



RD50 Workshop at CERN – 28.11.2023-1.12.2023



Welcome to the 43rd RD50 Workshop

The last RD50 Workshop

**Radiation hard semiconductor devices
for very high luminosity colliders**

CERN 28.11.2023 to 1.12.2023

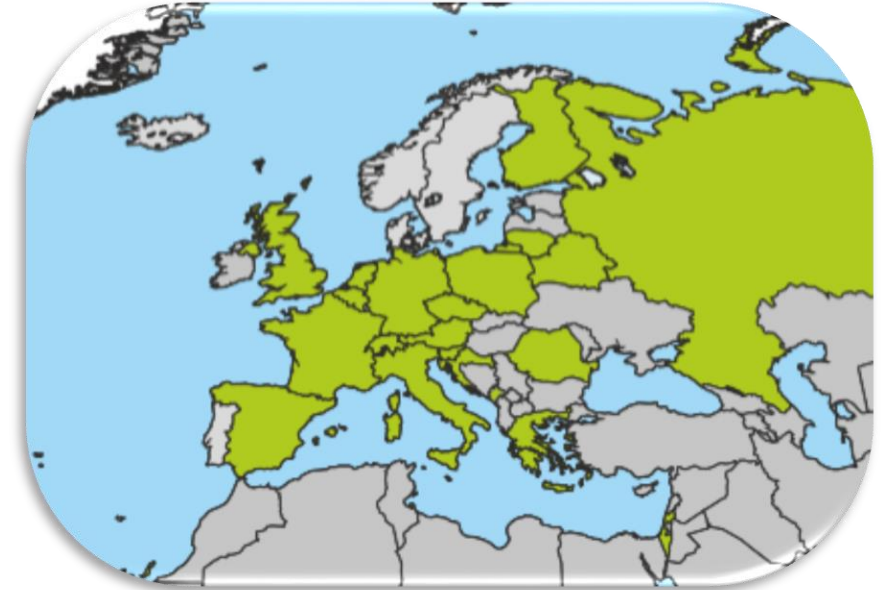
The RD50 Collaboration – November 2023



- RD50: 65 institutes and 440 members

51 European institutes

Austria (HEPHY), **Belarus** (Minsk), **Czech Republic** (Prague (3x)), **Finland** (Helsinki, Lappeenranta), **France** (Marseille, Paris, Orsay), **Germany** (Bonn, Dortmund, Freiburg, Göttingen, Hamburg (Uni & DESY), Karlsruhe, Munich (MPI & MPG HLL)), **Greece** (Demokritos), **Italy** (Bari, Perugia, Pisa, Trento, Torino), **Croatia** (Zagreb), **Lithuania** (Vilnius), **Montenegro** (Montenegro), **Netherlands** (NIKHEF), **Poland** (Krakow), **Romania** (Bucharest), **Russia** (Moscow, St.Petersburg), **Slovenia** (Ljubljana), **Spain** (Barcelona(2x), Santander, Sevilla (2x), Valencia), **Switzerland** (CERN, PSI, Zurich), **United Kingdom** (Birmingham, Glasgow, Lancaster, Liverpool, Oxford, Manchester, RAL)

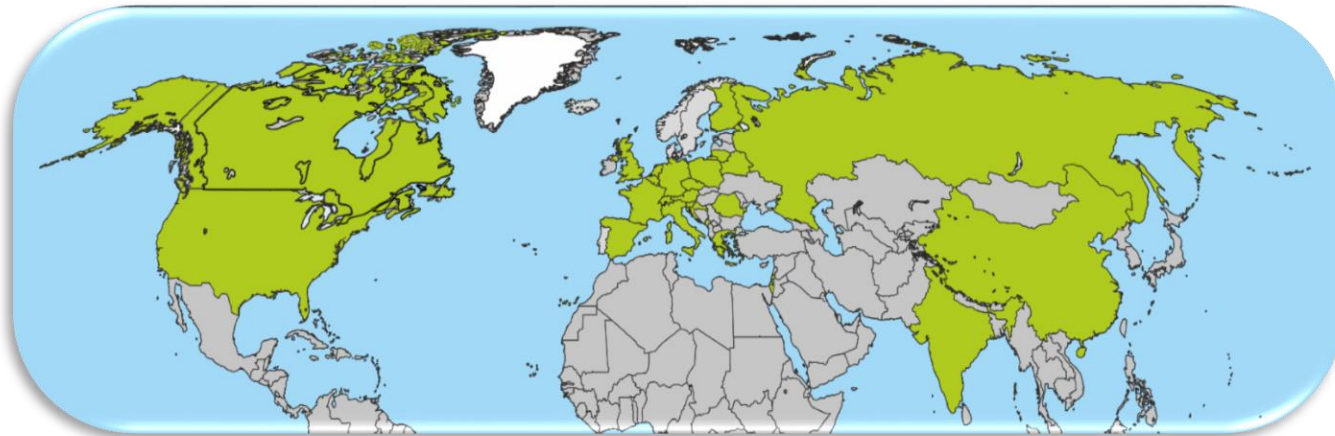


8 North-American institutes

Canada (Ottawa), **USA** (BNL, Brown Uni, Fermilab, LBNL, New Mexico, Santa Cruz, Syracuse)

7 Asian institutes

China (Beijing-IHEP, Dalian, Hefei, Jilin, Shanghai),
India (Delhi), **Israel** (Tel Aviv)



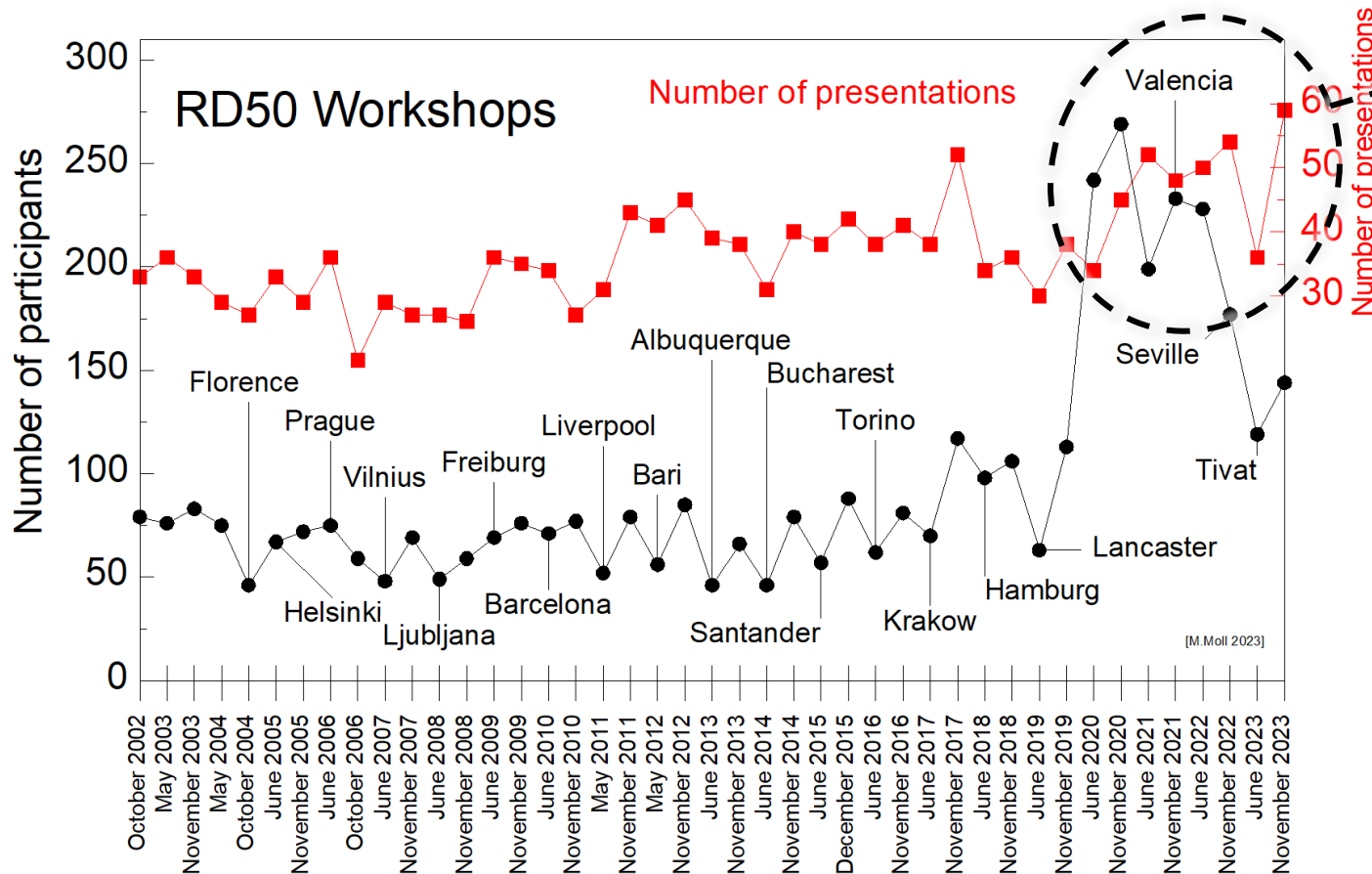
Full member list: www.cern.ch/rd50

RD50 Workshop statistics



- RD50 Workshops (until 2019): <35 talks> <72 participants>
- RD50 Workshops (since 2020): <44 talks> <173 participants>

Online/Hybrid workshops



• The 43rd RD50 Workshop

- CERN, 28.11. to 1.12.2023
- **The last RD50 Workshop**
- The 21st RD50 Workshop at CERN
 - We had 3 online workshops and 19 workshops outside of CERN
- Registered participants: 146
(video connection possible without registration)
- **In-person: 117** (A good quarter of RD50!)
- **Presentations: 59 talks**
- Discussions: 4 sessions

..the busiest RD50 workshop ever!

- Highest in-person participation
- Highest number of presentations

..sign that we do not stop RD50 for lack of interest

The RD50 Farewell Cup



A small gift to remember RD50
in the coming years

- One for each registered in-person participant
- *...sorry, no spares to distribute, the very high in-person participation to this workshop was not expected by us...*



*....thanks for the local student/post-doc team
for arranging this, especially Veronika*

Program: 43rd Workshop [4 days!]



Check INDICO
for last minute updates!

- **DAY1** - Tuesday 28.11.2023 – BE Auditorium (6/2-024)
 - 10:00-12:30: **Monolithic Devices** (4 talks + discussion)
 - *Lunch*
 - 14:00-18:30: **Special Event “Goodbye RD50” Symposium**
 - 19:00-21:00: **Reception in CERN Restaurant 1**
 - We celebrate 21 years of successful R&D
 - Finger food and drinks
- **DAY2** - Wednesday 29.11.2023 – BE Auditorium (6/2-024)
 - 9:00-11:30: **Wide Bandgap Semiconductors – SiC** (5 talks + discussion)
 - 11:30-12:50: **Radiation Damage I** (Fundamental damage, TCT, damage studies)
 - *Lunch*
 - 14:00-17:30: **Radiation Damage II** (HL-LHC detectors, EPI p-type, GaN,...)
 - 19:00-23:00 **Dinner**

Program: 43rd Workshop [4 days!]



Check INDICO
for last minute updates!

