

iDMEu

initiative for Dark Matter in Europe and Beyond

Website preview and early feedback

The iDMEu Organizers

[Marco Cirelli](#)

[Caterina Doglioni](#)

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[Gabrijela Zaharijas](#)

[slido.com](https://www.slido.com)

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Website

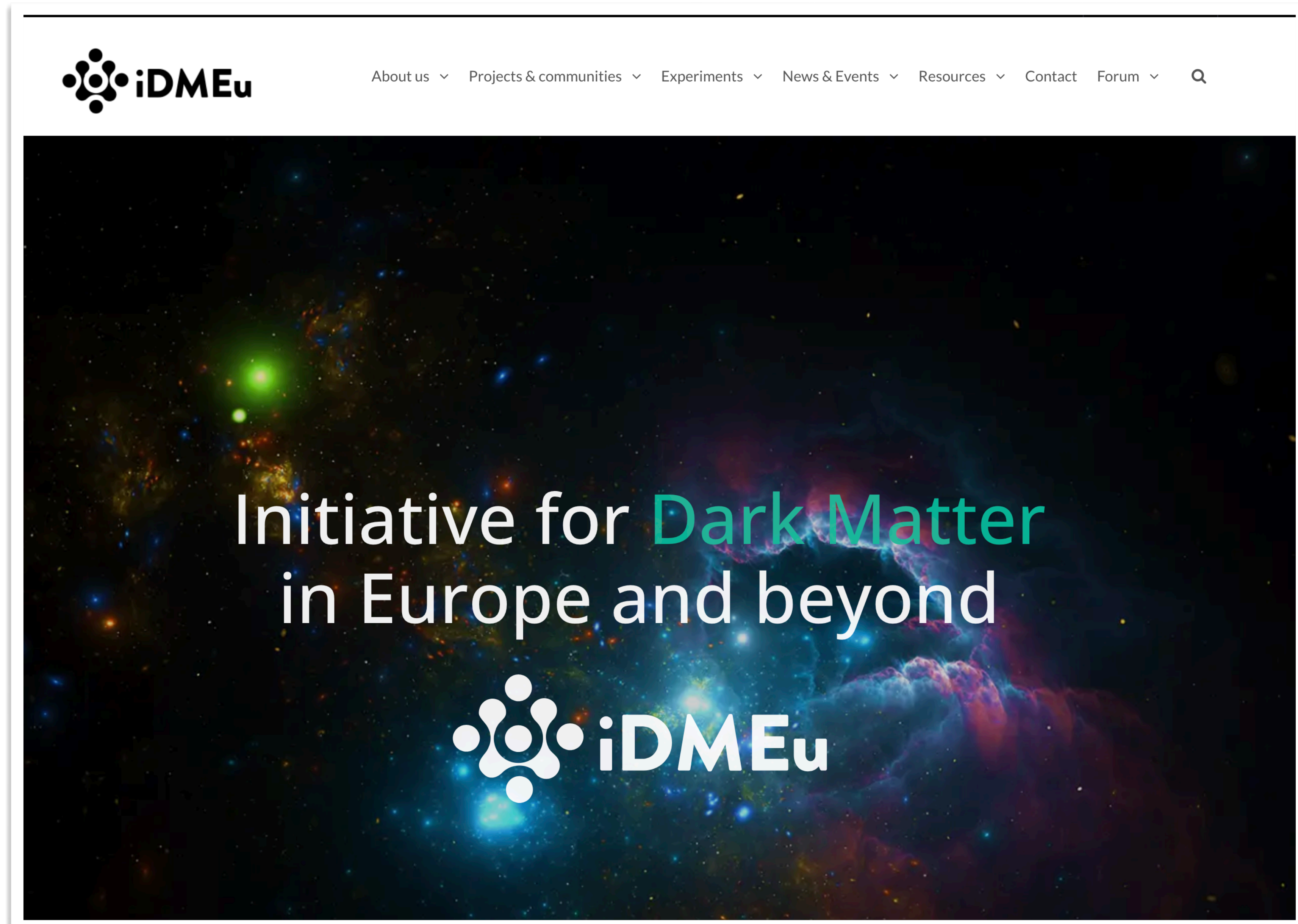
Goal: Collect and find information / expertise on everything DM
A sort of “Dark Matter” hub

URL: www.idmeu.org (currently old version)
<https://nectarclient.co.uk/idmeu> (*beta* version)

Who: Designed by the *Organizers*
Edited/maintained by the *Curators*
Everyone's input welcome and essential!

