

Dr. Jérémy Bonvoisin - Academic Profile May 5, 1983

jb@jeremybonvoisin.com • +44 (0) 7842 087205 • github.com/jbon • twitter.com/du33Jerry • google scholar

Summary

I'm an expert of sustainability in engineering design. I work to reduce the environmental impacts of products and to foster citizen participation in product development.

I dedicate my energy to build international and interdisciplinary teams around original, socially relevant and game changing ideas, such as [Open Source Product Development](#). The relevance and excellence of my

research has been trusted multiple times by European funding agencies and has been acknowledged with several awards. This is reflected in my numerous editorial roles in international conferences as well as in the pioneering [Journal of Open Hardware](#). I'm proud of the far reaching impacts of my work on practitioner communities, for example through the development of the standard [DIN SPEC 3501 - Open Source Hardware](#).

Appointments

University of Bath/Department of Mechanical Engineering Lecturer in engineering design	BATH, UNITED KINGDOM <i>March '18 – present</i>
Technische Universität Berlin / Chair of Industrial Information Technology Research associate	BERLIN, GERMANY <i>Nov '12 – Feb'18</i>
Institut National Polytechnique de Grenoble / Laboratoire G-SCOP Research assistant / PhD Candidate	GRENOBLE, FRANCE <i>Feb '09 – Nov '12</i>
Sopra Steria PLM consultant	ILE-DE-FRANCE <i>Apr '06 – Aug'08</i>

Academic degrees

Université Grenoble Alpes PhD in industrial engineering	GRENOBLE, FRANCE 2012
École Nationale Supérieure des Arts et Métiers Postgraduate diploma in eco-design and environmental management	CHAMBÉRY, FRANCE 2008
École Supérieure d'Informatique, Électronique et Automatique Master Degree in applied information technology (diplôme d'ingénieur)	LAVAL, FRANCE 2006

Significant research projects

- Open_Next:** H2020
Long title: *Company-community collaboration for open sourcing*. Key figures: 6MEUR budget over three years (2019-2021), 19 partners in 7 countries. Ambition: foster the adoption of open source product development practices in industry, particularly in SMEs. My role: initiator and principal investigator.
- Open!:** DFG (DE)/ANR (FR)
Long title: *Methods and tools for community-based product development*. Key figures: 750kEUR budget over three years (2016-2018), 6 partners from France and Germany. Ambition: understand and characterize new practices of product development emerging outside the traditional perimeter of the firm. My role: initiator and coordinator.
- CRC 1026:** DFG (DE)
Long title: *Collaborative Research Center 1026 Sustainable Manufacturing - Shaping Global Value Creation*. Key figures: 12MEUR budget over four years (2011-2015), 80 involved researchers and principal investigators. Ambition: address the breadth and depth of the role of manufacturing in sustainability. My role: research associate and managing director.
- SensCity:** FUI (FR)
Long title: *A City-level Machine-to-Machine Ecosystem*. Key figures: 13 partners, 6MEUR budget over two years (2010-2012). Ambition: Develop a technology of interoperable wireless sensor networks enabling the provision of services for a sustainable city. My role: PhD candidate.
- Synergico:** ANR (FR)
Long title: *SYnergie – enERGIe – COncption*. Key figures: 4 partners over two years (2009-2011). Ambition: Develop a systematic approach to steer the in-use energy efficiency of a product along the product development process. Role: research assistant.
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Publications