- **DAY3 - Thursday 30.11.2023**

- 9:00-13:00: **Low Gain Avalanche Diodes** [31/3-004 - IT Amphitheatre]
- *Lunch*
- 14:30-17:30: **Low Gain Avalanche Diodes** [BE Auditorium (6/2-024)]

- 17:30-19:30: The last RD50 Collaboration Board Meeting (restricted to CB members)

- **DAY4 - Friday 1.12.2023** BE Auditorium (6/2-024)

- 9:00-11:00: **Low Gain Avalanche Diodes**
- 11:00-13:00: **Facilities**
- 13:00 Closing of last RD50 Workshop --- Farewell to all RD50 members

- *Lunch*

- 14:30-15:30: The first RD50 Finance Review Committee Meeting
 - Organized by CERN directorate/finance; restricted to FA representatives (i.e. CB members)

Thanks to Session and Discussion Chairs



• Tuesday [BE Auditorium (6/2-024)]

- 10:00 Welcome: Michael Moll
- 10:20- 11:40 Monolithic sensors: Eva Vilella Figueras
- 11:40 **Discussion: Monolithic sensors** Eva Vilella Figueras

- 14:00-16:30 Goodbye RD50 I – Michael Moll
- 16:30-18:30 Goodbye RD50 II– Gianluigi Casse

- *Reception in Restaurant 1*

• Wednesday [BE Auditorium (6/2-024)]

- 09:00-11:10 Wide Band Gap – Thomas Bergauer
- 11:10-11:30 **Discussion Wide Band Gap** – Thomas Bergauer
- 11:30-12:50 Radiation damage I – general Igor Mandic
- 14:00-15:00 Radiation damage II – general Ivan Vila
- 15:30-17:10 Radiation damage III – general Gianluigi Casse
- 17:10-17:40 **Discussion Radiation damage general**
– Gianluigi Casse, Ioana Pintilie

- *Workshop dinner at the Bois Joly*

• Thursday

- **Morning:** [31/3-004 - IT Amphitheatre]
- 09:00-10:40 LGAD I – Gregor Kramberger
- 11:20-13:00 LGAD II – Valentina Sola
- **After lunch** [BE Auditorium (6/2-024)]
- 14:20-16:00 LGAD III – Anna Macchiolo
- 16:00-17:20 LGAD IV – Giulio Pellegrini
- 17:20: **Towards DRD3** - Giulio Pellegrini, Nicolo Cartiglia

- *17:40-19:40: Collaboration Board: Gregor Kramberger
(restricted to CB members) [BE Auditorium (6/2-024)]*

• Friday [BE Auditorium (6/2-024)]

- 09:00-10:20 LGAD V – Nicolo Cartiglia
- 10:20-10:40 **LGAD Discussion** Gregor, Nicolo
- 11:20-12:40 Facilities Rogelio Palomo Pinto
- 12:40 **Discussion Facilities** – Rogelio Pinto

- *14:30 RD50 Finance Review Board: Pippa Wells 42/1-018
(restricted to FA representatives)*

Dinner on Wednesday evening



- More details on INDICO/Wednesday
 - 2 busses will leave from CERN:
19h00 CERN Hostel Bldg.39
 - Do not forget to bring your workshop badge (food selection is color coded)

...you know the place, but we could not resist to go there for a last time to close the loop:



Bois Joly, October 2002
1st (First) RD50 Workshop



Bois Joly, June 2022
40th RD50 Workshop



Bois Joly, November 2023
43rd (Last) RD50 Workshop

Many thanks to ...



- ... all **speakers** for their contributions (and keeping the time – very tight program!)
- the local **organization team** for running the workshop
 - Veronique, Moritz, Sebastian, Ruddy, Yana, Veronika, Niels, Faiza, Marcos, Vagelis, Michael
- the **scientific organization team** for the “Goodbye RD50” symposium organization
 - Nicolo, Gianluigi, Eckhart, Gregor, Michael, Giulio, Ioana
- ... and on behalf of all RD50
 - .. to **Veronique Wedlake** for doing such a great job as RD50 secretary!
 - .. to **Maurice Glaser** for helping to handle the RD50 finances while enjoying his retirement in Brazil!