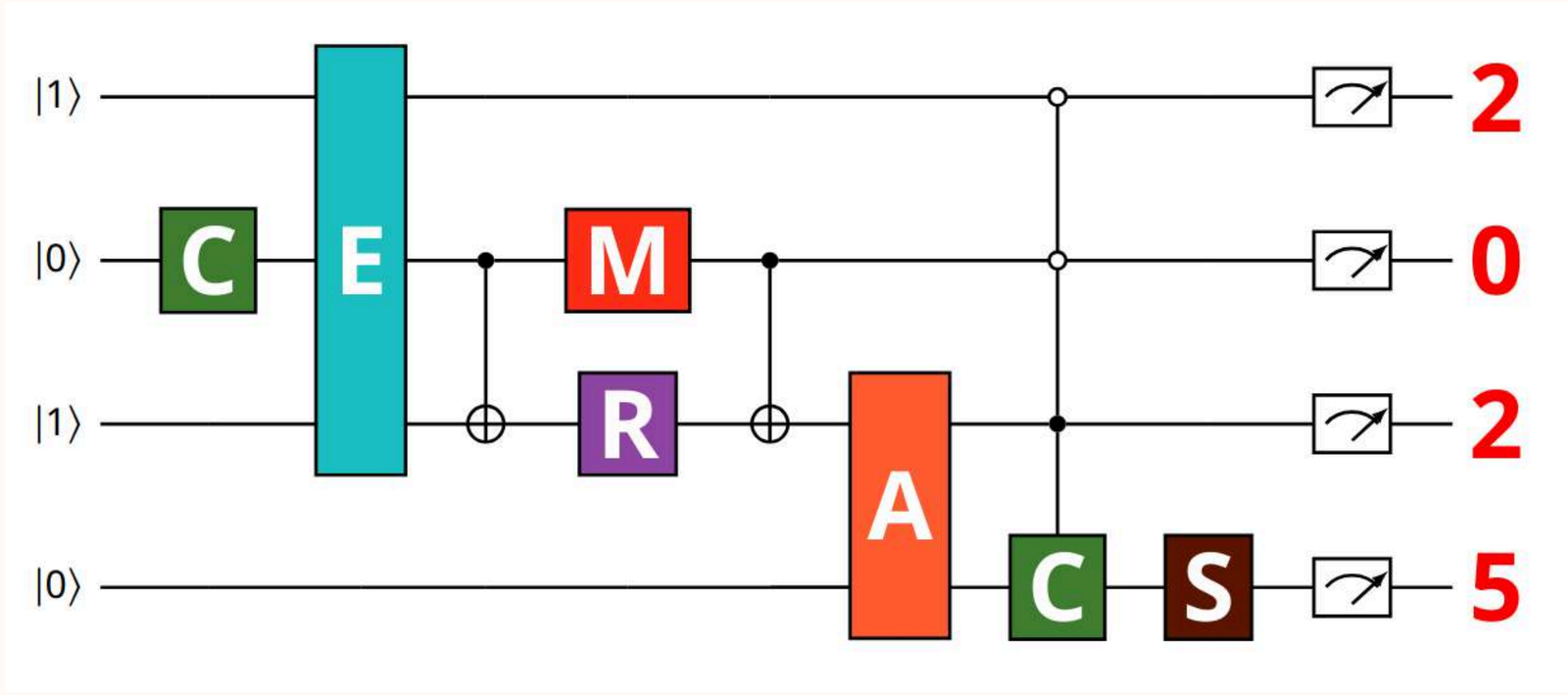
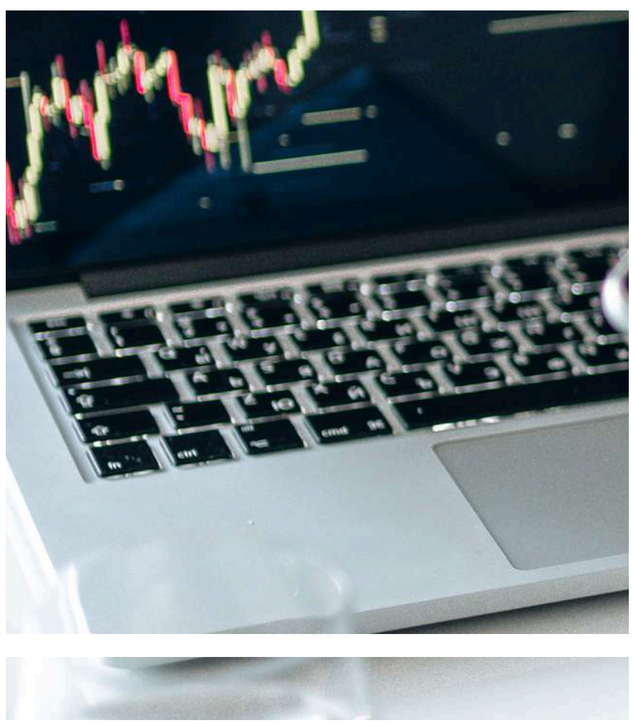
CEMRACS SUMMER SCHOOL 2025

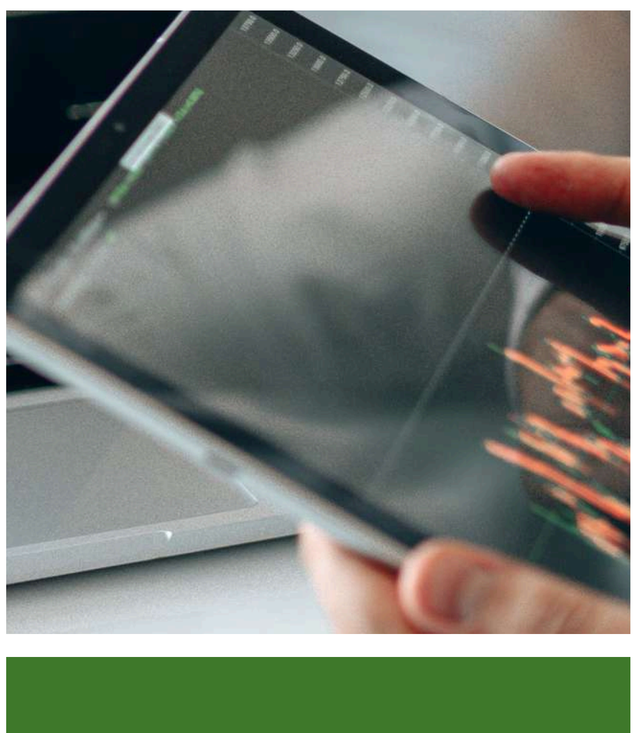


QUANTUM COMPUTING

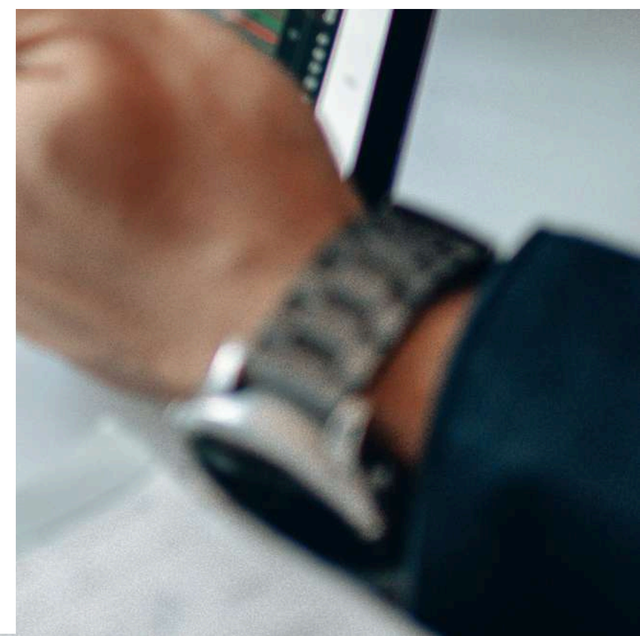
OPPORTUNITY

JULY 15 - AUGUST 22, 2025





CIRM,
Marseille
France



More Information

SMAI
société de mathématiques appliquées et industrielles

CCFR CENTRE DE COMPETENCE HPC.HPDA.IA.QUANTIQUE

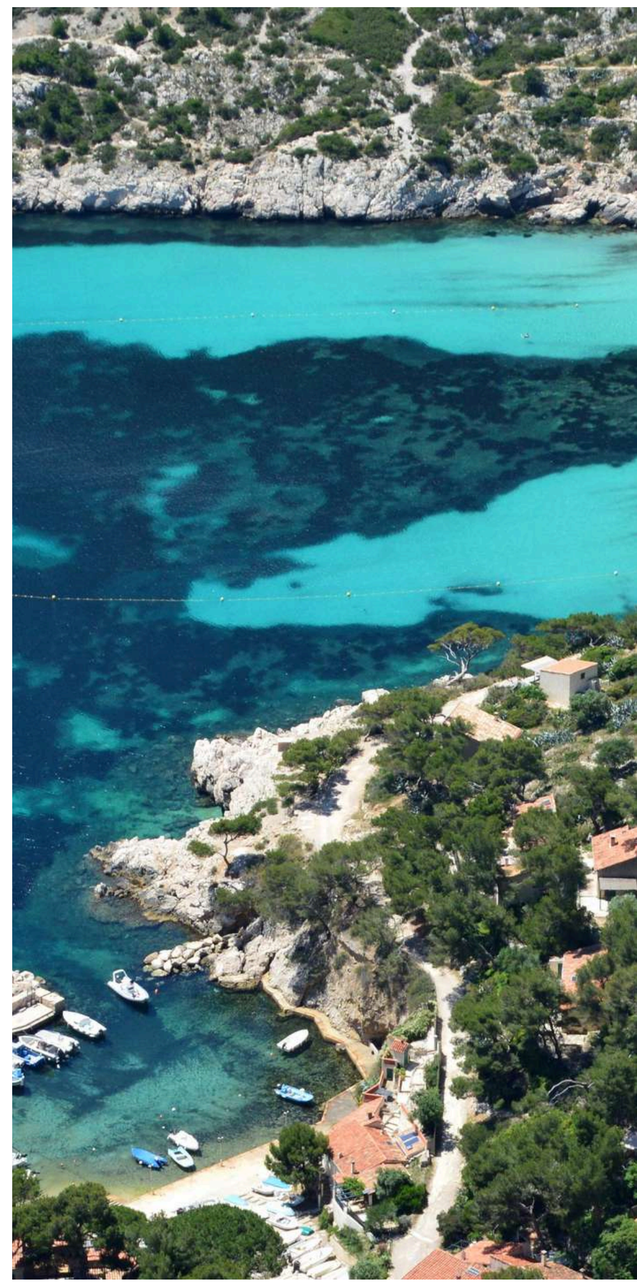
Teratec

Quantum Opportunity

Are you an industrial or academic expert interested in *Quantum Computing*?

Do you have a dedicated research team, technological challenges to tackle, or simply want to start a quantum project and train your teams?

Don’t miss this unique opportunity to be part of the largest Summer School on Quantum Computing!

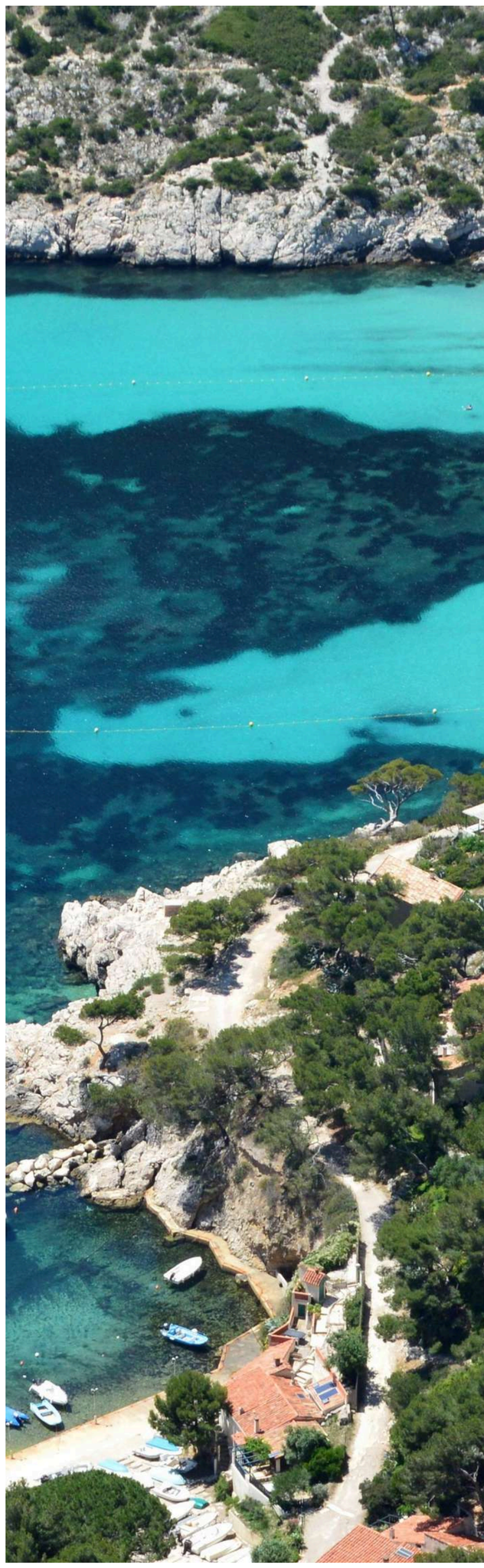


CEMRACS 2025 is organized by SMAI and CC-FR/Teratec and supported by:

About CEMRACS

CEMRACS is a six-week international summer school that has been organized by SMAI every summer since 1996 at the Centre International de Rencontres Mathématiques (CIRM), located in the beautiful Luminy campus near Marseille.

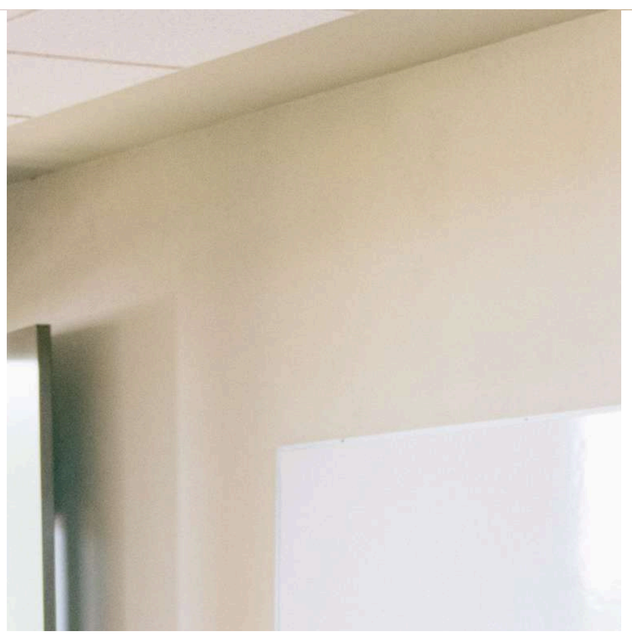
The 2025 edition will focus on Quantum Computing, with a special emphasis on two key domains deeply impacted by quantum technologies: scientific computing and cryptography.

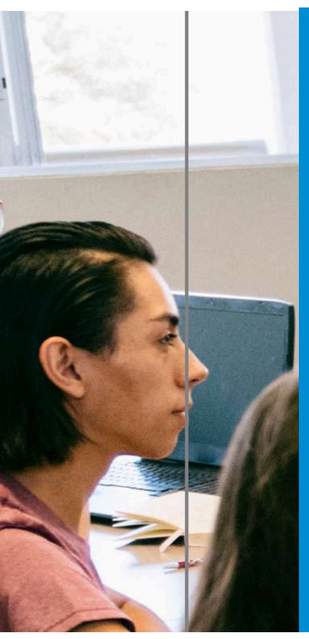


Scientific Scope

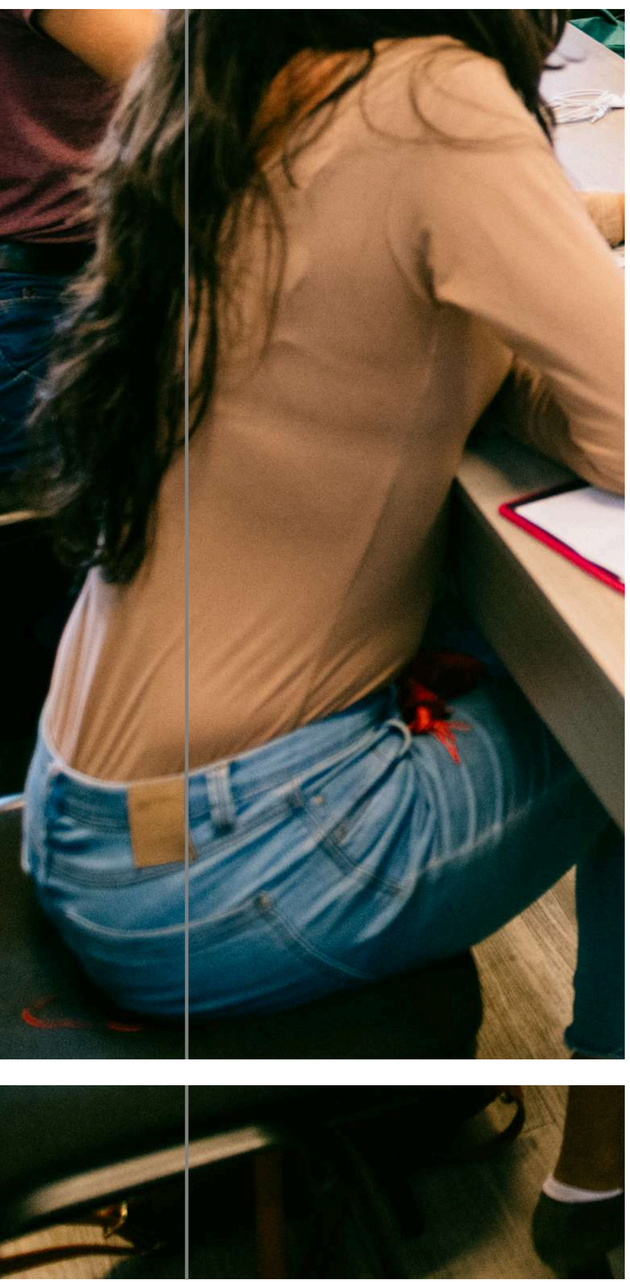
CEMRACS 2025 aims to :

Train young researchers in Quantum computing fundamentals, including ideal quantum computing frameworks and algorithms.

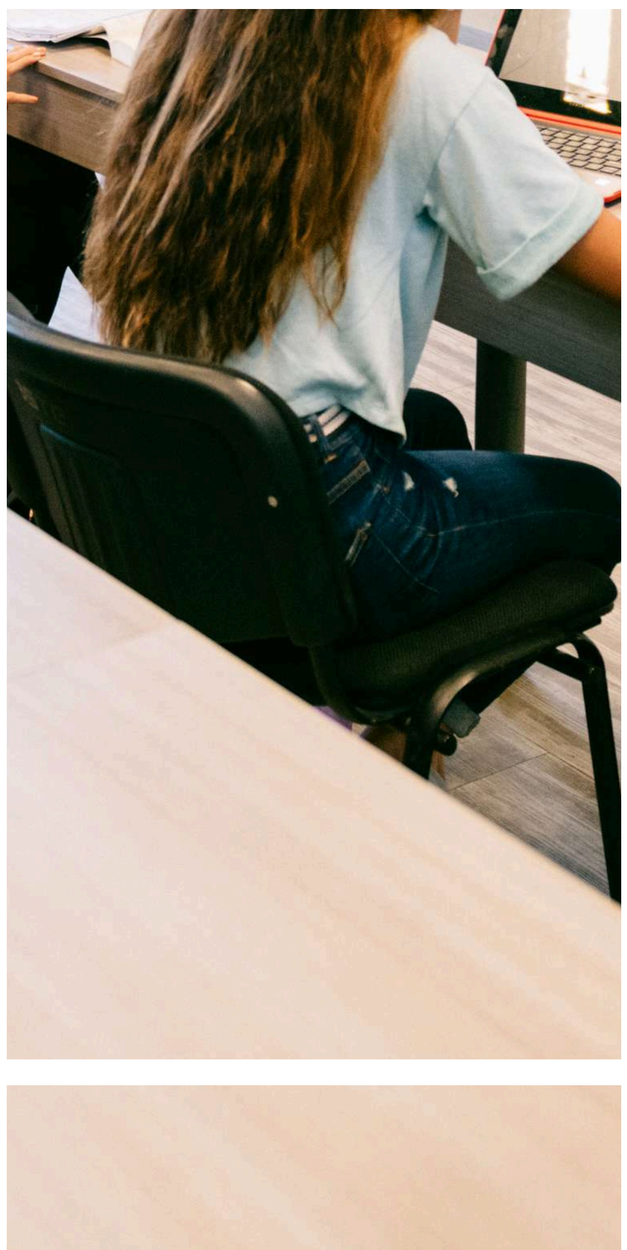




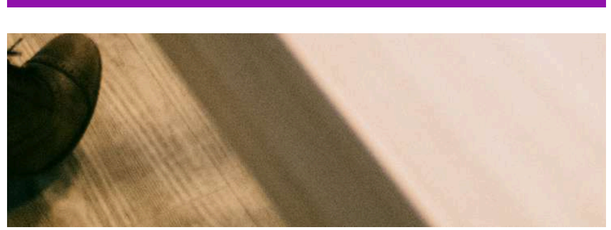
Explore the potential of quantum computing in scientific computations, including the adaptation and performance gains of existing algorithms in a quantum framework - part of the France Hybrid HPC Quantum Initiative

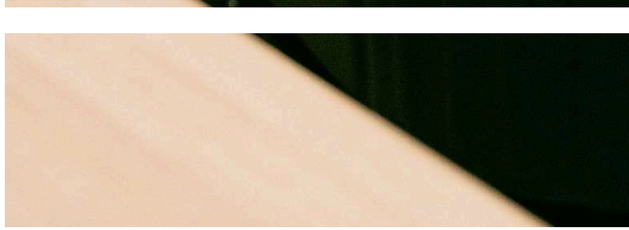


Focus on the need to develop Quantum cryptography and investigating new encryption methods for the post-quantum era.



Bridge the gap between scientific computing and cryptography, fostering collaboration across disciplines





Structure of the event

CEMRACS follows a two-phase structure:

1 SUMMER SCHOOL

1 week -
15-19 July 2025

In short

A week of lectures designed to provide participants with a strong foundation in quantum computing.

Details

The summer school is open to a wide community but also aims to provide a knowledge base for the participants who will stay for the following 5 weeks to work on a project.

2 HACKATHON

5 weeks -
21 July - 22 August 2025

In short

Five weeks of Project-Based Research where participants collaborate on research projects proposed by industrial or academic partners.

Details

Each project team consists of 2-3 young researchers, supervised by experienced researchers from the proposing institution. The goal is to train the next generation of researchers in quantum computing and address real-world questions from industry and academia.

Key Dates

Becoming a partner of CEMRACS 2025

Partnering with CEMRACS gives your organization the chance to:

- propose a project to be tackled by young researchers and supervised by your experts,
- sponsor the event and gain visibility within the quantum computing community,
- train your teams through direct involvement in the school and hackathon,
- access top talent and recruit from the next generation of quantum experts,
- collaborate with leading academics in an interdisciplinary environment,
- benefit from extensive visibility as CEMRACS 2025 will be widely promoted across Europe through the EuroCC initiative, as well as within the French quantum ecosystem.

How to Get Involved?

1. Submit a Research Project

Industries and academic institutions are invited to submit project proposals for the Hackathon. Each project will be assigned a team of 2-3 young researchers, supervised by senior experts.

2. Sponsorship and Financial Contribution

The 15,000€ standard sponsorship package includes:

- funding for two young researchers (PhD students or post-docs) for six weeks,
- three weeks of stay for a senior researcher (academic or industry expert) to be distributed over the six weeks,
- summer school registration for both young researchers and one senior from the sponsoring company.

The financial format and timeline can be adjusted on a case-by-case basis.

Confidentiality and Open Collaboration

- **Public Project Descriptions:** the general description of submitted projects will be publicly displayed on the event website. Hackathon candidates will rank their preferences among at least three topics.

- **Controlled Work Environment:** once teams are formed, written content and code are developped on individual computers and may remain private if necessary.

- **Encouraging Open Exchanges:** while confidentiality is respected, the goal of CEMRACS is to foster knowledge exchange between young researchers and senior experts to overcome key technological challenges. It is recommended to submit topics that can remain at least partially open for collaborative discussion.

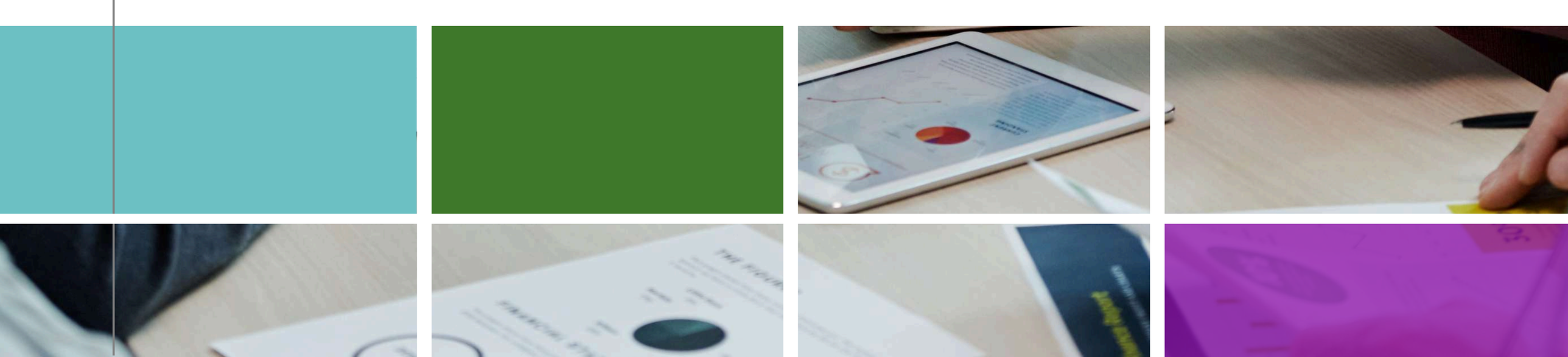
- **Publication** of the team's results is possible, but not automatic nor mandatory.

Join Our Information Webinar!

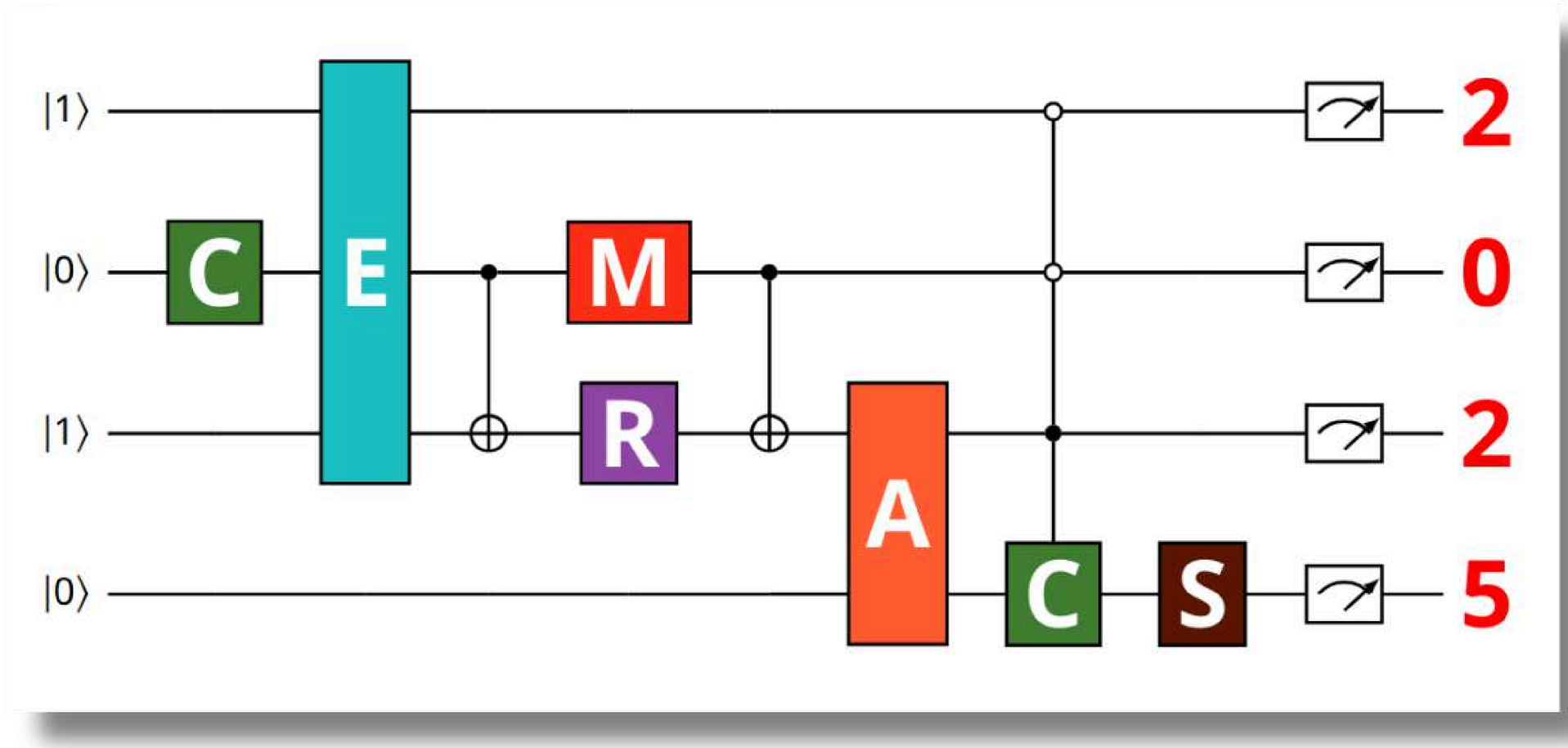
Yvon Maday, co-founder of CEMRACS, and the Organizing Committee will host an **online webinar** to present CEMRACS 2025 and **answer any questions** from potential sponsors and project providers:

Join us on Tuesday, 25th March @ 14.00 CET:

Register here



Be a part of the quantum revolution—
partner with us for CEMRACS 2025!



Thank You

If you have any question, please contact us:

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