



DRIVING  
THE EXASCALE  
TRANSITION



# Women


in the eXascale era



# Women in the eXascale Era

A Campaign by MaX – Materials design at the eXascale

Celebrating the International Day of Women and Girls in Science  
11 February 2024



# Towards inclusive excellence in HPC

Despite decades of progress, women and girls remain significantly underrepresented in advanced scientific and technological fields, from materials science to high-performance computing (HPC) and computational modelling. This underrepresentation is not merely a question of fairness: it directly limits the scope and quality of scientific inquiry. Research consistently demonstrates that diverse teams produce more innovative solutions, ask deeper questions, and challenge assumptions that homogeneous groups may overlook.

At MaX, the European Centre of Excellence for materials design at the exascale, we recognise that scientific breakthroughs will not be achieved by computational power alone. They require vision, creativity, and the full participation of all talented scientists, regardless of gender.

To advance this goal, on February 11, 2024, we launched a social media campaign to give visibility to the women scientists involved in the MaX project. By highlighting their work, we aim to provide visible role models, challenge persistent stereotypes, and inspire the next generation of girls and young women to envision themselves as leaders in HPC and materials science.

# The results – what we achieved

Though the campaign is just one step in a much larger journey, it achieved meaningful outcomes.

It raised visibility: by using MaX social-media channels, we brought attention not only to the women scientists, but to materials modelling at the exascale.

It helped humanise science: rather than machines, we introduced real people, women with stories.

It offered inspiration: girls and young women wonder if a career in science, HPC or materials modelling is open to them. We pointed to role models within the MaX project.

It reinforced the message of inclusion and diversity: that excellence in HPC and materials simulation does not happen by chance, but by design. And part of that design is ensuring that all voices are heard.

It reinforced the message: the campaign tied into the broader efforts of European Centres of Excellence to promote gender equality in HPC.

# What we did - the campaign story

From 11 February 2024 onward, we ran a social-media campaign under the banner “Women in the eXascale era”:

1

On 11 February, we published the launch post: explaining the campaign’s aim, marking the International Day, and announcing that over the coming weeks, we would introduce women scientists from MaX.

2

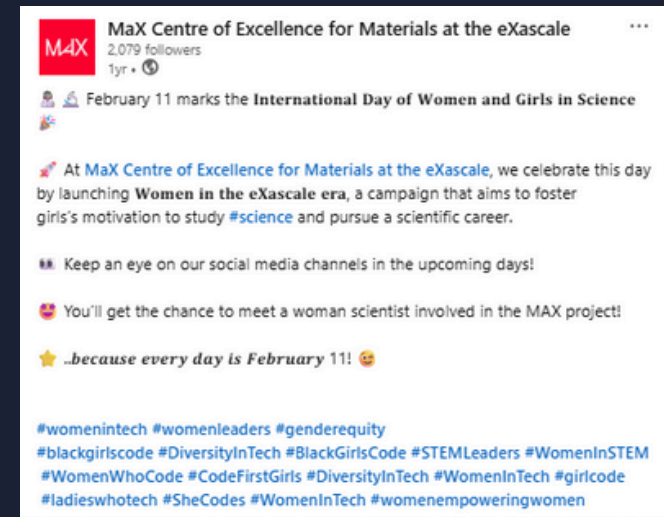
On Twitter and LinkedIn, we posted a series of photos and quotes from MaX women scientists sharing their perspective: why they chose science, how they came to HPC or materials modelling, and what advice they would give to the next generation of women scientists.

3

Each post invited engagement: we encouraged viewers to comment, ask questions, and follow our pages, creating a living conversation about science, careers, and possibilities.

4

We used the campaign to highlight the broader context: the exascale transition in HPC, the role of materials simulations in tackling big societal challenges, and the fact that women must be part of this advance.





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**Women in the eXascale era**

Meet **Deborah Prezzi**, #Computational #Scientist at [Consiglio Nazionale delle Ricerche](#) - Istituto Nanoscienze.

Every day is February 11!

#STEMLeaders #WomenInTech #GirlCode #SheCodes



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**Women in the eXascale era**

Meet **Cláudia Cardoso**, #Researcher at [CNR Istituto Nanoscienze](#), where she develops #software and uses #HPC computer simulations.

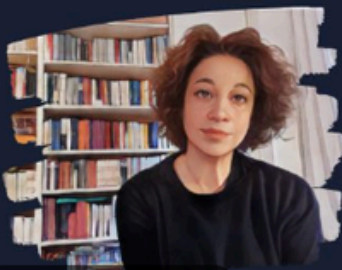
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with Deborah Prezzi

'''Deborah Prezzi'''

Deborah is a computational physicist at CNR-NANO (Modena, Italy), working in collaboration with experimental groups around Europe. Interested in a greener future, she uses HPC resources to model materials at the nanoscale and understand their changes when they are cycled inside batteries.



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'''Cláudia Cardoso'''

Cláudia works at CNR NANO in Italy, where she develops software and uses HPC computer simulations to study the electronic and optical properties of nanomaterials. Since she was a kid, she has been interested in the way science changes our perception of the world: how our knowledge of astrophysics, or statistics, or neurosciences transforms the way we think about our "self" and the humankind.

Find her on Twitter at: @Cláudia81668079

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### Women in the eXascale era

Meet **Alice Ruini**, Associate **#Professor** of Condensed **#Matter #Physics** at the **Università degli Studi di Modena e Reggio Emilia**.

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# Women in the eXascale era

'''Alice Ruini'''

Alice is Associate Professor of Condensed Matter Physics at the University of Modena and Reggio Emilia. She got passionate about STEM disciplines already in middle school: she really liked solving math exercises! Today, her research activities lie in computational nanoscience and quantum theory of materials, with applications in the field of nanotechnology and energy storage/conversion.



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### Women in the eXascale era

Meet **Mariella Ippolito**, **#HPC** Specialist at **CINECA**.

Find her on LinkedIn

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# Women in the eXascale era

'''Mariella Ippolito'''

Mariella works as HPC specialist at Cineca, where she supports users in materials science to exploit HPC resources. She began to love science from an early age, reading Asimov's science fiction books. In her free time she loves reading and cooking desserts - pastry is also a true science, made of numbers and passion!



with Mariella Ippolito

Find her on LinkedIn at:  
mariella-ippolito-263b8a99/

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### Women in the eXascale era

Meet **Ada Böhm**, a **#computer** scientist and **#programmer** at **IT4Innovations National Supercomputing Center**.

Find her at <https://github.com/spirali>

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spirali - Overview  
github.com

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### Women in the eXascale era

Meet **Roberta Farris**, a **#computational** physicist at **Institut Català de Nanociència i Nanotecnologia (ICN2)**.

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**#STEMLeaders #WomenInTech #GirlCode #SheCodes**



## Women in the eXascale era



''Roberta Farris''

Roberta is a **computational physicist** at ICN2, Barcelona. She discovered her **passion for condensed matter physics** during her university studies, where a particular course captured her interest. Today, she works to **unravel the transport properties of materials** by investigating their behavior at the atomic level.

Find her on LinkedIn at:  
[/roberta-farris9393](#)

with Roberta Farris

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# Contact

[www.max-centre.eu/](http://www.max-centre.eu/)



# Acknowledgement

This campaign was made possible by the MaX Centre of Excellence (Grant Agreement No. 101093374) under the EuroHPC Joint Undertaking.

We thank all the women scientists who contributed their photos and voices, the communication teams, and all of you who engaged with the campaign.

Together, we are helping to build a future in which science is truly open to all.



Co-funded by  
the European Union



**EuroHPC**  
Joint Undertaking