

# FABIO CARAFFINI

CURRICULUM VITAE

## EMPLOYMENT HISTORY

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From 1/8/2020 Associate Professor - Research & Innovation (De Montfort University, UK)  
1/3/2015 - 31/7/2020 VC2020/Senior Lecturer in Computer Science (De Montfort University, UK)  
18/06/2012 - 28/2/2015 Hourly-Paid Part-Time Lecturer (De Montfort University, UK)

## MEMBERSHIPS

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From 2012 IEEE CIS Member  
From 2021 ACM Member  
From 2020 Benchmarking Network  
From 2020 IEEE CIS Task Force on Benchmarking

## HONOURS DEGREES

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11/2008 BSc in Electronics Engineering (University of Perugia, Italy)  
11/2011 MSc in Telecommunications Engineering (University of Perugia, Italy)  
10/2014 PhD in Computer Science (De Montfort University, UK)  
10/2016 PhD in Computing and Mathematical Sciences (University of Jyväskylä, Finland)

## CERTIFICATES & PROFESSIONAL RECOGNITION

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10/2016 Post Graduate Certificate in Higher Education (PGCertHE)  
10/2016 Fellow of the Higher Education Academy (FHEA)

## AWARDS

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30/10/2020 Editor's Choice Article (DOI:10.3390/math7111051, Mathematics, MDPI)  
14/05/2020 Featured Paper (DOI:10.3390/math8050785, Mathematics, MDPI)  
7/2016 Publons Reviewer Awards (Computer Science)  
7/2016 Publons Reviewer Awards (Mathematics)  
4/2013 IEEE CIS outstanding Student Travel Grant 2013 [500 USD]  
4/2013 Laxton Bequest and Consolidated Travel Funds (DMU) [800 GBP]  
7/2012-6/2014 PhD bursary (De Montfort university) [26K GBP]  
5-9/2011 TUCEP Fund for International Internships [2500 EUR]

## LEADERSHIP, ADMINISTRATIVE DUTIES & TEACHING

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FROM 1/1/2021 Institute Head of Research Students  
1/8/2020-31/1/2021 Deputy Subject Group Leader - Games Mathematics & Intelligent Systems  
FROM 1/9/2016 Programme leader of MSc Intelligent Systems  
Programme leader of MSc Intelligent Systems & Robotics  
FROM 9/2016 Module leader of Calculus I (Level 4), Calculus II (undergrad modules)  
FROM 9/2015 Module leader of Computational Intelligence Optimisation (postgrad module)

## SECURED GRANTS

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### Externally funded:

MAR 2018 Newton-Fund Royal Academy of Engineering grant [50'000 GBP] (CI)  
OCT 2021 Leicester City Longitudinal Study [100'000 GBP]

### Internally funded:

De Montfort University, UK

- 3/2021 DMU GCRF 2021 (DMU) [**3'100 GBP**]
- 9/2020 Future Research Leaders 7 funds (DMU) [**1'500 GBP**]
- 1/4/2021 NLP Tool For Stop & Search (HEIF/DMU) [**17'124.80 GBP**]
- 2/2019 GCRF competition 2018/2019 (DMU) [**23'500 GBP**]
- 10/2018 VC2020 Additional Funding 2018/2019 (DMU) [**3'000 GBP**]
- 10/2018 Frontrunner Internship project (DMU) [**~ 2000 GBP**]

University of Jyväskylä, Finland

- 1-7/2015 Jyväskylä Grant for Computing and Mathematical Sciences [**10250 EUR**]
- 1-7/2012 Jyväskylä Grant for Computing and Mathematical Sciences [**10250 EUR**]

## RESEARCH STUDENT SUPERVISION & EXAMINATION

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### PhD completions:

- DR JOHANA FLOREZ-LOZANO 14/11/2019 Pontifical Xavierian University
- DR RAYMOND MOODLY 17/01/2020 De Montfort University
- DR DINESH MOTHU 19/06/2020 De Montfort University

### PhD supervision:

- MATTHEW FOX De Montfort University
- RAFAEL DAVID LINERO RAMOS Pontifical Xavierian University
- SEAN CARROLL De Montfort University
- ABDALLAH HARMOUSH De Montfort University

### Internal Examiner:

- MR WILLIAM LAWRENCE 7/09/2020 De Montfort University

### INVITED TALKS

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- *Optimisation Applications in Engineering* (Nov 2018, EIA University, Colombia)
- *Metaheuristic Optimisation: from theory to tool implementation* (Nov 2018, EIA)