How: Wordpress with dedicated plugins

Homepage



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Homepage



About iDMEu

The mission of the iDMEu project is to provide a public platform to facilitate information-finding and interactions among Dark Matter researchers from different communities. It is supported by the European accelerator physics, astroparticle physics and nuclear physics committees and consortia [ECFA](#), [APPEC](#) and [NuPECC](#).

Read more about the iDMEu project in the [JENAS 2018 expression of interest](#), in the [Summer 2020 ECFA Newsletter](#), and in [this article published in European Nuclear Physics News](#) (institutional access needed).

FIND OUT MORE



IDMEU KICK-OFF MEETING AT THE TAUP CONFERENCE

The first iDMEu town hall meeting will take place on the last day of the XVIII International Conference on Topics in Astroparticle

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SNOWMASS PAPERS RELATED TO DARK MATTER

The Snowmass process, which provides a vision from the particle physics community as input to the panel that suggests the prioritisation of

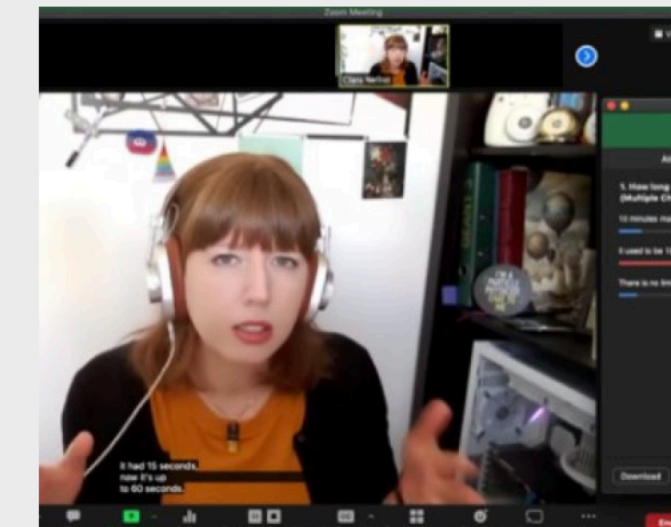
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JENAS 2022

3-6 May 2022 Madrid, Spain The 2nd Joint ECFA-NuPECC-APPEC JENAS-Seminar (jointly organized by IEM - UGr - LSC - IFCA - UCM)

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IDMEU KICK-OFF MEETING: POST-EVENT REPORT

12 May 2021 - Online Figure 3: A screenshot of the interactive outreach session led by Clara Nellist [permission granted to publish]

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Homepage

New dark matter papers

Most recent dark matter papers from arxiv.org, sourced from Twitter account [higgsinocat](#), using an algorithm from [K. Liang](#), scroll down for more.

Twitter feed to go here

ABOUT US

The iDMEu initiative and this website are supported by [ECFA](#), [APPEC](#) and [NuPECC](#).



LATEST NEWS



10 August, 2023
iDMEu kick-off meeting at the TAUP conference



7 June, 2023
Snowmass papers related to dark matter



7 June, 2023
JENAS 2022

QUICK LINKS

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- [News & Events](#)
- [Contact Us](#)
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If you wish to contact us, please [CLICK HERE](#)

This website has also received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 679305.



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Dropdown menu for "About us":

- About us
- Organizers
- Curators (highlighted with a grey background)
- Proponents

Curators

New curators welcome!


Curators Home > About us > Curators

iDMEu Curators

The contents of this site have been developed by the Early Career Researchers in this page. You can reach the current iDMEu curators (with names in [blue](#)) at idmeu.jenaa.eoi.curators@gmail.com.

Join the iDMEu Curators team


If you are a Bachelor, Master or PhD student (or a supervisor) interested in internships and theses on iDMEu in collaboration with dark matter researchers, you can get in touch with [the iDMEu organizers](#) or use the [contact form](#). For a list of tasks that we'd like help with, see [this page](#).



