europass Curriculum vitae

PERSONAL INFORMATION

Antonio Ragagnin

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Date of birth 05/11/1988 | Nationality Italian

WORK EXPERIENCES

01/02/2024 – ongoing — Fixed term staff researcher at INAF-OAS

Work with Dr. Francesco Calura under on setting up intitial conditions and running a cosmological box with milky-way like haloes with a sub-parsec resolution up to $z = 2$.

01/08/2023 – 11/08/2023 — Visiting Dr. Klaus Dolag at LMU (Munich)

Performed accuracy analysis of the GPU porting for the gravity and hydrodynamics physics solvers in the OpenGadget3 code.

01/04/2023 – 31/01/2024 — Postdoc at INAF-OAS

Working with Dr. Massimo Meneghetti and Dr. Carlo Giocoli on the Euclid Mission project on planning, running, and analysing of zoom-in cosmological simulations for studies on gravitational lensing from substructures in galaxy clusters.

01/04/2022 – 31/04/2022 — Visiting LMU (Munich) with grants HPC-Europa3 (HPC17YMAKH)

01/04/2021 – 31/03/2023 — Postdoc at Università di Bologna

Work with Prof. Lauro Moscardini, Dr. Massimo Meneghetti and Dr. Carlo Giocoli on the impact of baryon physics in galaxy-galaxy strong lensing signal in the core of galaxy clusters.

I semester 2020/2021 — Lab assistant

Foundation of HPC class of High Performance Computing SISSA/ICTP master

I semester 2021/2022 — Lab assistant

Advanced lab. for programming in physics (Laboratorio di programmazione avanzata per la fisica) at Physics department of University of Trieste

01/04/2019 – 31/03/2021 — Postdoc at INAF-OATS

Work with Dr. Giuliano Taffoni on improving scalability of high-resolution zoom-in hydrodynamic simulations of galaxy clusters.

01/01/2019 – 31/03/2019 — Postdoc at Leibniz Supercomputing Centre (LRZ)

Performance testing of codes for hydrodynamic cosmological simulations on the new supercomputer (SuperMuc-NG) at LRZ (Leibniz Supercomputing Centre).

01/10/2014 – 31/12/2018 — PhD fellowship

Ph.D. program as part of the International Max Planck Research School (IMPRS) on Astrophysics, in collaboration between Ludwig-Maximilians-Universität (LMU), LRZ supercomputing center, and the Excellence Cluster Universe (https://www.universe-cluster.de/).

11/06/2018 – 16/06/2018

Visiting Dr. Claudio Gheller at CSCS (Switzerland)

Supervised intern Conradin Roffler (ETH Zurich) on the GPU porting of the cooling and stellar formation model in the Gadget3 code.

Other experiences

I worked from September 2007 to December 2007 as a junior system administrator for Sinterim Spa at Cimolai Spa, from February 2008 to August 2008 as a PHP programmer for Manifattura Web Srl, and from January 2014 to August 2014 as a Java programmer for ZConsultancies.

EDUCATION AND TRAINING

18/12/2018

PhD Title (cum laude)

Thesis “From the mass-concentration relation of haloes to GPUs and into the web: a guide on fully utilizing super computers for the largest, cosmological hydrodynamic simulations”, at University Ludwig-Maximilians-Universität (LMU) München.

Repository: https://edoc.ub.uni-muenchen.de/23521/

21/11/2013

Master degree in Theoretical Physics (Grade: 110/110 cum laude)

Università degli studi di Trieste

20/07/2011

Bachelor degree in Theoretical Physics (Grade: 110/110)

Università degli studi di Trieste

PERSONAL SKILLS

Mother tongue: Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	C1	C1	C2
Deutsch	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Digital Skills: Windows, Microsoft Office, Microsoft Excel, HTML, CSS, Javascript, Linux, HPC, C/C++, Python, MPI, OpenMP, OpenACC, P-Gadget, SUBFIND

CONFERENCES AND MEETINGS

28/06/2024	Talk on SIEGE simulations on "A lens on globular cluster nurseries", Sexten (Italy)
23/01/2024	Talk on my Euclid first author paper @ Euclid Cluster of Galaxies SWG meeting, Innsbruck
26/19/2023	Talk "Feedback and resolution do not improve the low lensing signal of simulated cluster cores " @ online Yale seminar "DM on small scales", PI Priyanka Natarajan
31/07/2023	Talk "Velocity dependent SIDM effects on galaxy cluster strong-lensing signals" @ Munich Observatory (USM)
19/06/2023 – 30/06/2023	Self-interacting dark matter meeting (Pollica) talk "Velocity dependent SIDM effects on galaxy cluster strong-lensing signals"
02/2023	Talk @ Euclid Galaxy Clusters SWG meeting in Bologna
02/2023	INAF-OAS colloquium seminar "Strong-lensed galaxies in simulated and observed galaxy clusters"

24/01/2023 – 26/01/2023	Zooming PRIN workshop “A golden era for strong gravitational lensing: new data, modelling and applications”, Milano
09/2023	Talk "Galaxies in the central regions of simulated galaxy clusters" @ CLUSTER3, Bologna
07/2022	Invited talk "Galaxies in the central regions of simulated galaxy clusters" @ RAS National Astronomy Meeting (NAM, University of Warwick, UK)
07/2022	Talk "Galaxies in the central regions of simulated galaxy clusters" @ Cosmology From Home
2020	NVIDIA virtual Hackaton @ CSC
2020	Invited talk "Bringing Zoom-In Initial Conditions of Cosmological Simulations on GPUs" @ OpenACC Summit (virtual)
01/2020	HydroSim meeting (hydrodynamic simulation meeting, Munich) @ Munich Observatory
2019	Talk "Gadget3 on GPUs with OpenACC" @ ParCo (Prague)
2018	Invited poster "Gadget3 (N-Body gravity + SPH) on GPUs" @ GPU Technology Conference (GTC, Munich)
2017	Invited poster "A web portal for large cosmological simulation data" @ EnviroInfo (Munich)
2017	EuroHack OpenACC workshop @ CSCS Lugano
2016	Poster "A multi node Barnes Hut solver on GPUs for Gadget3" @ Perspectives of GPU in science (Rome)
2016	Talk @ HydroSim workshop (Trieste)
2016	Talk "A web interface to federalize the outcome of large, cosmological, hydrodynamic simulations" @ Astronomical Data Analysis Software and Systems (ADASS, Trieste)
2015	Talk "Exploiting the Space Filling Curve Ordering of Particles in the Neighbour Search of Gadget3" @ International Conference on Parallel Computing (ParCo, Edinburgh)

REFEREE

2022	Referee for MNRAS
2022	Referee for Astronomy & Computing

COLLABORATIONS

Member of Euclid Consortium
Member of Euclid Clusters of Galaxies Science Working Group
Member of Observable-Mass relation Euclid key-project
Member of Dianoga simulations (PIs Klaus Dolag, Elena Rasia, Stefano Borgani)
Member of Magneticum (PI Klaus Dolag)
Member of Darkium on Self-Interacting Dark Matter (PI Moritz Fisher)
Member of OpenGadget3 developer team (PI Klaus Dolag)

COMPUTING RESOURCES

08/2024	PI EuroHPC regular (EHPC-REG-2024R01-029) of 84 000 node hours on Leonardo at CINECA
08/2023	PI CINECA Iscra C (IsCb1 openaccg)
08/2023	PI EuroHPC Benchmark Call (EHPC-BEN-2023B08-013) 3500 Leonardo Booster node hours
2023	PI PLEIADI Bologna project "SIDM vs CDM 2" 400 000 CPU hours
2022	Collaborator CINECA account LEAP 041 (PI Dr. Milena Valentini) 100 000 CPU hours
2023	Collaborator INAF computing time account INA23 C9B06 (PI Dr. Elena Rasia) 550 000 CPU hours
2022	PI PLEIADI Trieste project "SIDM vs CDM" 466 000 CPU hours
2022	Collaborator CINECA Iscra B account IsB24 HRCLUS (PI Dr. Luca Tornatore) 704 000 CPU hours
2021	Collaborator INAF computing time INA21 C8A63 (PI Dr. Tiago Castro) 480 000 CPU hours
2021	Collaborator CINECA Iscra B IsB22 ECOCLUS (PI Dr. Giuseppe Murante) 750 000 CPU hours
2020	Collaborator INAF computing time INA20 C7A68 (PI Dr. Elena Rasia) 400 000 CPU hours
2019	Collaborator CINECA Iscra B IsB18 SimClus (PI Prof. Stefano Borgani) 500 000 CPU hours
2017	Collaborator INAF computing time INA17 C5A46 (PI Prof. Stefano Borgani) 186 000 CPU hours

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
Data e Firma: