



# The OpenGATE collaboration

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Spokesperson of the OpenGATE collaboration

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# The collaboration

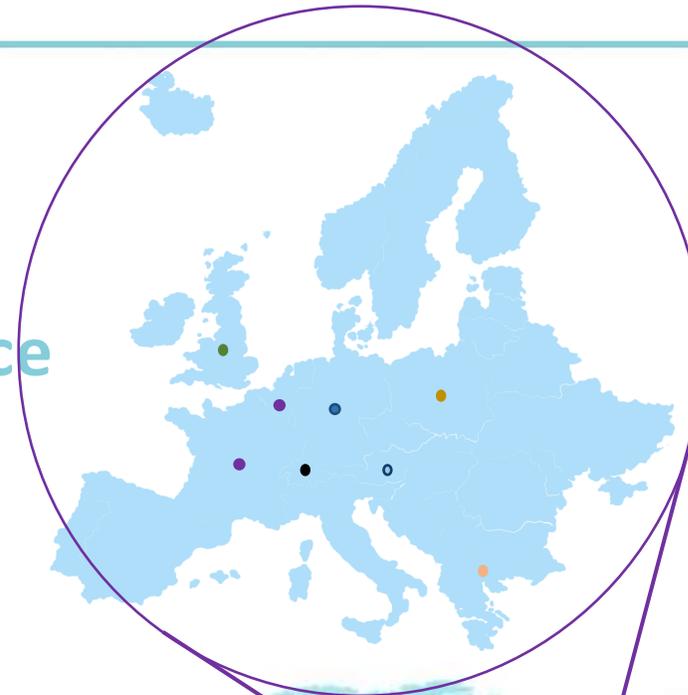
**23** members, public laboratories and companies developing an open source platform

Spokesperson: Lydia Maigne (CNRS, LPCA)  
 Technical coordinator: David Sarrut (CNRS, CREATIS)

## Europe



- FH Aachen, University of Applied Sciences, Julich, Germany
- Medisip, Ghent University, Belgium
- Medical University of Vienna, Wiener Neustadt, Austria
- MedAustron, Wiener Neustadt, Austria
- Christie Medical Physics & Engineering, Manchester, UK
- Institute of Nuclear Physics Polish Academy of Sciences, Poland
- Univ. of Patras, Dept of Med. Phys., Greece
- BioemTech, Athens, Greece
- Paul Scherrer Institute (PSI), Switzerland



France 

 10 labs

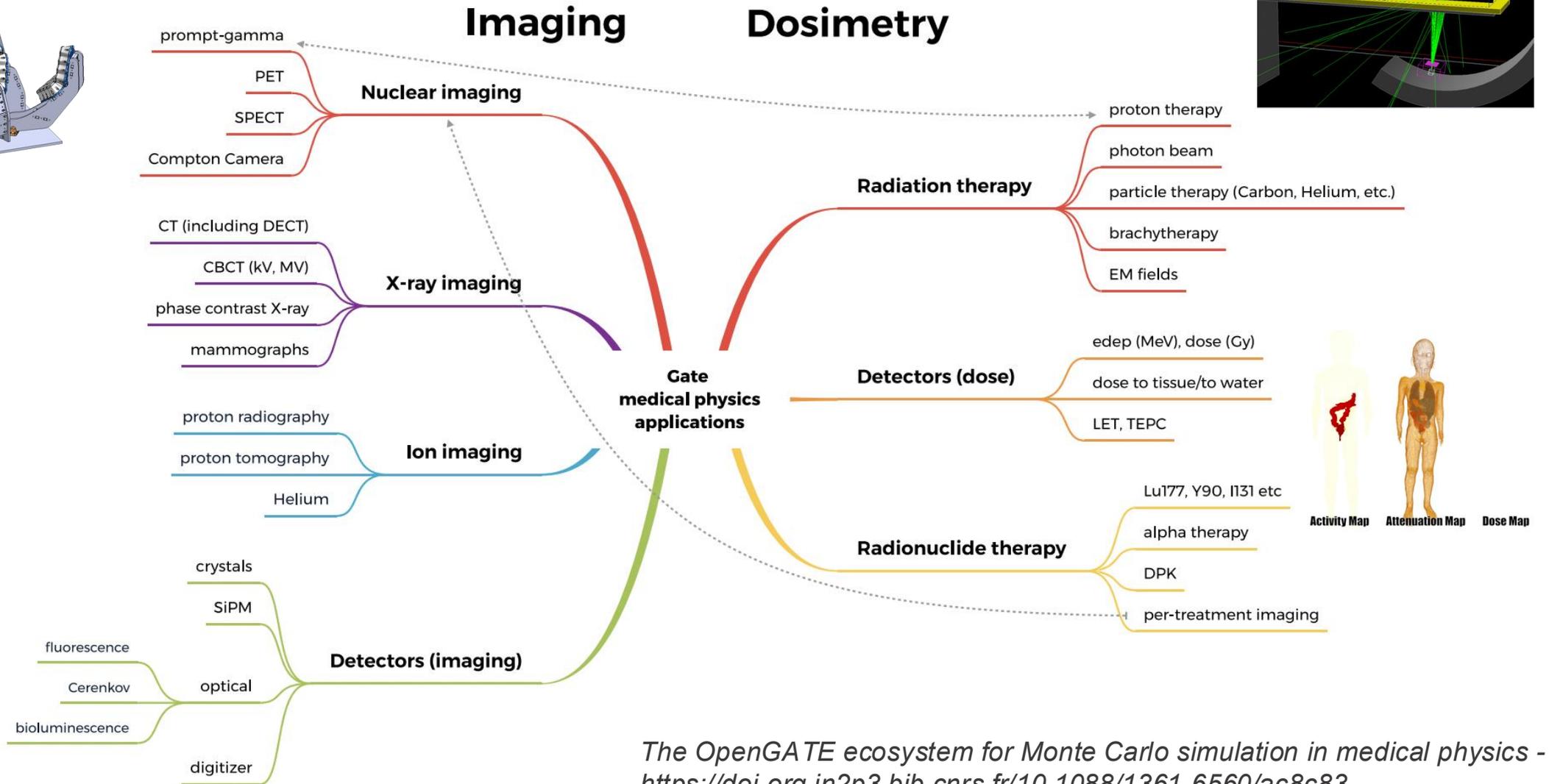
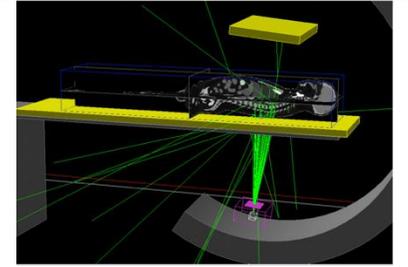
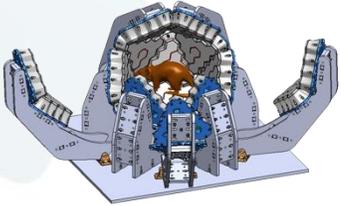




## Elsewhere

-  MSKCC, New York, USA
-  UC Davis, Davis, USA
-  Sogang University, Seoul, South Korea
-  QST, Chiba, Japan



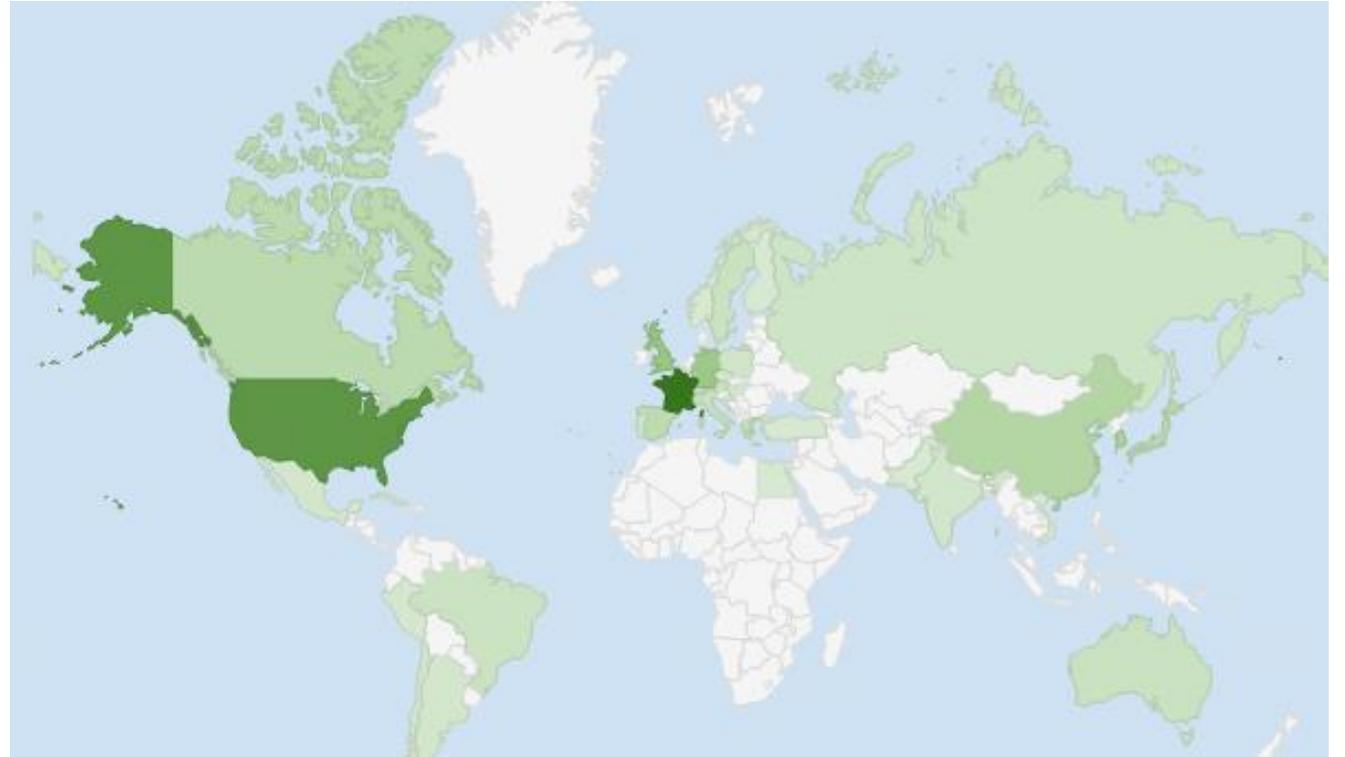


The OpenGATE ecosystem for Monte Carlo simulation in medical physics - <https://doi-org.in2p3.bib.cnrs.fr/10.1088/1361-6560/ac8c83>

## A large community of users

### Around 2000 registered users

- Large communities in France and USA
- Increasing number in Asia: China, Japan and South Korea



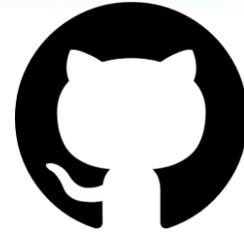
### GATE USERS MAILING LIST

#### What is for?

- The mean for the collaboration to send information about releases, job offers, interesting papers
- The mean for users to ask any question regarding GATE: bugs, compilation problems, good practice for using or developing the platform

To register to the mailing-list: <https://listserv.in2p3.fr/cgi-bin/wa?A0=OPENGATE-L>

**Soon the OpenGATE FORUM**



**1<sup>st</sup> official release in November 2025**

**Create a Python environment (highly recommended)**

```
pip install opengate  
opengate_tests
```

See: <https://github.com/OpenGATE/opengate>

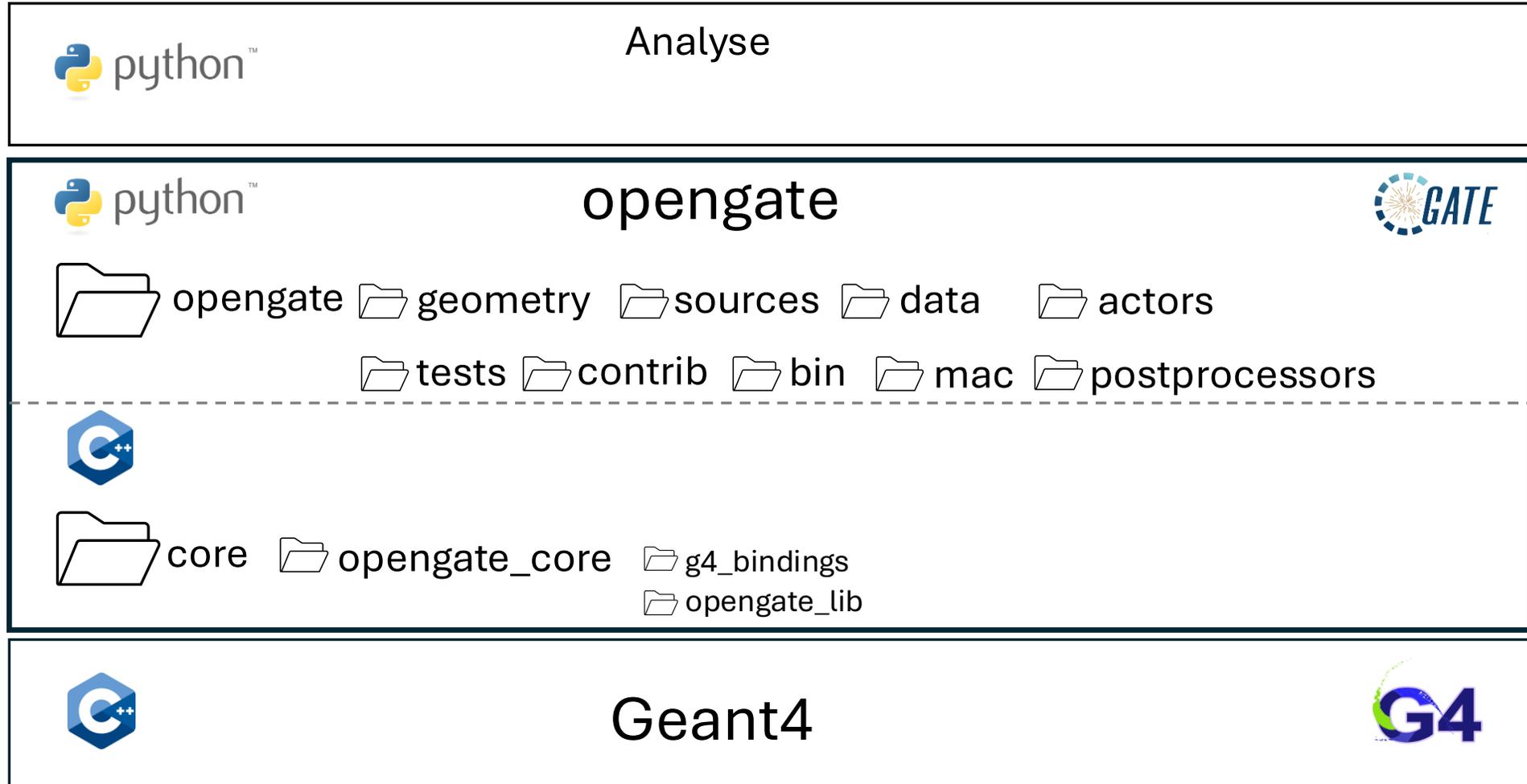
Docs: <https://opengate-python.readthedocs.io>

Examples: <https://github.com/OpenGATE/opengate/tree/master/opengate/contrib>

Tests: <https://github.com/OpenGATE/opengate/tree/master/opengate/tests>

**More than 100 tests & examples available**

# GATE 10 - The source code



## Workshop in conferences

2025 IEEE NSS MIC, [https://indico.in2p3.fr/e/gate\\_ieee2025](https://indico.in2p3.fr/e/gate_ieee2025)

2024 IEEE NSS MIC, [https://indico.in2p3.fr/e/gate\\_ieee2024](https://indico.in2p3.fr/e/gate_ieee2024)



## Scientific meetings:

- **31 March - 1 April 2026, Strasbourg (France), <https://indico.in2p3.fr/e/gate2026>**
- 1-2 April 2025, Paris-Saclay (France), <https://indico.in2p3.fr/e/gate2025>
- 22-23 May 2024, Paris-Saclay (France), <https://indico.in2p3.fr/e/gate2024>
- 25-26 April 2023, Krakow (Poland), <https://indico.in2p3.fr/e/gate2023>

## GATE Hackaton

<https://indico.in2p3.fr/e/gate-hackathon-2026-delft>

## Next GATE trainings

- **[GATE training for beginners](#) 24-26 November 2026 (remote)**
- GATE trainings in master programs
- Specific GATE trainings for companies (remote or in-person)



## PMB Focus collection 2025-2026

<https://iopscience.iop.org/collections/pmb-250417-827>

**Co-editors for the FOCUS collection:**

Lydia Maigne, Nils Krah, Christian Morel, Emilie Roncali and David Sarrut

- **All articles are published once they are accepted**
- **No need to wait for the collection to close.**
- **The review process follows the usual procedure in PMB.**
- **You can publish open access, but you do not have to.**

**2 collaboration papers have been published in 2025:**

- [\*\*GATE 10 Monte Carlo particle transport simulation -Part I: development and new features\*\*](#)
- [\*\*GATE 10 Monte Carlo particle transport simulation -Part II: architecture and innovations\*\*](#)

## GATE 10 Technical news

**Last release (Oct 2025): 10.0.3 (Geant4 v11.3.2)**

**Soon the next release: 10.1.0 with Geant4 v11.4.0**

### **Current work in progress:**

- Maintenance (updates QT, ITK, pybind, Geant4 ...)
- Coincidence sorter improvements (including HDF5 format)
- Compton Camera coincidence sorter
- Tessellated volumes formats: STL, OBJ, OFF
- Interfacing with reconstruction software
- SPECT: Pytomography, RTK
- PET: CASToR, Siemens o7tools
- Compton Camera: Coresi

## GATE 10 Technical news

### Future work:

- Multiprocessing
- PET digitizers : pile-up and dead-time
- More generic filters
- Actors: BioDoseActor, ChemistryActor....

### Other ideas? Needs?

**WE NEED YOU to contribute to GATE 10 development**

## The OpenGATE young developer prize 2026

- The call will open in February 2026 to master, PhD students and PostDoc
- Guidelines provided to participants to commit their code with tests and documentation
- Easy online application procedure
- **6 months** to provide the developments with mid-term projects presented during our scientific meeting in **April 2026**
- A committee composed of 4 developers to rank the commits
- Thomas Baudier will provide a technical support to candidates
- **3 awards will be given to the top 3 developers (800€, 400€, 200€)**

**Announcement coming soon on the user mailing-list**

**Thank you!**