europass

Antonio Ragagnin

Data di nascita: 05/11/1988 | **Nazionalità:** Italiana | **Numero di telefono:** (+39) 3713366550 (Cellulare) |

Indirizzo e-mail: antonio.ragagnin@inaf.it

ESPERIENZA LAVORATIVA

07/2007 – 12/2007 Pordenone, Italia
SYS ADMIN JUNIOR CIMOLAI SPA

Junior position in administration of the ICT network (Windows-server based).
01/2008 – 07/2008 Conegliano, Italia
SVILUPPATORE DI SITI WEB MANIFATTURA WEB

programming in PHP and help developing the content management system (CMS) used by the company to make web sites.
12/2013 – 08/2014 Monfalcone, Italia
SVILUPPATORE WEB ZCONSULTANCIES SRL

Developing a webapp on stock exchange with Java, Postgres SQL, and Spring framework
01/04/2019 – 31/03/2021 Trieste, Italia
RICERCATORE UNIVERSITARIO GIULIANO TAFFONI, INAF

Part of my post-doc was devoted to improving the performance of the n-body code Gadget3 (working with C, C++, OpenMP and MPI) in order to efficiently run cutting-edge high-resolution cosmological numerical simulation by improving the SN feedback scheme and wind particle scheme of the Dianoga simulations (zoom-in hydrodynamic cosmological simulations produced in Trieste, PIs S. Borgani, E. Rasia, K. Dolag).

I also analysed Magneticum (PI K. Dolag) simulations (using Python), and I studied the dependency from cosmological parameters of galaxy cluster masses and Navarro-Frank-White concentration. In particular, I also studied how parametrising the mass-concentration relation with cosmological parameters can impact the results of stacked weak-lensing analyses (Ragagnin+21a).
01/04/2021 – ATTUALE Bologna, Italia
RICERCATORE UNIVERSITARIO LAURO MOSCARDINI, DIFA, UNIBO

With respect to the discrepancy between observed and simulated galaxy-galaxy strong-lensing probabilities (GGSL) in cluster cores (see Meneghetti+20), I analysed the results of hydrodynamic cosmological zoom-in simulations (from the Dianoga suite) produced with different AGN energy feedback models, and studied how different schemes affect the substructure population, with focus on their GGSL probability, and their stellar and dark matter components, as presented in Ragagnin+22a.

I am also testing how alternative models of dark matter do affect substructures in galaxy clusters, with focus on their GGSL probability. In particular I am producing and analysing a set of hydrodynamic cosmological simulations, based on Dianoga initial conditions, that use some promising alternatives to cold-dark-matter, as the self-interacting dark matter (Ragagnin+23a in prep).

Within the Euclid collaboration I am writing a first-author paper on the comparison between galaxy clusters in observed and simulated data (from Magneticum simulations), with a particular focus on the covariance between weak lensing signals from clusters, X-ray properties, optical properties, projection effects, and accretion histories, see Ragagnin+23b, in prep.

ISTRUZIONE E FORMAZIONE

2008 – 2011
LAUREA DI PRIMO LIVELLO IN FISICA (VOTO 110) Università degli studi di Trieste

2011 – 2013
LAUREA MAGISTRALE IN FISICA TEORICA (110 E LODE) Università degli studi di Trieste

2014 – 2018
DOTTORATO IN ASTRONOMIA (CON LODE) Ludwig Maximilian University (LMU), Monaco di Baviera, Germania

My PhD program was part of the International Max Planck Research Schools (IMPRS) on Astrophysics and I mainly worked with galaxy clusters in hydrodynamic cosmological simulations. Part of my project was devoted to improve the performance of the code Gadget3 in order for it to scale and produce the largest Magneticum cosmological boxes to the full SuperMuc machine, and

Additionally,I analysed their results, with particular focus on the dark matter profiles of most of well-resolved Magneticum galaxy clusters, and studied the dark matter and galaxy evolution to understand the origin of fossil groups in simulations (see Ragagnin+19).

COMPETENZE DIGITALI

HPC | OpenACC | GPU | C | C++ | OpenMP | MPI | AnacondaPython

ULTERIORI INFORMAZIONI

CONFERENZE E SEMINARI

Talk at CLUSTER3 (Bologna, 2022)

Invited Speaker at National Astronomy Meeting 2022 (NAM2022) in Warwick, UK

Talk at Cosmology From Home 2022

Invited speaker at HydroSim Meetings 2014 (Trieste), 2016 (Trieste), 2018 (Munich), 2019 (Trieste), 2020 (Munich)

ADASS 2016, Trieste

Parallel Computing (ParCo) in Edimburg (2016), and Prague (2019) to present paper proceedings

ALTRI TITOLI

PI of CSCS Piz Daint 30 000 node hour GPU computing time

Co-I of various CINECA proposals

HPC-Europa3 2020 grants for a 1-month visit in Munich and 240k core-hours

Core-team member of Magneticum

PI of PLEIADI (INAF) 500000 corehour computing time

TEACHING ASSISTING

Attività Didattica Integrativa, Foundation of HPC , 2020/2021

Lab assistant, Laboratorio di programmazione avanzata per la fisica, 2019/2020

Lab assistant, Laboratorio di programmazione avanzata per la fisica, 2020/2021

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".

Le informazioni contenute nel presente "curriculum vitae et studiorum" sono rese sotto la personale responsabilità del sottoscritto, ai sensi degli articoli 46 e 47 del Decreto del Presidente della Repubblica 28

dicembre 2000, numero 445, e successive modifiche ed integrazioni, consapevole della responsabilità penale prevista dall'articolo 76 del medesimo Decreto per le ipotesi di falsità in atti e dichiarazioni mendaci.

Luogo e data:

Firma: