Welcome to the 43rd 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>

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…

28 November 2023
Program: 43rd Workshop [4 days!]

• 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!]

- **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!