In peer reviewed journals

- Muschard, B., and J. Bonvoisin. 2019. CubeFactory2 – an Off-Grid and Circular 3D-Printing Mini-Factory. *Journal of Open Hardware*, 3(1), p3. DOI:10.5334/joh.15
- Bonvoisin, J., T. Buchert, M. Preidel, and R. Stark. 2018. How participative is open source hardware? Insights from online repository mining. *Design Science*, 4(19). DOI:10.1017/dsj.2018.15
- Stark, R., T. Buchert, S. Neugebauer, J. Bonvoisin, and M. Finkbeiner. 2017. Benefits and obstacles of Sustainable Product Development methods – A case study in the field of urban mobility. *Design Science*, 3(17). DOI:10.1017/dsj.2017.20
- Bonvoisin, J., R. Mies, R. Stark, and J.-F. Boujut. 2017. What is the source of open source hardware? *Journal of Open Hardware*, 1(1), p5. DOI:10.5334/joh.7
- Buchert, T., F. A. Halstenberg, J. Bonvoisin, K. Lindow, and R. Stark. 2017. Target-Driven Selection and Scheduling of Methods for Sustainable Product Development. *Journal of Cleaner Production*, 161: 403–421. DOI:10.1016/j.jclepro.2017.05.067
- Bonvoisin, J. 2017. Limits of Ecodesign: The Case for Open Source Product Development. *International Journal of Sustainable Engineering* 10 (4-5): 198–206. DOI:10.1080/19397038.2017.1317875
- Bonvoisin, J., F. A. Halstenberg, T. Buchert, and R. Stark. 2016. A systematic literature review on modular product design. *Journal of Engineering Design*, 27(7):488-514. DOI:10.1080/09544828.2016.1166482
- Bonvoisin J., A. Lelah, F. Mathieux, and D. Brissaud. 2014. An integrated method for environmental assessment and ecodesign of ICT-based optimization services. *Journal of Cleaner Production*, 68:144-154. DOI:10.1016/j.jclepro.2014.01.003
- Bonvoisin J., S. Thiede, D. Brissaud, and C. Herrmann. 2013. An implemented framework to estimate manufacturing related energy consumption in product design. *International Journal of Computer Integrated Manufacturing*, 26(9):866-880. DOI:10.1080/0951192X.2013.799782
- Bonvoisin J., A. Lelah, F. Mathieux, and D. Brissaud. 2012. An environmental assessment method for wireless sensor networks. *Journal of Cleaner Production* 33:145-154. DOI:10.1016/j.jclepro.2012.04.016

Books and book chapters

- Mies, R., J. Bonvoisin, and R. Jochem. 2019. Harnessing the Synergy Potential of Open Source Hardware Communities. In: *Co-Creation - Reshaping Business and Society in the Era of Bottom-up Economics*, T. Redlich, M. Moritz, J. P. Wulfsberg (eds.), Management for Professional Series, Springer, Cham. ISBN 978-3-319-97787-4. DOI:10.1007/978-3-319-97788-1_11
- Stark, R., G. Seliger, and J. Bonvoisin (eds.). 2017. *Sustainable Manufacturing – Challenges, Solutions and Implementation Perspectives*. In the series: Sustainable Production, Life Cycle Engineering and Management, Herrmann C. and S. Kara (eds.). Springer International Publishing. ISBN 978-3-319-48513-3. DOI:10.1007/978-3-319-48514-0
- Bonvoisin, J., R. Stark, and G. Seliger. 2017. Field of Research in Sustainable Manufacturing. In: *Sustainable Manufacturing– Challenges, Solutions and Implementation Perspectives*, R. Stark, G. Seliger, and J. Bonvoisin (eds.), 3–20. Sustainable Production, Life Cycle Engineering and Management. Springer International Publishing. DOI:10.1007/978-3-319-48514-0_1
- Bonvoisin J. 2012. *Analyse environnementale et éco-conception de services informationnels*. Ph.D. Thesis. Université de Grenoble. HAL id:tel-00766136

Conference proceedings

- Antoniou, R., E. Dekoninck, and J. Bonvoisin. 2019. Exploring the Role of Linguistic Abstraction in Idea-Generation Sessions. In: *Proceedings of the Design Society: International Conference on Engineering Design*, 1(1), pp. 329-338. 22nd International Conference on Engineering Design, August 5–8, Delft, The Netherlands. DOI:10.1017/dsi.2019.36
- Bonvoisin, J. and R. Mies. 2018. Measuring Openness in Open Source Hardware with the Open-o-Meter, *Procedia CIRP* 78:388-393, ISSN 2212-8271, 6th CIRP Global Web Conference, October 23-25, online. DOI:10.1016/j.procir.2018.08.306
- Bonvoisin, J., T. Buchert, and R. Stark. 2018. Formal system for the expression of target-oriented design heuristics. In: *DS92: Proceedings of the DESIGN 2018 15th International Design Conference*, Marjanović D., M. Štorga, S. Škec, Bojčetić, N. Pavković (eds.), pp. 45-56, May 21-24, Dubrovnik, Croatia. DOI:10.21278/idc.2018.0120 • This paper received an “outstanding contribution” award from the conference and the “Design Science Journal Distinguished Paper Award”.
- Bonvoisin, J., R. Mies, R. Stark, and R. Jochem. 2018. Vielfalt und Stand der Open-Source-Hardware, In: *Interdisziplinäre Perspektiven Zur Zukunft Der Wertschöpfung*, Redlich, T., Moritz, M., Wulfsberg, J.P. (Eds.), pp. 121–133. Springer Fachmedien Wiesbaden, Wiesbaden. DOI:10.1007/978-3-658-20265-1_10 • This contribution received a best paper award.
- Bonvoisin, J., L. Thomas, R. Mies, C. Gros, R. Stark, K. Samuel, R. Jochem, and J.-F. Boujut. 2017. Current state of practices in open source product development. In: *Proceedings of the 21st International Conference*

on Engineering Design (ICED17), Vol. 2: Design Processes | Design Organisation and Management, Vancouver, Canada, August 21-25, ISBN 978-1-904670-90-2, pp. 111-120.

