

Oliver Stickel

Fab Lab manager, researcher, founder

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Experience

Self-employed researcher, consultant, educator. Consultation work for organizations interested in Fab Labs, Makerspaces and Community Innovation Spaces. Public and private grant proposals. Teaching. Book project "Handbuch Fab Labs". Meta-Lab Rhein-Ruhr (in formation).	2015–today
Lab leader. I was involved in the setup of RUB-Makerspace as deputy general manager as well as lab leader for the Digital Lab and the Plastics Lab. RUB-Makerspace is a 2000sqm space with a team of 16 people and multiple (sub-)labs. Ruhr-Universität Bochum.	2020–2023
Researcher, project manager, educator. After graduating, I stayed at Uni Siegen to continue building Fab Lab Siegen into a sustainable infrastructure. Apart from the Lab, I worked on/in in different projects (see below), published and did a lot of teaching. University of Siegen.	2015–2019
Guest researcher, consultant. Field research, consultations and development of joint project proposals in/with collaborators from the Middle East. University of Birzeit, Univ. of Technology Oman, Goethe Institute, others, (mostly) Palestine.	2014–2019
Founder and manager. I founded Fab Lab Siegen and managed it on its journey from a student initiative in a literal storage room on campus outside the city through many locations to a big, wonderful, colorful, open and community-oriented space with a funded team and filled with people, ideas, tools and machines right in the city center. Siegen.	2013–2019
TA, student researcher. Teaching assistant (mostly in HCI), research assistant (mostly with qualitative field work), IT and media tech support/maintenance. Universities of Siegen and Duisburg-Essen.	2009–2015

Education

Dissertation work - About Fab Labs and Makerspaces as public infrastructure. University of Siegen and self-employed.	2015–today
M.Sc. Human Computer Interaction (honors) - Socio-technical systems design based on qualitative methods. University of Siegen.	2012–2015
B.Sc. Applied Cognitive and Media Sciences - Computer Science and Psychology (without advanced engineering and clinical aspects), grounded in quantitative methods. University of Duisburg-Essen.	2009–2012

Community roles

I (co-)chaired Fab:UNiverse - the conference of Fab Lab managers at German universities - multiple times and help maintain its website. I've also (co-)organized many gatherings such as temporary (Maker)spaces at other events or meetups like the World Usability Day Siegen (2014-2018). In academic service, I was reviewer/chair for conferences and journals like CHI, JCSCW, C&T or M&C. Occasionally, I've been asked to join committees, mostly on (community) innovation spaces or student issues. I've also been an elected member of different bodies of (self)-governance such as the Senate commission on Strategic University Development and

examination boards at Uni Siegen or head of the student representatives ("Fachschaftsräte") at Uni Duisburg-Essen and Uni Siegen respectively.

Memberships: Verbund Offener Werkstätten, Fab Lab network, Chaos Computer Club, ver.di. **Past:** UPA, GIG, Hasi, GI.

Teaching

I enjoy teaching and learning a lot. I've always made it a point to try and be open in teaching and have frequently had students from other faculties or external guests in my seminars.

At Uni Siegen, I've been responsible for many elements of the annual introduction to Human Computer Interaction (see "Unpublished work" for more information) for many years. This included lectures and mentoring up to 40 students per iteration through big, semester-long projects ending in submissions to and wins in national student challenges. Additionally, I've held many different seminars ranging from reading classes on literature about "Making" to very practical seminars on rapid prototyping methods. At Ruhr-Uni Bochum, I was less involved in structured, academic teaching but taught and learned whatever was needed to help many different Makerspace community members from (many different) disciplines with their - many different - projects.

As a thesis advisor and co-advisor, I have accompanied about 8 Bachelor and Master Students along their paths to graduation. Topics have varied from participatory-design-oriented field investigations to studies about Makerspaces in teacher training to engineering and fabrication of additive tools for industrial processes. Additionally, I've been involved in co-advising state-certified technicians as a pilot project between a university and a technical vocational college. Occasionally, I've contributed to revisions of examination regulations and similar regulatory structures.

I've also developed and held lots of safety and infrastructure introductions.

Skills in Keywords

Making - Makerspace operation / management / safety. Rapid Prototyping (many different methods), CAD/CAM, general (basic) coding, (traditional) web development, electronics and integrated systems for rapid prototyping, basic skills in different crafts / workshop and lab areas.

Human Centered Design - UX design, HCI, usability methods, design thinking, convergence of agile and user centered methods.

Projects and People - Project development, social innovation, fundraising, agility / Skunkworks, community and team development, operations (with)in public service and public administration.

Methods - Constructionism, human-centered teaching and learning, mixed-methods, action and field research, participatory methods and participatory action research, (Maker-)space(s) as a method.

Personal

Birth date: 12 June 1987

German: native, English: fluent, French: rudimentaire, Latin: obliviscebam.

I enjoy camping, water, (working on) motorbikes, cooking and books.

Projects and funding

Maker in Residence is an effort at RUB-Makerspace to invite Makers from different disciplines to share knowledge. I co-led the first two funding rounds and managed the 2023 residency.

Regional donors, 20-40.000€ p.a.

2023-today

MentorINN is a project between three universities to found Ruhr School of Design Thinking, to support Design Thinking in academic teaching and to

2022-2024

share course material. I was part of the proposal team and occasionally helped in the project. Stiftung Innovation in der Hochschullehre ('foundation for digital teaching in academia'), about 20.000€.	
SMAPS - the center for smart production systems - was a research-infrastructure project on additive fabrication and smart systems for industrial tooling (mainly forming processes). I was part of the proposal team and briefly involved in the ramp-up and procurement phase. European EFRE-fund (EFRE.NRW), about 3m€.	2019-2022
FAB 101 was a research project of four German universities on Fab Labs in academia. It focused on cooperation, tools, education and infrastructure. I developed the core idea, led the proposal, was project manager and part of the operative team. Federal Ministry of Education and Research, about 1.2m€.	2017-2020
YALLAH - "You All Are Hackers" was a student exchange / hackathon project. Students from Palestine and Germany visited each other and worked on socio-economical issues and art using "maker-methods" (info slides from 2017). I developed the core idea after my own visits to Palestine as a student, led the proposal and helped recruit and set up the staff who took over. German Academic Exchange Service (DAAD), about 225.000€.	2016-2018
ZEIT.RAUM Siegen was a project between a museum, three university chairs and Fab Lab Siegen to develop a 3D-printed, interactive city model and a regional Wiki for a museum installation. I coordinated the ideation phase, wrote most of the proposals, was part of the negotiation team, built the first prototypes for model and wiki and recruited the project staff. Regional societies, University of Siegen, other sources, about 190.000€ (funding brochure I designed).	2016-2018
Internet-Cafe4Refugees was a project we set up when Uni Siegen housed hundreds of refugees. We provided tech support, hardware and internet connection together with the local freifunk.net community. Volunteer work, hardware donations and enough local funding for student aids to cover daily opening hours.	2015-2016
Fab Lab Siegen was my baby for many years and my first real experience in regards to being a founder and the world of fundraising. My old team is still running and growing the Lab and it has become local infrastructure. Calls for student projects, donations, other sources, about 100.000€ in money and more in hardware donations during the first three years. Later, funding strategies changed when the project became official university infrastructure. The spaces for the lab were and are co-sponsored by private-public partnerships.	2013-today
CUBES was a research project on community-based innovation in software and usability for small and medium sized enterprises. I was involved as a student, then researcher, then (interim) project manager for the project reporting and closing. Federal Ministry for Economic Affairs and Energy, about 800.000€.	2012-2015

Awards and honors

Honorable Mention Paper Award , "Mensch und Computer" (M&C) conference for Praktiken der Nutzerintegration im Entwicklungsprozess von KMU (see below), German Informatics Society (GI).	2015
Arthur-Woll award for an exemplary master thesis , University of Siegen and association for the support of the economic faculty.	2015
pwc award for best graduate of the faculty, University of Siegen and PricewaterhouseCoopers.	2015
Scholarship Tallinn Summer School on research methods in Human-Computer interaction, University of Siegen.	2014
First Prize "Student Usability Challenge" for Social Flashcards, German Informatics Society (GI).	2013

- Handbuch Fab Labs: Einrichtung, Finanzierung, Betrieb, Forschung & Lehre** by Iris Bockermann, Jan Borchers, Anke Brouck, Marcel Lahaye, Antje Moebus, Stefan Neudecker, Oliver Stickel, Melanie Stolz, Daniel Wilkens, René Bohne, Volkmar Pipek, Heidi Schelhowe. Bombini-Verlag. 2021
- shARe-IT: Ad hoc Remote Troubleshooting through Augmented Reality** by Thomas Ludwig, Oliver Stickel, Peter Tolmie, Malte Sellmer. Journal on Computer Supported Cooperative Work 30, pp. 119–167. 2021
- Fab:UNiverse - Makerspaces, Fab Labs and Lab Managers in Academia** (slides here) by Oliver Stickel, Melanie Stolz, Anke Brouck, Jan Borchers, Volkmar Pipek. Workshop at Fab Learn Europe Conference '19. 2019
- Fab Lab Education in German Academia** by Oliver Stickel, Anke Brouck, Melanie Stolz, Antje Möbus, Iris Bockermann, Jan Borchers, Volkmar Pipek. Proceedings from the Fab14 Conference '18, pp. 39-46. 2018
- Praxisorientierte Projektstudie zur transdisziplinären Entwicklung innovativer Produkte** by Oliver Stickel, Stefan Krick, Timo Scherer, Tamara Reinicke, Volkmar Pipek. Poster for a regional conference on innovations in teaching. 2018
- Fab Labs and Interdisciplinary Academic Teaching: A research agenda** (poster here) by Oliver Stickel, Melanie Stolz, Volkmar Pipek. Proceedings from the Fab Learn Europe Conference '18, pp. 104-105. 2018
- Computerclubs und Flüchtlingslager - Ein Diskussionsbeitrag zur Forschungs- und Bildungsarbeit aus praxistheoretischer Perspektive** by Oliver Stickel, Konstantin Aal, Marén Schorch, Dominik Hornung, Alexander Boden, Volker Wulf, Volkmar Pipek. In: Langreiter, N., Löffler, K. (eds.) - Do it! Yourself? Fragen zu (Forschungs-)Praktiken des Selbermachens. transcript. 2017
- 3D printing/digital fabrication for education and the common good** by Oliver Stickel, Konstantin Aal, Verena Fuchsberger, Sarah Rüller, Victoria Wenzelmann, Volkmar Pipek, Volker Wulf, Manfred Tscheligi. Workshop at Communities & Technologies conference '17. 2017
- MuC-Makerspace: Academic practices in Community Innovation and (Digital) Fabrication** by Oliver Stickel, Melanie Stolz, Volkmar Pipek. Workshopband der Mensch & Computer Konferenz (MuC) '17. 2017
- User Integration in Agile Software Development Processes: Practices and Challenges in Small and Medium Sized Enterprises** by Oliver Stickel, Corinna Ogonowski, Timo Jacobi, Gunnar Stevens, Volkmar Pipek, Volker Wulf. In: Cockton, G., Lárusdóttir, M., Gregory, P., Cajander, Å. (eds) - Integrating User-Centred Design in Agile Development. Springer. 2016
- Usability Quartett (Neuaufgabe und Erweiterung)** by GermanUPA, Oliver Stickel, Alisha Tilsner, Elisabeth Schwerdtner, Susanne Speh, Cindy Waldinger. Method Cards, GermanUPA (see pitch). 2016
- Report series for SME on understanding users (1, 2, 3)** by Oliver Stickel, Sebastian Draxler, Volkmar Pipek et al. Publication series "Wissenschaft trifft Praxis" - "Mittelstand Digital". BMWI / BMWK. 2016
- 3D Printing with Marginalized Children – An Exploration in a Palestinian Refugee Camp** by Oliver Stickel, Dominik Hornung, Konstantin Aal, Markus Rohde, Volker Wulf. Proceedings of the 14th European Conference on Computer Supported Cooperative Work (ECSCW) '15, pp. 83-102. 2015
- Appropriating digital fabrication technologies—a comparative study of two 3d printing communities** (slides here) by Thomas Ludwig, Oliver Stickel, Alexander Boden, Volkmar Pipek, Volker Wulf. Proceedings of the iConference '15. 2015
- Praktiken der Nutzerintegration im Entwicklungsprozess von KMU** (slides here) by Oliver Stickel, Corinna Ogonowski, Timo Jakobi, Gunnar Stevens, Volkmar Pipek, Volker Wulf. Tagungsband der Mensch & Computer Konferenz (MuC) '15, pp. 103-112. 2015

Die richtige Frage zur richtigen Zeit: Ereignisbedingte Fragebogen-Studien mittels und über Smartphone-Apps by Julian Dax, Thomas Ludwig, Oliver Stickel, Volkmar Pipek. Workshopband der Mensch & Computer Konferenz (MuC) '15.	2015
3D Printing as a Means for Participation in Developmental Settings - A Field Study by Oliver Stickel, Dominik Hornung, Sarah Rüller, Volkmar Pipek, Volker Wulf. Proceedings of the Participatory Innovation Conference (PIN-C) '15.	2015
Educating the next generation of Makers - 3D Printing with marginalized refugee children: Exploring Making and digital fabrication from a HCI perspective through an exploratory field study in refugee camps in the West Bank. My master thesis at the institute for Information Systems and New Media & the CSCW research group, University of Siegen.	2015
Bottom-Up Kultur in Siegen: Ein Bericht über aktuelle Strukturen, Entwicklungen und Umnutzungsprozesse by Oliver Stickel, Alexander Boden, Gunnar Stevens, Volkmar Pipek, Volker Wulf. In: Habscheid, S., Hoch, G., Schröteler-v. Brandt, H., Stein, V. (eds.) - DIAGONAL Jahrgang 2014: Umnutzung - Alte Sachen, neue Zwecke. V&R unipress.	2014
Beteilige Deine Nutzer! Fallstudie eines systematischen Vorgehens zur Integration von Nutzer-Feedback in agilen Entwicklungsprozessen by Sebastian Draxler, Oliver Stickel, Frank Rosswog, Gunnar Stevens. Wissenschaft trifft Praxis, issue on "User Experience - Positives Erleben betrieblicher IT", pp. 36-45. BMWI / BMWK.	2014
Towards Sociable Technologies: An Empirical Study on Designing Appropriation Infrastructures for 3D Printing by Thomas Ludwig, Oliver Stickel, Alexander Boden, Volkmar Pipek. Proceedings of the Designing Interactive Systems Conference (DIS) '14, pp. 835-844.	2014
Computer supported urban gardening (poster here) by Oliver Stickel, Thomas Ludwig. Proceedings of the Designing Interactive Systems Conference (DIS) '14, pp. 77-80.	2014
Nutzerintegration in Softwareprojekte durch Multi-Channel Feedback. by Sebastian Draxler, Oliver Stickel, Dominique Winter, Gunnar Stevens. Tagungsband der Mensch & Computer Konferenz (MuC) '14, pp. 175-184.	2014
Playful, collaborative approaches to 3D modeling and 3D printing (poster here) by Thomas von Rekowski, Alexander Boden, Oliver Stickel, Dominik Hornung, Gunnar Stevens. Tagungsband der Mensch & Computer Konferenz (MuC) '14, pp. 363-366.	2014
Computer im Grünen: IT-Systeme zur Unterstützung urbaner Gärten by Oliver Stickel, Thomas Ludwig, Volkmar Pipek. Tagungsband der Mensch & Computer Konferenz (MuC) '14, pp. 303-306.	2014
3D Printers as Potential Boundary Negotiating Artifacts for Third Places (slides here) by Thomas Ludwig, Oliver Stickel, Volkmar Pipek. Workshop Proceedings of the Designing Interactive Systems Conference (DIS) '14.	2014
Come_in@ palestine: adapting a german computer club concept to a palestinian refugee camp by Konstantin Aal, George Yerosis, Kai Schubert, Dominik Hornung, Oliver Stickel, Volker Wulf. Proceedings of the 5th ACM international conference on Collaboration across boundaries (CABS): culture, distance & technology '14, pp. 111-120.	2014
Customer Feedback and UCD in Agile Software Development by Oliver Stickel, Sebastian Draxler, Gunnar Stevens. Workshop Proceedings of the NordiCHI '14.	2014
Come_IN: Expanding Computer Clubs Towards Tinkering and Making by Oliver Stickel, Dominik Hornung, Volkmar Pipek, Volker Wulf. Workshop Proceedings of the NordiCHI '14.	2014
Page navigation in touch based interfaces. My bachelor thesis at the Interactive Systems research group, University of Duisburg-Essen.	2012
XESCOE - x-tendable environment for soundcard operated experiments (user handbook, slides) by Benedikt Rudolph, Oliver Stickel, Niklas	2005