### EDITORIAL ACTIVITIES

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#### Editorial board member of:

- Mathematics (MDPI) [FROM 3/03/2020]

#### Associate Editor for:

- International Journal of Intelligent Systems (Wiley) [FROM 8/12/2020]

#### Special sessions & workshops:

- 'Workshop on Analysing Algorithmic Behaviour of Optimisation Heuristics' (GECCO 2021, 2022)
- 'Applications of Nature-inspired Computing for Sustainability and Development' (EVO\* 2021, EVO\* 2022)
- 'Recent Advances in Computational Intelligence Techniques and Applications' (IEEE WCCI 2020)
- 'Workshop on Memetic Computing' (IEEE SSCI 2014)

#### Special Issues:

- Applications of Computational Intelligence based Systems for Societal Enhancement (IJIS, Wiley, 2020)
- Swarm and Evolutionary Computation—Bridging Theory and Practice (MDPI Mathematics, 2020-2021)
- Artificial Intelligence for Sustainable Development (MDPI, Applied Sciences, 2020-2021)
- Evolutionary Computation & Swarm Intelligence (MDPI Mathematics, 2019-2020)
- Emerging Artificial Intelligence (AI) Technologies for Learning (MDPI, Applied Sciences, 2020-2021)

### OTHER PEER ESTEEM INDICATORS

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#### Invited grant proposals reviewer for

- the Engineering and Physical Sciences Research Council (EPSRC)
- the Natural Sciences and Engineering Research Council of Canada (NSERC)

#### Invited as external supervisor of

- 1 MSc student at Leiden University (The Netherlands)
- 2 PhD students at Pontifical Xavierian University (Colombia)

#### Technical peer reviewer for (*selected forums*)

- IEEE Transactions on Evolutionary; Computation (Q1, IF 11.169)
- IEEE Transaction on Cybernetics; (Q1, IF 11.079)
- International Journal of Intelligent Systems\*, Wiley; (Q1, IF 10.312)
- International Journal of Neural Systems\*, IOS Press; (Q1, IF 6.507)
- Swarm and Evolutionary Computation\*, Elsevier; (Q1, IF 6.912)
- Information Sciences, Elsevier\*; (Q1, IF 5.910)
- Applied Soft Computing\*, Elsevier; (Q1, IF 5.472 )
- Expert Systems With Applications, elsevier; (Q1, IF 5.452)
- Integrated Computer-Aided Engineering\*, IOS Press; (Q1, IF 4.904)
- journal of Retailing and Consumer Services\*, Elsevier; (Q1, IF 4.219)
- Soft Computing\*, Springer; (Q2, IF 3.050)

\* indicates selected forums where I have published

#### Programme Committee of (*selected events*)

- IEEE Congress on Evolutionary Computation (CEC) 2013-2022;
- IEEE Symposium Series on Computational Intelligence (SSCI) 2013-2022;
- EvoStar 2017-2022;
- GECCO: The Genetic and Evolutionary Computation Conference 2019-2021;
- Parallel Problem Solving from Nature (PPSN) 2020
- International Conference on Swarm, Evolutionary, and Memetic Computing (SEMCCO) 2013
- Workshop on Machine Learning & Optimization for Communications Networks (MaLeN) 2020
- ECTA at International Joint Conference on Computational Intelligence (IJCC) 2019-2022
- Conference on Computer Science and Intelligence Systems (FedCSIS) 2022

**Advisory committee memeber of:** ICIERA-2021

## PUBLICATIONS

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### Journal publications

- [J32] Elmina Homapour, Larry Su, Fabio Caraffini, and Francisco Chiclana. Regression analysis of macroeconomic conditions and capital structures of publicly listed british firms. *Mathematics*, 10(7):1119, Mar 2022
- [J31] Fabio Caraffini, Francisco Chiclana, Raymond Moodley, and Mario Gongora. Applications of computational intelligence-based systems for societal enhancement. *International Journal of Intelligent Systems*, 37(4):2679–2682, 2022
- [J30] Antonio Agresta, Marco Baiocchi, Chiara Biscarini, Fabio Caraffini, Alfredo Milani, and Valentino Santucci. Using optimisation meta-heuristics for the roughness estimation problem in river flow analysis. *Applied Sciences*, 11(22), 2021
- [J29] Anna V. Kononova, Fabio Caraffini, and Thomas Bäck. Differential evolution outside the box. *Information Sciences*, 581:587–604, 2021
- [J28] Stuart O’Connor, Salim Hasshu, James Bielby, Simon Colreavy-Donnelly, Stefan Kuhn, Fabio Caraffini, and Richard Smith. Scips: A serious game using a guidance mechanic to scaffold effective training for cyber security. *Information Sciences*, 580:524–540, 2021
- [J27] Raymond Moodley, Francisco Chiclana, Fabio Caraffini, and Mario Gongora. Using self-organising maps to predict and contain natural disasters and pandemics. *International Journal of Intelligent Systems*, 37(4):2739–2757, 2022
- [J26] Mohammad Khishe, Fabio Caraffini, and Stefan Kuhn. Evolving deep learning convolutional neural networks for early covid-19 detection in chest x-ray images. *Mathematics*, 9(9):1002, Apr 2021
- [J25] Alejandro Pena, Alejandro Patino, Francisco Chiclana, Fabio Caraffini, Mario Gongora, Juan David Gonzalez-Ruiz, and Eduardo Duque-Grisales. Fuzzy convolutional deep-learning model to estimate the operational risk capital using multi-source risk events. *Applied Soft Computing*, page 107381, 2021
- [J24] Giovanni Iacca and Fabio Caraffini. Re-sampled inheritance compact optimization. *Knowledge-Based Systems*, 208:106416, 2020
- [J23] Johana M Florez-Lozano, Fabio Caraffini, Carlos Parra, and Mario Gongora. A robust decision-making framework based on collaborative agents. *IEEE Access*, 8:150974–150988, 2020
- [J22] Johana Florez-Lozano, Fabio Caraffini, Carlos Parra, and Mario Gongora. Cooperative and distributed decision-making in a multi-agent perception system for improvised land mines detection. *Information Fusion*, 64:32 – 49, 2020
- [J21] Simon Colreavy-Donnelly, Fabio Caraffini, Stefan Kuhn, Mario Gongora, Johana Florez-Lozano, and Carlos Parra. Shallow buried improvised explosive device detection via convolutional neural networks. *Integrated Computer-Aided Engineering*, pages 1–14, 2020

- [J20] Fabio Caraffini and Giovanni Iacca. The SOS platform: designing, tuning and statistically benchmarking optimisation algorithms. *Mathematics*, page 785., 2020
- [J19] Raymond Moodley, Francisco Chiclana, Jenny Carter, and Fabio Caraffini. Using data mining in educational administration: A case study on improving school attendance. *Applied Sciences*, 10(9):3116, Apr 2020
- [J18] Athinoula A. Kosti, Simon Colreavy-Donnelly, Fabio Caraffini, and Zacharias A. Anastassi. Efficient Computation of the Nonlinear Schrödinger Equation with Time-Dependent Coefficients. *Mathematics 2020, Vol. 8, Page 374*, 8(3):374, mar 2020
- [J17] Jia Ming Yeoh, Fabio Caraffini, Elmira Homapour, Valentino Santucci, and Alfredo Milani. A clustering system for dynamic data streams based on metaheuristic optimisation. *Mathematics*, 12:1229, 2019
- [J16] Valentino Santucci, Alfredo Milani, and Caraffini Fabio. An optimisation-driven prediction method for automated diagnosis and prognosis. *Mathematics*, 7:1052, 2019
- [J15] Raymond Moodley, Francisco Chiclana, Fabio Caraffini, and Jenny Carter. A product-centric data mining algorithm for targeted promotions. *Journal of Retailing and Consumer Services*, page 101940, 2019
- [J14] Fabio Caraffini, Anna V. Kononova, and David Corne. Infeasibility and structural bias in differential evolution. *Information Sciences*, pages 161 – 179, 2019
- [J13] Fabio Caraffini, Ferrante Neri, and Michael Epitropakis. Hyperspam: A study on hyper-heuristic coordination strategies in the continuous domain. *Information Sciences*, 477:186 – 202, 2019
- [J12] Fabio Caraffini and Ferrante Neri. A study on rotation invariance in differential evolution. *Swarm and Evolutionary Computation*, 50:100436, 2019
- [J11] Raymond Moodley, Francisco Chiclana, Fabio Caraffini, and Jenny Carter. Application of uninorms to market basket analysis. *International Journal of Intelligent Systems*, 34(1):39–49, 2019
- [J10] Jixiang Cheng, Gexiang Zhang, Fabio Caraffini, and Ferrante Neri. Multicriteria adaptive differential evolution for global numerical optimization. *Integrated Computer-Aided Engineering*, 22(2):103–107, 2015
- [J9] Anna Kononova, David W. Corne, Philippe De Wilde, Vsevolod Shneer, and Fabio Caraffini. Structural bias in population-based algorithms. *Information Sciences*, 298:468–490, 2015
- [J8] Ilpo Poikolainen, Ferrante Neri, and Fabio Caraffini. Cluster-based population initialization for differential evolution frameworks. *Information Sciences*, 297:216–235, 2015
- [J7] Fabio Caraffini, Ferrante Neri, and Lorenzo Picinali. An analysis on separability for memetic computing automatic design. *Information Sciences*, 265:1 – 22, 2014
- [J6] Giovanni Iacca, Fabio Caraffini, and Ferrante Neri. Multi-strategy coevolving aging particle optimization. *International Journal of Neural Systems*, 24(01):1450008, 2014. PMID: 24344695
- [J5] Fabio Caraffini, Ferrante Neri, Benjamin N. Passow, and Giovanni Iacca. Re-sampled inheritance search: High performance despite the simplicity. *Soft Computing*, pages 1–22, 2013
- [J4] I. Poikolainen, Giovanni Iacca, Fabio Caraffini, and Ferrante Neri. Focusing the search: a progressively shrinking memetic computing framework. *International Journal of Innovative Computing and Applications*, 5:127–142, 2013
- [J3] Giovanni Iacca, Fabio Caraffini, and Ferrante Neri. Memory-saving memetic computing for path-following mobile robots. *Applied Soft Computing*, 13(4):2003 – 2016, 2013
- [J2] Fabio Caraffini, Ferrante Neri, Giovanni Iacca, and Aran Mol. Parallel memetic structures. *Information Sciences*, 227(0):60 – 82, 2013
- [J1] Giovanni Iacca, Fabio Caraffini, and Ferrante Neri. Compact differential evolution light: high performance despite limited memory requirement and modest computational overhead. *Journal of Computer Science and Technology*, 27(5):1056–1076, 2012

## Peer reviewed conference proceedings

- [P30] Bas van Stein, Fabio Caraffini, and Anna V. Kononova. *Emergence of Structural Bias in Differential Evolution*, page 1234–1242. Association for Computing Machinery, New York, NY, USA, 2021
- [P29] Diederick Vermetten, Anna V. Kononova, Fabio Caraffini, Hao Wang, and Thomas Bäck. *Is There Anisotropy in Structural Bias?*, page 1243–1250. Association for Computing Machinery, New York, NY, USA, 2021
- [P28] Anna V. Kononova, Fabio Caraffini, Hao Wang, and Thomas Bäck. Can compact optimisation algorithms be structurally biased? In Thomas Bäck, Mike Preuss, André Deutz, Hao Wang, Carola Doerr, Michael Emmerich, and Heike Trautmann, editors, *Parallel Problem Solving from Nature – PPSN XVI*, pages 229–242, Cham, 2020. Springer International Publishing
- [P27] Simon Colreavy-Donnelly, Stefan Kuhn, Fabio Caraffini, Stuart O’Connor, Zacharias Anastassi, and Simon Coupland. A neural network for interpolating light-sources. In *2020 IEEE 44th Annual Computers, Software, and Applications Conference (COMPSAC)*, pages 1634–1640. IEEE, 2020
- [P26] Johana Florez-Lozano, Fabio Caraffini, Carlos Parra, and Mario Gongora. Training data set assessment for decision-making in a multiagent landmine detection platform. In *2020 IEEE Congress on Evolutionary Computation (CEC)*, pages 1–8, 2020
- [P25] Anna V. Kononova, Fabio Caraffini, Hao Wang, and Thomas Bäck. Can single solution optimisation methods be structurally biased? In *2020 IEEE Congress on Evolutionary Computation (CEC)*, pages 1–9, 2020

- [P24] Matthew Fox, Shengxyang Yang, and Fabio Caraffini. An experimental study of prediction methods in robust optimization over time. In *2020 IEEE Congress on Evolutionary Computation (CEC)*, pages 1–7, 2020
- [P23] Isis Bonet, Fabio Caraffini, Alejandro Pena, Alejandro Puerta, and Mario gongora. Oil palm detection via deep transfer learning. In *2020 IEEE Congress on Evolutionary Computation (CEC)*, pages 1–8, 2020
- [P22] James Bielby, Stefan Kuhn, simon Colreavy-Donnelly, Fabio Caraffini, Sturat O’Connor, and Zacharias Anastassi. Identifying parkinson’s disease through the classification of audio recording data. In *2020 IEEE Congress on Evolutionary Computation (CEC)*, pages 1–7, 2020
- [P21] Conor Fahy, Fabio Caraffini, and Mario Gongora. A multi-agent system for modelling the spread of lethal wilt in oil-palm plantations. In *2020 IEEE Congress on Evolutionary Computation (CEC)*, pages 1–7, 2020
- [P20] A. Peña, I. Bonet, D. Manzur, M. Gongora, and F. Caraffini. Validation of convolutional layers in deep learning models to identify patterns in multispectral images. In *2019 14th Iberian Conference on Information Systems and Technologies (CISTI)*, pages 1–6, June 2019
- [P19] Giovanni Iacca and Fabio Caraffini. Compact optimization algorithms with re-sampled inheritance. In Paul Kaufmann and Pedro A. Castillo, editors, *Applications of Evolutionary Computation*, pages 523–534, Cham, 2019. Springer International Publishing
- [P18] Fabio Caraffini, Giovanni Iacca, and Anil Yaman. Improving (1+1) covariance matrix adaptation evolution strategy: A simple yet efficient approach. *AIP Conference Proceedings*, 2070(1):020004, 2019
- [P17] Fabio Caraffini and Anna V. Kononova. Structural bias in differential evolution: A preliminary study. *AIP Conference Proceedings*, 2070(1):020005, 2019
- [P16] Anil Yaman, Giovanni Iacca, and Fabio Caraffini. A comparison of three differential evolution strategies in terms of early convergence with different population sizes. *AIP Conference Proceedings*, 2070(1):020002, 2019
- [P15] Fabio Caraffini and Ferrante Neri. Rotation invariance and rotated problems: An experimental study on differential evolution. In Kevin Sim and Paul Kaufmann, editors, *Applications of Evolutionary Computation. Lecture Notes in Computer Science, Volume 10784*, pages 597–614, Cham, 2018. Springer International Publishing
- [P14] F. Caraffini, F. Neri, and G. Iacca. Large scale problems in practice: The effect of dimensionality on the interaction among variables. In Giovanni Squillero and Kevin Sim, editors, *Applications of Evolutionary Computation. EvoApplications 2017. Lecture Notes in Computer Science, vol 10199.*, pages 636–652, Cham, April 19-21 2017. Springer International Publishing
- [P13] G. Iacca, F. Caraffini, and F. Neri. Continuous parameter pools in ensemble differential evolution. In *Computational Intelligence, 2015 IEEE Symposium Series on*, pages 1529–1536. IEEE, 2015
- [P12] Michael G. Epitropakis, Fabio Caraffini, Ferrante Neri, and Edmund Burke. Separability prototype for automatic memes with adaptive operator selection. In *IEEE Symposium Series on Computational Intelligence, Workshop on Memetic Computing*, pages 70–77. IEEE, 2014
- [P11] Giovanni Iacca, Ferrante Neri, Fabio Caraffini, and Ponnuthurai Nagaratnam Suganthan. *A Differential Evolution Framework with Ensemble of Parameters and Strategies and Pool of Local Search Algorithms*, pages 615–626. Springer Berlin Heidelberg, Berlin, Heidelberg, 2014
- [P10] Fabio Caraffini, Giovanni Iacca, Ferrante Neri, L. Picinali, and E. Mininno. A cma-es super-fit scheme for the re-sampled inheritance search. In *Evolutionary Computation (CEC), 2013 IEEE Congress on*, pages 1123–1130, June 2013
- [P9] Giovanni Iacca, Fabio Caraffini, Ferrante Neri, and E. Mininno. Single particle algorithms for continuous optimization. In *Evolutionary Computation (CEC), 2013 IEEE Congress on*, pages 1610–1617, June 2013
- [P8] Fabio Caraffini, Ferrante Neri, Jixianga Cheng, Gexianga Zhang, Lorenzo Picinali, Lorenzo Iacca, and Ernesto Mininno. Super-fit multicriteria adaptive differential evolution. In *Evolutionary Computation (CEC), 2013 IEEE Congress on*, pages 1678–1685, June 2013
- [P7] Fabio Caraffini, Ferrante Neri, Mario Gongora, and Benjamin Passow. Re-sampling search: A seriously simple memetic approach with a high performance. In *IEEE Symposium Series on Computational Intelligence, Workshop on Memetic Computing*, pages 52–59, April 2013
- [P6] Fabio Caraffini, Ferrante Neri, and Ilpo Poikolainen. Micro-differential evolution with extra moves along the axes. In *IEEE Symposium Series on Computational Intelligence, Symposium on Differential Evolution*, pages 46–53, April 2013
- [P5] Fabio Caraffini, Giovanni Iacca, Ferrante Neri, and E. Mininno. Three variants of three stage optimal memetic exploration for handling non-separable fitness landscapes. In *Proceedings of the UK Workshop on Computational Intelligence*. IEEE, September 2012
- [P4] Fabio Caraffini, Giovanni Iacca, Ferrante Neri, and Ernesto Mininno. The importance of being structured: a comparative study on multi stage memetic approaches. In *Proceedings of the UK Workshop on Computational Intelligence*. IEEE, September 2012
- [P3] Ferrante Neri, M. Weber, Fabio Caraffini, and I. Poikolainen. Meta-lamarckian learning in three stage optimal memetic exploration. In *Proceedings of the UK Workshop on Computational Intelligence*. IEEE, September 2012
- [P2] I. Poikolainen, Fabio Caraffini, Ferrante Neri, and M. Weber. Handling non-separability in three stage memetic exploration. In *Proceedings of the Fifth International Conference on Bioinspired Optimization Methods and their Applications*, pages 195–205, May 2012
- [P1] Giovanni Iacca, Fabio Caraffini, Ferrante Neri, and E. Mininno. Robot base disturbance optimization with compact differential evolution light. In Di Chio C. et al., editor, *Applications of Evolutionary Computation. EvoApplications 2012. Lecture Notes in Computer Science, vol 7248.*, pages 285–294. Springer, Berlin, Heidelberg, April 2012

## Chapters of book

- [C1] Diederick Vermetten, Bas van Stein, Anna V. Kononova, and Fabio Caraffini. *Analysis of Structural Bias in Differential Evolution Configurations*, pages 1–22. Springer Singapore, Singapore, 2022

## Edited books

- [B1] Fabio Caraffini, Valentino Santucci, and Alfredo Milani. *Evolutionary Computation & Swarm Intelligence*. MDPI, 2021. online version

## Under review

- [R1] Daniela Zaharie, Fabio Caraffini, Madalina Mitran, Diederick Vermetten, and Anna V. Kononova. Theoretical partial rankings for strategies of dealing with infeasible solutions: case of differential evolution applied to box-constrained problems. In *Lecture Notes in Computer Science, vol 7248*. Springer, Berlin, Heidelberg, 2022
- [R2] Diederick Vermetten, Fabio Caraffini, Bas van Stein, , and Anna V. Kononova. *Using Structural Bias to Analyse the Behaviour of Modular CMA-ES*, page 9. Association for Computing Machinery, New York, NY, USA, 2022
- [R3] Simon Colreavy-Donnelly, Alan Ryan, Stuart O'Connor, Fabio Caraffini, Stefan Kuhn, and Salim Hasshu. Leveraging immersive technologies to support blended learning post covid-19. *Education and Information Technologies*, 2022
- [R4] Anna V. Kononova, Fabio Caraffini, Diederick Vermetten, Madalina Mitran, and Daniela Zaharie. The importance of being constrained: dealing with infeasible solutions in differential evolution and beyond. *Evolutionary Computation*
- [R5] Matthew Fox, Shengxyang Yang, and Fabio Caraffini. A modified moving peaks benchmark with attractors for evaluating evolutionary dynamic optimization algorithms. *Swarm and Evolutionary Computation*, 2021
- [R6] Diederick Vermetten, Bas van Stein, Fabio Caraffini, Leandro Minku, and Anna V. Kononova. BIAS: A Toolbox for Benchmarking Structural Bias in the Continuous Domain. *IEEE Transaction On Evolutionary Computation*, 9 2021
- [R7] James Izzard, Fabio Caraffini, and Francisco Chiclana. Towards a software tool for general meal optimisation. *Applied Intelligence*, 2021