- Bonvoisin, J. K. Galla, and S. Prendeville. 2017. Design Principles for Do-It-Yourself Production. In: *Sustainable Design and Manufacturing 2017*, Smart Innovation, Systems and Technologies Series vol. 68, pp. 77-86. Springer, Cham. International Conference on Sustainable Design and Manufacturing SDM 2017, April 26-28, Bologna, Italy. DOI:10.1007/978-3-319-57078-5_8
- Buchert, T., A. Pförtner, J. Bonvoisin, K. Lindow, and R. Stark. 2016. Model-Based Sustainable Product Development. In *DS 84: Proceedings of the DESIGN 2016 14th International Design Conference*, D. Marjanovic, M. Storga, N. Pavkovic, N. Bojetic, and S. Skec (eds.), pp. 145-54. [Link](#).
- Bonvoisin, J. 2016. Implications of Open Source Design for Sustainability. In: *Sustainable Design and Manufacturing 2016*, Smart Innovation, Systems and Technologies Series vol. 52, R. Setchi, R. J. Howlett, Y. Liu, P. Theobald (Eds.), pp. 49-59, Springer, Cham. International Conference on Sustainable Design and Manufacturing SDM 2017, April 4-6, Chania, Crete, Greece. DOI:10.1007/978-3-319-32098-4_5
- Halstenberg, F., T. Buchert, J. Bonvoisin, K. Lindow, and R. Stark. 2015. Target-oriented Modularization – Addressing Sustainability Design Goals in Product Modularization, *Procedia CIRP*, 29:603-608. 22nd CIRP conference on Life Cycle Engineering, April 7-9, Sydney, Australia. DOI:10.1016/j.procir.2015.02.166
- Bonvoisin, J., and J.-F. Boujut. 2015. Open design platforms for open source product development: current state and requirements, *Proceedings of the 20th International Conference on Engineering Design (ICED 15)*, Vol 8: Innovation and Creativity, pp. 11-22, July 27-30, Milan, Italy. ISBN: 978-1-904670-71-1 • This contribution received a “reviewers’ favorite” award.
- Lizarralde, I., B. Tyl, and J. Bonvoisin. 2014. Socially Responsible Regions: a Localism Business Model to enhance eco-innovation, XXV ISPIM Conference – Innovation for Sustainable Economy & Society, June 8-11, Dublin, Ireland. [link](#).
- Bonvoisin J., J. Wewior, F. Ng, and G. Seliger. 2013. Openness as a supportive paradigm for Product-Service Systems. Presented at the 11th Global Conference on Sustainable Manufacturing, September 23-25, Berlin, Germany. [Link](#).
- Bonvoisin J., and S. Thiede. 2012. Vers une estimation de l'énergie de fabrication d'un produit dès sa conception. 13ème Colloque National AIP-PRIMECA, March 27-30, Le Mont-Dore, France.
- Bonvoisin J., A. Lelah, F. Mathieux, and D. Brissaud. 2011. Environmental Impact Assessment Model for Wireless Sensor Networks. In: *Glocalised Solutions for Sustainability in Manufacturing*, J. Hesselbach and C. Herrmann (eds.), pp. 124-129, Springer, Berlin. 18th CIRP International Conference on Life Cycle Engineering, May 2-4, Braunschweig, Germany. DOI:10.1007/978-3-642-19692-8_22
- Bonvoisin J., F. Mathieux, L. Domingo, and D. Brissaud. 2010. Design for energy efficiency: proposition of a guidelines-based tool. In: *Proceedings of DESIGN 2010, the 11th International Design Conference*, D. Marjanovic, M. Storga, N. Pavkovic and N. Bojetic (eds.), pp. 629-638. Dubrovnik, Croatia, May 17-20. The Design Society, Castle Cary. [Link](#).
- Arikoglu E.S., J. Bonvoisin, M. Bouznif, S. Cheriti, S. Hachani, H. Izadpanah, and C. Weber. 2010. Distributed collaborative design, analysis of a student experience. In: *Proceedings of DESIGN 2010, the 11th International Design Conference*, D. Marjanovic, M. Storga, N. Pavkovic and N. Bojetic (eds.), pp. 1239-1248. Dubrovnik, Croatia, May 17-20. The Design Society, Castle Cary. [Link](#).
- Moenne-Loccoz G., F. Tremblay, S. Saint-Ange, L. Domingo, and J. Bonvoisin. 2010. Methods and Tools to Meet Energy Efficiency Targets at Product Design Stage. 5th Going Green - CARE INNOVATION conference, November 8-10, Vienna, Austria. [Link](#).
- Domingo L., F. Mathieux, J. Bonvoisin, and D. Brissaud. 2010. Indicator for in Use Energy Consumption (IUE): a tool enhancing Design for Energy Efficiency of products. IDMM-Virtual Concept, October 20-22, Bordeaux, France. HAL Id : hal-00529296.