Unpublished work

These might or might not be continued at some point. Thoughts and feedback are welcome!

Towards a conceptual model of HCI and Making and HCI motivations for establishing, positioning and operating a Fab Lab and poster draft on HCI and Fab Labs

On self-expression through 3D printing / digital fabrication

Literature review draft on Fab Labs and Makerspaces in academia

On better interfaces for (educational) 3D modeling tools

Der große Bruder in uns?

Proposed contribution on the institutionalization of shared machine shops / Fab Labs

Proposal for a cultural probe study about domestic digital fabrication

Talks & slides

Introduction to soldering	2023
Build your own air quality sensor (web-view)	2022
Introduction to Mixed Reality	
Microcontroller Basics (web-view)	
Introduction to CAD (two days)	
Introduction to measuring for electronics	
Introduction to making PCBs	
Introduction to CNC milling	
How to develop workshops in/for Makerspaces	2021
Safety instructions Digital Lab (web-view)	
WTF is Fab Lab (Siegen)? (extended version: What is a Fab Lab)	2019
Prototyping with Arduino (semester-long seminar, English)	
Das Schaffen in Fab Labs	
Fab Labs and additive manufacturing seminar session	2018
Socio-Informatics	
Project FAB101	2017
Project ZEIT.RAUM Siegen	
Wissenschaftstheorie	
Kinder-Uni zum Entstehen von Produkten	
2017: Introduction to HCI (semester-long lecture) - German / English	
Fab Lab Siegen	2016
Interaction Design with Arduino (semester-long seminar, German)	
Workshop Usability & User Experience: one day / two days	2015
3D printing (semester-long seminar)	
Industrie 4.0 meets Making	
Makers at Palestine	2014
Social Flashcards	2013
Synchrone und asynchrone Kooperation	
HackDock - a 3d printed Macbook accessory	
KUSi - launch of the Siegen usability competence center	
Tutorial development for an exergame for the elderly	
HCI-Lab Siegen (predecessor of Fab Lab Siegen)	
On Fab Labs (Handout)	
Clifford Nass - the man who lied to his laptop	2012
John Dewey - art as experience	
On User Experience	
Educational game "Food Balance" (poster here)	2011
Cindy Sherman	

Pathological Internet Use
3D animation project "Star Trek TOS" (animation here)
OpArt
Das (schwarze) Quadrat
The perfect thing - Imco lighters
(Web-)Typografie (Handout)

2010

Additional links

Other files: Linked files from above and more are available here.
makerspace.rub.de / on GitLab / video tour
fablab-siegen.de / on GitHub / videos: 2018 - on Campus, 2020 -
"Herrengarten", 2023 - current space
fab101.de
fab-universe.de / on GitHub
yallah.exchange / exhibition.yallah.exchange
Interview "Deutsche Welle" about Fab Labs
News article on 3D printing with children
News article on working with refugees at Fab Lab Siegen
Interview "Deutschlandfunk Kultur" on Makers
A talk by me about Fab Lab Siegen (from way back when)
Guest lecture on Socio-Informatics at RWTH Aachen
Usability Method Finder
World Usability Day Siegen
My old blog posts on the Fab Lab Siegen website