PhD position in Numerical Galaxy Formation at MPIA Heidelberg - Deadline July 12, 2019

The Galaxy and Cosmology Theory Group at the Max Planck Institute for Astronomy in Heidelberg (http://www.mpia.de/en) invites applications for a PhD position in numerical galaxy formation to work with Dr. Annalisa Pillepich on the chemodynamics, star formation, and baryonic cycle in Milky Way-like galaxies.

The successful candidate will work on numerical models of Milky Way-like galaxies in the full cosmological context, via the analysis, development, and execution of magneto-hydrodynamical cosmological galaxy simulations at supercomputers.

The starting point will be the galaxy formation models developed within the IllustrisTNG project: http://www.tng-project.org/. The successful candidate will contrast selected outcomes of simulated Milky Way-like galaxies to currently available observational results obtained on our Galaxy with surveys like Gaia, APOGEE, GALAH, etc; s/he will extract interpretation pathways to observational findings and identify possible limitations of the current models; therefore, s/he will contribute to the development of new numerical routines for the star formation, chemical enrichment, or feedback in cosmological galaxy simulations.

The work will be conducted in collaboration with the PhD mentor and the team postdocs. The successful candidate will join the broader research efforts that are currently underway across the Heidelberg astronomical community (MPIA, Heidelberg University and the Landessternwarte) and that focus on the Milky Way system under the SFB881 funding scheme: http://sfb881.zah.uni-heidelberg.de/.

The position is available for up to 4 years of funding (2/3 of the German TVL E13 pay scale) and could start on short notice (but no later than December 2019). The successful candidate will automatically join the International Max Planck Research School for Astronomy and Cosmic Physics at the University of Heidelberg.

We seek excellent students with strong background in physics and astronomy. The applicant should hold, or expect to obtain, a Masters' degree or equivalent in physics or astronomy and should be able to demonstrate advanced language skills in English (written and spoken). Experience with numerical methods, programming, and numerical data mining would be a strong advantage.

Applications should be written in English and should include a detailed CV, copies of academic certificates and grade transcripts, a 1-page statement of research interests (indicating their interest in this project), and two letters of reference. All material should be sent to the email address listed below. For additional questions please also use the same email address.

The deadline is Friday July 12, 2019 (but the position will remain open until filled).

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Application Deadline: July 12, 2019
Email: pillepich@mpia.de

Attention to:
Dr. Annalisa Pillepich
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D-69117 Heidelberg
Germany