Curriculum Vitae of Carola DOERR (updated June 2022)

Personal Data

Name:	Doerr (formerly Winzen), Carola
Date of birth:	March 05, 1984, in Würselen, Germany
Nationality:	German
Family status:	Married, two kids (born 04/2013 and 09/2015)
Homepage:	http://www-ia.lip6.fr/~doerr/
Publications:	Complete list, Google Scholar profile, DBLP entry

Education

12/20	Habilitation à diriger des recherches (HDR) HDR manuscript (50 page summary of my research activities) Jury members: Carlos Coello Coello, Christoph Dürr, Laetitia Jourdan, Jonathan E. Rowe, Günter Rudolph, Marc Schoenauer, Lothar Thiele, Carsten Witt.
01/10–12/11	Ph.D. studies in Computer Science (Dr.-Ing., with distinction, summa cum laude, PhD thesis) Max Planck Institute for Informatics and Saarland University, Germany Supervisor: Prof. Dr. Dr. hc. mult. Kurt Melhorn
10/03–08/07	Studies in Mathematics (Dipl.-Math., "very good", best possible grade) Kiel University, Germany
07/03	Abitur (best possible grade of 1.0, two awards), Konstanz, Germany
08/01–07/02	AFS Intercultural Programs High-School Exchange in Tobatí, Paraguay

Current and Previous Academic and Industrial Positions

since 10/13	Permanent researcher with the French National Center for Scientific Research (CNRS), affiliated with the Computer Science department (LIP6) of Sorbonne Université, Paris, France
10/12–09/13	PostDoc at LIAFA (now IRIF), Paris Diderot University, France (funded by the Alexander von Humboldt Foundation)
01/12–09/13	PostDoc at Max Planck Institute for Informatics, Germany (part-time after 10/12)
01/10–12/11	PhD student at Max Planck Institute for Informatics, Germany
12/07–01/12	Business Consultant with McKinsey & Co., Munich office, Germany (on educational leave from 01/10, working part-time 10/11-01/12)
07/06–10/06	Internship with Deutsche Lufthansa AG, Frankfurt, Germany

Selected Awards, Distinctions, and Fellowships

2022	CNRS bronze medal
2022	Nomination for a Best Paper Award at ACM Genetic and Evolutionary Computation Conference (GECCO), for a paper with André Biedenkapp, Nguyen Dang, Martin Krejca, and Frank Hutter
2021	Best Paper Award at IEEE Congress on Evolutionary Computation (324 accepted papers), for a paper with Kirill Antonov, Maxim Buzdalov, and Arina Buzdalova
2021	Best Paper Award at EvoApplications, for a paper with Anja Jankovic and Tome Eftimov
2020	1st and 3rd prize at the NeurIPS 2020 black-box competition
2019	Nomination for the CNRS bronze medal
2016	Best paper award at GECCO, for a paper with Johannes Lengler
2014	Offer for an Independent Minerva Research Group Leadership Position (5 years, W2 equivalent) within the Max Planck Society (declined)
2013	Best paper award at GECCO, for a paper with Benjamin Doerr and Franziska Ebel

2013	Otto Hahn Medal of the Max Planck Society (honoring ≈30 scientists across all disciplines per year)
2012–13	Feodor Lynen PostDoc fellowship of the Alexander von Humboldt foundation
2012–13	Offers for highly selective PostDoc fellowships by the German Academic Exchange Service (DAAD) and École Polytechnique (both declined)
2012–14	Selected participant in the Fast Track Program of the Robert Bosch Foundation as only Computer Scientist among the 20 awardees
2012	Best paper award at GECCO, for a paper with Benjamin Doerr
2010–12	Google Europe PhD Fellowship covering my salary, travel costs, and other expenses
2010	Best paper award at GECCO, for a paper with Benjamin Doerr and Daniel Johannsen
2004–07	Fellow of the Foundation of German Business (SDW), undergraduate stipend

Selected Recent Project Leadership Roles

2021-23	PI of DIM RFSI project *Optimization Meets Systems Biology (Opt4SysBio)*, to establish a collaboration with the Systems Biology group at Institute Pasteur. 84k€ (18 months PostDoc position + expenses), starting 01/2021
2019-22	PI of DIM RFSI project *Automated Algorithm Selection for Discrete Black-Box Optimization (AlgoSelect)*. 55k€ (13 months PostDoc position), since 09/2019
2020-22	PI of International Emerging Action *Theoretical Foundations of Dynamic Parameter Selection for Randomized Optimization Heuristics*, joint CNRS - RFBR project, with Benjamin Doerr, Arina Buzdalova, and Maxim Buzdalov. 4k€ p.a., 2020-2022
2018-20	PI of DIM RFSI project *Online Configuration of Heuristic Optimization Algorithms*, 12k€ 2018-2019
2016-20	Vice-chair of EU-funded COST Action *Improving Applicability of Nature-Inspired Optimisation by Joining Theory and Practice*. 34 participating countries, 100k-150k€ p.a.
2014-22	PI and member of various PGMO/Labex Mathématique Hadamard projects, see this list for details. Each project has a budget of 7k-15k€ p.a.

Editorial Responsibilities, Program Committees, and Similar

2022	Senior area chair for Evolutionary Computation at the AutoML Conference 2022, co-located with ICML'22
2021-22	Guest editor of a special issue in IEEE Transactions on Evolutionary Computation on *Benchmarking Sampling-Based Optimization Heuristics: Methodology and Software* (top-tier journal of the field)
2020	PC chair of PPSN 2020, with M. Emmerich and H. Trautmann (268 submissions)
since 2020	Appointed member of the EC Technical Committee of the IEEE Computational Intelligence Society. We organize special sessions in conferences and journals, run tutorials and workshops, and organize other activities that promote the research, development, application, and teaching of evolutionary computation or related techniques. We also contribute to policy discussions in the IEEE Computational Intelligence Society.
since 2019	Associate Editor, ACM Transactions on Evolutionary Learning and Optimization
since 2019	Editorial Board member, Evolutionary Computation Journal (MIT press)
2019	PC chair of 15th ACM/SIGEVO Workshop on Foundations of Genetic Algorithms, with D. Arnold (31 submissions)
since 2018	Advisory Board Member of Springer's Natural Computing Series
2017	PC chair theory track of GECCO, with D. Sudholt
2017–18	Guest editor of a special issue in Algorithmica, with D. Sudholt
2015	PC chair theory track of GECCO, with F. Chicano
2015-17	Guest editor of a special issue in Algorithmica, with F. Chicano
since 2011	PC member in conferences on **general algorithms** [Computability in Europe'21, ESA'17 (Track B)], **evolutionary computation** [e.g., GECCO'11–'22, WCCI/CEC'13–'22, PPSN'12–'22, EvoCop'17–'22, EA'17–'19, SSCI'15–'21, FOGA'15–'21], **artificial intelligence** [IJCAI'20–'24, ECAI'20, ECML-PKDD'20-'21, LOD'20], AAAI student papers '20–'21, and **distributed computing** [IPDPS'17, ICDCD'15, FOMC'13]

Recent Roles in the French Academic Environment

since 01/21	Member of the "commission scientifique" de l'UFR d'Ingénierie, Sorbonne Université
since 09/20	Member of the "commission locaux" of LIP6
since 03/18	Member of the "conseil scientifique" of GT Complexité et algorithmes (CoA), part of the Groupement de Recherche *Informatique Mathématique* (GdR IM)

Recent Hiring Committee Membership

2022	Member of the hiring committee for the position *Maître de conférences - Profil: Probabilités et Applications* at the Mathematics department of Sorbonne Université
2019	Member of the hiring committee for the position *Maître de conférences no. 25MCF1683 (0110) Profil: Probabilités et Applications* at the Mathematics department of Sorbonne Université
2018	Member of the hiring committee for the position *Maître de conférences no. 25MCF2733 (0015) - Profil: Mathématiques fondamentales et interactions* at the Mathematics department of Sorbonne Université

Recent Grant Reviewing Services

2021	Marie Sklodowska-Curie Postdoctoral Fellowships (HORIZON-MSCA-2021-PF), reviewed 3 proposals
2020	Marie Sklodowska-Curie Actions Innovative Training Networks (H2020-MSCA-ITN-2020), reviewed 3 ITN proposals
2020	Dutch Research Council, NWO, reviewed 1 Veni grant application
2019	Marie Sklodowska-Curie Actions Innovative Training Networks (H2020-MSCA-ITN-2019), reviewed 3 ITN proposals
2018	Austrian Science Fund (FWF), reviewed 1 Erwin Schroedinger fellowship application
2018	ALECS, a Marie Sklodowska-Curie COFUND fellowship program at Lero, the Irish Software Research Centre, reviewed 3 applications

PhD Jury Membership

2022	Zbynk Pitra, Czech Technical University in Prague, Czech Republic (reviewer)
2022	Urban Skvorc, Jozef Stefan International Postgraduate School, Slovenia (reviewer)
2021	Marcelo de Souza, Universidade Federal Do Rio Grande Do Sul, Brazil (jury member)
2021	Jörg Stork, Vrije Universiteit Amsterdam, The Netherlands (reviewer (2021) and jury member (2022))
2020	Brieuc Guinard, Université de Paris, France (jury member, but I was unfortunately sick on the day of the defense and could not attend it)
2018	Hao Wang, Leiden University, The Netherlands (reviewer and on-site jury member)

Selected Invited Presentations

2022	BIOMA conference, Maribor, Slovenia
2022	SIGEVO summer school, online
2022	Conseil d'aministration du CNRS, Paris, France
2021	IEEE SSCI conference, Students and Young Professionals panel, online
2021	SIGEVO summer school, online
2021	ECOLE ITN training school, online
2020	Caleidoscope Research school in computational complexity, Paris, France (canceled due to COVID-19)
2017	GECCO summer school, speaker and mentor
2017	MENDEL International Conference on Soft Computing, Brno, Czech Republic
2016	Journées Graphes et Algorithmes, Paris, France
2016	ALEA in Europe Meeting, Munich, Germany
2013	Artificial Evolution Summer School, Quiberon, France

Participation at By-Invitation-Only Events

2022	Dagstuhl seminar on Theory of Randomized Optimization Heuristics
2021	Dagstuhl seminar on Challenges in Benchmarking Optimization Heuristics (I was invited but the seminar got canceled due to COVID-19)
2016	Dagstuhl seminar on Automated Algorithm Selection and Configuration
2016	Dagstuhl seminar on Evolution and Computing
2015	Banff workshop on Discrepancy (declined, pregnant)
2015	Dagstuhl seminars on Theory of Evolutionary Algorithms
2014	ICERM workshop on Discrepancy Theory
2013	Oberwolfach workshop on Uniform Distribution Theory and Applications, Germany
2013	Dagstuhl seminar on Theory of Evolutionary Algorithms
2013	Dagstuhl seminar on Epidemic Algorithms and Processes: From Theory to Applications
2010	Dagstuhl seminar on Theory of Evolutionary Algorithms

Recent Organization of Events and Networks (main or co-organizer)

2022	Lorentz Center Workshop Benchmarked: Optimization Meets Machine Learning, 5k€ funding from Artificial Intelligence Journal
2022	Workshop chair at GECCO 2022
2022	Open Optimization Competition 2022, joint Nevergrad and IOHprofiler initiative
2022	Special Session at EvoApplications 2022 on Analysis of Evolutionary Computation Methods: Theory, Empirics, and Real-World Applications
2022	Special Session at IEEE WCCI 2022 on AutoDesign4EC: Automated Algorithm Design for Evolutionary Computation
2022	Workshop at GECCO 2022 on Good Benchmarking Practices for Evolutionary Computation
2021	Mini-Symposium Meta-Learning for Randomized Optimization Heuristics at the Joint Annual Conference of the German Mathematical Society (DMV) and the Austrian Mathematical Society (MG)
2021	Hot-off-the-Press chair at GECCO 2021
2021	Open Optimization Competition 2021
2022	Special Session at CEC 2021 on RepL4Opt: Representation Learning meets Meta-heuristic Optimization
2021	Workshops at GECCO (1/2), at GECCO (2/2), and at CEC
2020	Virtual Lorentz Center workshop Benchmarked: Optimization Meets Machine Learning, > 100 active participants
2020	Open Optimization Competition 2020
2020	Workshops at PPSN and at GECCO
since 2019	Founding member of the Benchmarking Network, an initiative to consolidate and to stimulate activities on benchmarking optimization heuristics. The network is very active in organizing various events and discussion forums. We are also preparing a survey on benchmarking best practices (first draft available at `https://arxiv.org/abs/2007.03488`)
2019	Dagstuhl seminar 19431 on Theory of Randomized Optimization Heuristics
2019	Late-Breaking Abstracts chair for GECCO
2019	Workshop on Discrete Black-Box Optimization Benchmarking
2017	COST training school (1 week summmer school, ≈40 participants, Paris)
2017	Dagstuhl seminar 17191 on Theory of Randomized Optimization Heuristics
2016	Tutorial chair for PPSN, with N. Bredeche
2014–16	women@GECCO workshops

Tutorial Speaker

- **Dynamic Parameter Choices in Evolutionary Computation**
  GECCO 2020 and WCCI/CEC 2020 (with Gregor Papa)
  GECCO 2017, 2018, 2019
  PPSN 2018

- **Benchmarking and Analyzing Iterative Optimization Heuristics with IOHprofiler**
  GECCO 2022 and WCCI/CEC 2022 (with Thomas Bäck, Hao Wang, Diederick Vermetten, Jacob de Nobel, Furong Ye)
  GECCO 2020 (with Thomas Bäck, Ofer M. Shir, Hao Wang)
  WCCI/CEC 2020, 2019 (with Thomas Bäck, Ofer M. Shir, Hao Wang)
- **Theory for Non-Theoreticians**
  GECCO 2016 (with Benjamin Doerr)
  WCCI/CEC 2016 (with Benjamin Doerr)
- **Black-Box Complexity: From Complexity Theory to Playing Mastermind**
  GECCO 2014, 2013 (with Benjamin Doerr)

Mentoring

2019	Workshop for highly gifted high school students in Munich, Germany
2017	Mentor for three students of the GECCO summer school
2015	Mentor for ACM scholarship awardee Irina Petrova at GECCO
2013–18	Mentor within the Minerva Program of the Max Planck Society, a network to support female PhD students through 1:1 coaching

Teaching Activities in Paris

I am since 2015 responsible for the course 2.24.2 on *Solving Optimization Problems with Search Heuristics* as part of the Parisian Master of Research in Computer Science (MPRI), 3 ECTS, 24 hours. From 2015 until 2020 I was co-teaching this course with C. Dürr. The course paused for one year in 2020/21. Since 2021/22 I co-teach it together with Evripidis Bampis.

Supervision of PostDoctoral Researchers (ongoing)

5. Koen van der Blom (09/2022-02/2024). Funded by ANR T-ERC project VARIATION
4. Anja Jankovic (09/2021-08/2022). ATER Sorbonne Université
3. Alexis Robbes (11/2021-04/2023). Funded by our DIM-RFSI project Opt4SysBio, joint with Institut Pasteur
2. Elena Raponi (05/2021-09/2021, 12/2021-5/2023), Elena first came to Paris for a jointly supervised internship at Facebook Artificial Intelligence Research lab and from December 2021 onwards, she will be a PRIME fellow of the German Academic Exchange Service (DAAD)
1. Martin Krejca (01/21-04/23), first funded by the RFSI DIM project AlgoSelect and since 05/2021 funded by the Paris Region Fellowship Programme.

Supervision of PostDoctoral Researchers (past)

1. Hao Wang (01/20 - 08/20), now Assistant Professor at Leiden University. Hao's position was was funded via the RFSI DIM project AlgoSelect.

Supervision of PhD Students (ongoing)

4. Océane Fourquet (since 10/2021)
   Integrative models for decision support system in ovarian cancer care
   Sorbonne Université, main supervisor, co-supervising with with Benno Schwikowski
3. Mara Santarelli (since 10/2021)
   Resistant subpopulations in ovarian cancer: Computational tools for their identification and treat-ment selection in clinical data using single-cell technology
   Sorbonne Université, main supervisor, co-supervising with with Benno Schwikowski
2. François Clement (since 10/2021)
   Efficient Algorithms for Discrepancy Subset Selection
   Sorbonne Université, main supervisor, EDITE scholarship, co-supervising with with Luís Paquete
1. Diederick Vermetten (since 01/20, 4 year PhD program, dblp entry)
   Integrated and Dynamic Algorithm Selection and Configuration
   Leiden University, jointly supervised with Thomas Bäck

Supervision of PhD Students (past)

4. Quentin Renau (02/19-01/22, 3 year PhD program, dblp entry)
   Landscape-Aware Selection of Metaheuristics for the Optimization of Radar Networks
   École Polytechnique, jointly supervised with Benjamin Doerr and Johann Dreo
   Joint CIFRE thesis between Thales, École Polytechnique, and Sorbonne Université

3. Furong Ye (10/17-06/22, thesis submitted 12/21, 4 year PhD program, dblp entry)
   Benchmarking Discrete Optimization Heuristics: From Building a Sound Experimental Environment to Algorithm Configuration
   Leiden University, jointly supervised with Thomas Bäck and Hao Wang

2. Anja Jankovic (10/18–12/21, 3 year PhD program, dblp entry)
   Towards Online Landscape-Aware Algorithm Selection in Numerical Black-Box Optimization
   Sorbonne Université, main supervisor, EDITE scholarship

1. Jing Yang (10/15–09/18, 3 year PhD program, dblp entry)
   From a Complexity Theory of Evolutionary Computation to Superior Randomized Search Heuristics
   École Polytechnique, jointly supervised with Benjamin Doerr
   After finishing her PhD studies, Jing moved on to an industrial position.

Supervision of Undergraduate Students and PhD Interns

21. Maria Laura SANTONI (ERASMUS+ student from University of Camerino, 02/2022-09/2022)
    Black-Box Optimization Benchmarking for Topology Optimization
    joint with Renato De Leone and Elena Raponi

20. Navin Pophare (Leiden University, 10/2021-)
    Analyzing the Anytime Performance of Numerical Black-Box Optimization Heuristics
    joint with Diederick Vermetten and Hao Wang

19. Alix Zheng (Sorbonne Université, 06/2021-09/2021)
    Automated Algorithm Configuration for Genetic Algorithms
    joint with Johann Dreo Now continuing her Master studies at Sorbonne Université

18. Huilin Li (Leiden University, 03/2021-01/2022)
    Standardizing Nature-Inspired Optimizers
    joint with Anna Kononova and Diederick Vermetten

17. Océane Fourquet (Sorbonne Université, 02/2021-08/2021)
    Monotonic Models for Classification Tasks in Systems Biology
    joint with Benno Schwikowski Now doing her PhD under our supervision

16. Dominik Schröder (Leiden University, 07/2020-04/2021)
    Dynamic algorithm selection for continuous black-box optimization
    joint with Thomas Bäck and Hao Wang Now working in a company in Germany

15. Amine Aziz-Alaoui (ISAE-SUPAERO, summer 2020)
    Automated Algorithm Design using Exploratory Landscape Analysis
    joint with Benjamin Doerr and Johann Dreo, 1 publication in preparation.
    Accepted a PhD position at Institut de Mathématiques de Toulouse (IMT)

14. Andy Rabetafika (ISAE-SUPAERO, summer 2020)
    Machine Learning and Discrepancy Theory
    joint with Benjamin Doerr and Johann Dreo. Continues his Master studies at ISAE-SUPAERO

13. Raphaël Cosson (MPRI, Paris Diderot Univ., summer 2019)
    Online Configuration of Heuristic Optimization Algorithms
    joint with Thomas Weise, 1 publication in preparation.
    Since 11/2019 PhD student at CRIStAL, Université de Lille

12. Vincent Aubry (MPRI, ENS, summer 2019)
    Query Complexity of Permutation Mastermind
    joint with Benjamin Doerr

11. Anissa Kheireddine (Sorbonne Université, summer 2019)
    Dynamic Algorithm Configuration for Interactive Learning
    joint with Thibaut Lust
    Since 10/2019 PhD student at LIP6, Sorbonne Université

10. Diederick Vermetten (Leiden University, 09/2018-11/2019)
    Online Selection of CMA-ES Variants
    joint with Thomas Bäck, GECCO 2019 paper
    Now doing his PhD studies under our supervision

9. Nathan Buskulic (Sorbonne Université, summer 2018)
   Optimal Evolutionary Algorithms with Dynamic Parameters
   Main supervisor, GECCO 2019 poster, 1 Evol. Comput. journal paper
   Completed his Master studies at TU Delft and Sorbonne Université. Now PhD student at
   University of Siegen, Germany

8. Anja Jankovic (Sorbonne Université, summer 2018)
   Randomness in Scheduling
   (joint with Fanny Pascual and Nguyen Kim Thang)
   Now doing her PhD studies under my supervision

7. Eduardo Carvalho Pinto (MPRI, Ecole Polytechnique, summer 2017)
   Self-Adjusting Parameter Choices for Discrete Black-Box Optimization
   Main supervisor, EA 2017 poster, PPSN 2018 paper
   Joined a start-up after finishing his Master studies.

6. Jing Yang (École Polytechnique, summer 2015)
   Tight Bounds for the Unbiased Black-Box Complexity of OneMax
   joint with Benjamin Doerr, GECCO 2016 paper.
   Continued with her PhD studies under our supervision

5. Axel de Perthuis de Laillevault (École Polytechnique, summer 2014)
   Evolutionary Algorithms with Iterated Initial Sampling
   joint with Benjamin Doerr, GECCO 2015 paper
   continued with a Master M2 at Sorbonne Université

4. Franziska Ebel (MPII, defended spring 2013)
   Lessons from the Black-Box: Fast Crossover-Based Genetic Algorithms
   joint with Benjamin Doerr, GECCO 2013 best paper award, TCS 2015
   moved to industry and is now a PhD student at the University of Stuttgart

3. G. Ramakrishna (PhD student intern at MPII, summer 2012)
   Computing Minimum Cycle Bases in Graphs of Bounded Treewidth
   joint with Jens M. Schmid, WG 2013 paper, J. Graph Algorithms Appl. 2014
   continued his PhD studies in India after his research stay at MPII

2. Vijay Ingalalli (MPII, defended autumn 2011)
   Evolutionary Algorithms to Compute Lower Bounds for the Star Discrepancy
   joint with Benjamin Doerr
   did a PhD at Université de Montpellier

1. Jong-Hyun Lee (MPII, winter 2011/12)
   Playing Mastermind with Constant Size Memory
   joint with Benjamin Doerr and Reto Spöhel
   continued his studies in South Korea after his research stay at MPII