, approximate methods and perturbation theory about the characterization of halo properties as a function of mass, redshift and local environment. We will discuss why haloes with different mass are characterized by a different bias parameter, with respect to the underlying matter density field, and how the bias varies for same mass systems as a function of particular halo properties. The second part will focus on how galaxies populate haloes, and how galaxy formation changes halo properties with respect to the widely used collisionless N-body simulations. We will summarize the developments of cosmological hydrodynamical simulations, semi-analytical models and Halo Occupation Distribution techniques.

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### Guest Editors

Dr. Emanuele Castorina

Dr. Carlo Giocoli

Dr. Pierluigi Monaco

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### Deadline for manuscript submissions

closed (31 July 2019)



## Galaxies

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## About the Journal

### Message from the Editorial Board

*Galaxies* provides an advanced forum for studies related to astronomy, astrophysics, and cosmology, including all of their subfields. Different formats, such as specialized research articles, reviews, communications and technical notes are welcomed. Manuscripts containing original and creative research proposals and ideas are especially appreciated.

We encourage scientists to publish their astronomical observations and theoretical results in as much detail as possible. There is no restriction on the paper length and full experimental and methodological details, as applicable, should be provided. All papers will be peer reviewed promptly. On behalf of the distinguished members of the editorial board, I extend my welcome to all researchers working on these subjects to contribute to *Galaxies*.

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### Editors-in-Chief

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