Gabriella Szabó
Bachelor student, Lund University, Sweden


Contribution (Spring 2021): indirect detection table.

- [Link to Bachelor's thesis.](#)
- [Link to poster presented at the JENAA conference in 2022.](#)




Tom Laclavère
Bachelor student, Université de Paris, France

Contribution (Spring 2021): outreach table.




Sarah Ayoub
Bachelor student, PSL University, Paris, France

Contribution (Spring 2021): tools and software table (TBC by Marco).




Aryaman Bhutani
Bachelor Student, IISc Bengaluru, India

Contribution (Summer 2023): wave-like experiments table, numerical simulations table.




Aloïse Dijoux
Bachelor student, Université d'Angers, France

Contribution (Summer 2023): indirect detection table.



Romane Kulesza
Master student, Sorbonne University, Paris, France


Contribution (Spring 2021): direct detection table.



Joshua Greaves
Master's student, Lund University, Sweden


Contribution (2021-2022): dark photon page.

- [Link to Bachelor's thesis.](#)
- [Link to poster presented at the JENAA conference in 2022.](#)




Maximilian Amerl
PhD Student, University of Manchester, United Kingdom

Contribution (2023-): colliders page.




Danielle Wilson-Edwards
PhD student, University of Manchester, United Kingdom

Contribution (2023-): collider page.




Tobias Fitschen
Postdoctoral researcher, University of Manchester, United Kingdom

Contribution (2023-): collider page, website maintenance.




Sukanya Sinha
Postdoctoral Researcher, University of Manchester, United Kingdom

Contribution (2023-): collider page, website maintenance.




Pratik Jawahar
PhD student, University of Manchester, United Kingdom

Contribution (2023-): cross-checks and updates of dark matter primer page.





Matthew Feickert
Postdoctoral researcher at the American Family Insurance Data Science Institute at the University of Wisconsin-Madison

Contribution (Summer 2023): script parsing inspire-hep for dark matter related papers and events (WIP)



New curators are welcome!





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Projects and communities

DM-related communities, centers and groups

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DM-related communities, centers and groups

The **LHC Dark Matter Working Group (LHC DM WG)** within the **LHC Physics Centre at CERN (LPCC)** brings together theorists and experimentalists to define guidelines and recommendations for the benchmark models, interpretation, and characterisation necessary for broad and systematic searches for dark matter at the LHC. Its mandate also includes improving the set of tools available to the experiments, such as higher-precision calculations of the backgrounds, assisting theorists with understanding and making use of LHC results, and maintaining close connections with theorists and other experimental particle DM searches towards a better understanding of viable dark matter models and complementarity between collider and non-collider experiments. The LHC DM WG holds open workshops and meetings. *Link containing contacts, publications and past/upcoming meeting schedule:* <https://lpcc.web.cern.ch/content/lhc-dm-wg>

The **LHC Long-lived Particles Working Group (LHC LLP WG)** within the **LHC Physics Centre at CERN (LPCC)** brings together experimentalists and theorists to discuss the physics of new long-lived particles at the LHC, also covering physics with unconventional experimental signatures. The WG serves as a formal bridge with the relevant physics groups of the LHC experiments in terms of recommendations for benchmark models, presentation of results and, facilitating communication between theory and experiments including validation and deployment of specific event generation tools, reinterpretation, new search directions. It holds open meetings complementing the workshops organised by the broader Long-Lived Particle Community. *Link containing contacts, publications and past/upcoming meeting schedule:* <https://lpcc.web.cern.ch/lhc-llp-wg>

The **Feebly Interacting Particles Physics Centre (FPC)** within the **CERN Physics Beyond Colliders (PBC) Study Group** has the main goal of developing and further boosting the potential of the PBC experiments for the physics of feebly-interacting particles, taking into account the worldwide context, recent theory progress and relevant results from neighboring fields (axion physics, dark matter direct detection, active neutrino physics, astroparticle, cosmology, etc.). It acts as a central forum for exchanges between the PBC experimental community and theorists for assessment of the feebly interacting particles physics reach of the proposed projects in a global landscape. The FPC holds open workshops. *Link containing contacts, experiments, theoretical activities, results, scientific events and bibliography:* <https://pbc.web.cern.ch/fpc-mandate>

The **European Consortium for Astroparticle Theory (EuCAPT)** aims to bring together the European community of theoretical astroparticle physicists and cosmologists. Its goals are to increase the exchange of ideas and knowledge, coordinate scientific and training activities, help scientists attract adequate resources for their projects, and promote a stimulating, fair and open environment in which young scientists can thrive. *Link containing contacts, Code of Conduct, activities, results, and scientific events:* <https://www.eucapt.org>

E.g.:
LHC DM WG

PBC

EuCAPT

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Direct detection experiments

Indirect detection experiments

Collider experiments

Accelerator experiments

Wave-like DM experiments

Astrophysics experiments

Numerical DM Simulations

Other experiments

Experiments - tables

For example: DM Indirect Detection

Name ▲	Home page	Location ▲	Type of experiment ▲	Start year ▲	End year ▲	Low energy limit (GeV) ▲	High energy limit (GeV) ▲	TDR
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Completed experiment

PAMELA	Home	Low Earth orbit	Charged cosmic rays - electrons	2006	2016	0.50	5.00E+02	Link
PAMELA	Home	Low Earth orbit	Charged cosmic rays - positrons	2006	2016	0.05	3.00E+02	Link
PAMELA	Home	Low Earth orbit	Charged cosmic rays - antiprotons	2006	2016	0.08	2.00E+02	Link

Running experiment

LHAASO	Home	Sichuan Province, China	Gamma rays	2019		100.00	1.00E+06	Link
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Future experiment

KM3NeT	Home	Mediterranean sea, Italy	Neutrinos	Future project		100.00	1.00E+08	Link
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Experiments - tables

For example: DM Indirect Detection

Filters and ranking tools

Indirect detection

Name: Name _____	Location: Location _____	Type of experiment: Type of experiment _____	Start year: From _____ To _____
End year: From _____ To _____	Low energy limit (GeV): From _____ To _____	High energy limit (GeV): From _____ To _____	<input type="button" value="Clear filters"/>

Experiments - tables

Available fields. Which others would you like to have? And which other tables?

Direct detection

Name
Phase/run
Location
Commissioning year
End year
Detection technique
Target material
Unit mass
Total mass
Exposure
Homepage
Main publication(s)

Indirect detection

Name
Homepage
Location
Type (CR species)
Start year
End year
Energy range
TDR publication

Wave-like DM exps

Name
Phase/run
Homepage
Location
Detection principle
DM mass range
Coupling sensitivity
Start year
End year
Main results publication(s)
TDR publication

Numerical simulations

Name
Simulation type/code
Number bodies
Volume
Minimal mass
Spatial resolution
Year
Main publication(s)

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- Software tools
- Outreach resources
- Lectures and reviews
- DM primer resources

Resources - tables

For example: Outreach resources

General Public - Articles and Books

Source	Title ▲	Author(s) ▲	Format ▲	Language ▲	Year ▲	Length ▲
Link	A History of Dark Matter	Stephanie Bucklin	Article	English	2017	~15 min
Link	Balade en matière noire	Lison Bernet	Comic	French	2018	12 pages
Link	Bend it like Dark Matter	Julia Woithe, Magdalena Kersting	Publication	English	2020	17 pages

General Public - Conferences and Videos

Children

Scientific Audience Basic Level - Articles and Books

Scientific Audience Basic Level - Conferences and Videos

Advanced level - Conferences and Videos

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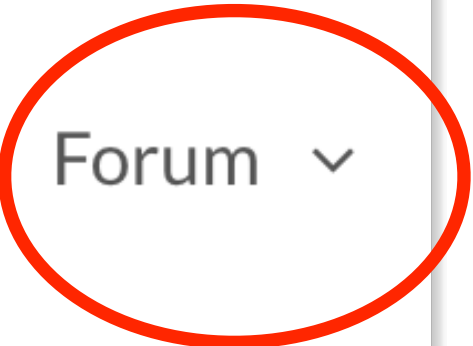
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Caterina's presentation later today