Other communications

- Open-Source-Hardware – Neue Wege der partizipativen Produktentstehung, WiGeP-News 2017-2 (Wissenschaftliche Gesellschaft für Produktentwicklung), p14-15. ↗
- Open ! – Produktentwicklung für Jedermann, Futur - Vision Innovation Realisierung, 2/2017, p14-15. ↗
- Best Practices of Open Source Mechanical Hardware - A guide with practical advice for sharing product-related documentation – Version 1.0. ↗
- Where sustainable product design got stuck – a springboard for open source design? ↗
- Product development for everyone, TU Berlin Press release 2016/3, 13.01.2016 (EN/DE)
- Nachhaltige Produktion am Beispiel von Sanitärsystemen, Futur - Vision Innovation Realisierung, 3/2013, p 20-21. ↗
- Introducing the Do-It-Yourself Bicycle, Public Awareness Video, posted on Youtube 21.11.2013. ↗
- Sustainable Sanitation Competition - Launching of the "Blue Responsibility Award: Manufacturing for a Sustainable Terra Preta Sanitation System", Collaborative Research Center 1029 "Sustainable Manufacturing – Shaping Global Value Creation", Press release 09/2013, Berlin, 15.11.2013.
- The Do-It-Yourself Bicycle, Collaborative Research Center 1029 "Sustainable Manufacturing – Shaping

Global Value Creation“, Press release 08/2013, Berlin, 16.10.2013.

- Self-help for Bicycle Owners - International Workshop at PTZ Berlin, Collaborative Research Center 1029 “Sustainable Manufacturing – Shaping Global Value Creation“, Press release 03/2013, Berlin, 23.5.2013.
 - Pôle Eco-conception, 2009. Etude sur l'état de l'art en matière d'auto-déclarations environnementales « produit » adaptées aux PME travaillant en B to B - Etude préalable en vue de la validation d'un format d'auto-déclaration environnementale produit.
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Awards and Grants

- 2018. The article “Formal system for the expression of target-oriented design heuristics” presented at DESIGN 2018 received an outstanding contribution award from the conference and the Design Science Journal Distinguished Paper Award.
 - 2017. The article “Theorie Und Praxis in der Open-Source-Produktentwicklung” presented at IKZW 2016 received a best paper award.
 - 2015. The article “Open design platforms for open source product development: current state and requirements” presented at ICED 2015 received a reviewers' favourite award.
 - 2012. Mobility grant from the CRC 1026 Sustainable Manufacturing – Shaping Global Value Creation for an 11-month research stay in TU Berlin.
 - 2011. Mobility grant for a six month research stay at the Institute for Machine-tools and Production Technology of TU Braunschweig.
 - 2009. Special aesthetics prize at the design competition “24 hours of innovation”.
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Roles and Memberships

- Member of the Editorial Board of the Journal of Open Hardware (Section Editor: Issues in Open Hardware)
- Session chair at the 4th and 5th International Conference on Sustainable Design and Manufacturing (2017-2018), Session “Sustainable Design, Innovation and Services”
- Member of the International Programme Committee of the International Conference on Sustainable Design and Manufacturing (2017-2020)
- Member of the Scientific Advisory Board of the biennial DESIGN Conference (2018-2020)
- Member of the International Programme Committee of ICoRD'19 (International Conference on Research into Design, track Eco-Design, Sustainable Manufacturing, Design for Sustainability)
- Member of the Design Society
- Member of the Deutscher Hochschulverband