# 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).

2020-2023

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.

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) infrastructures. 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, global Fab Lab network, Chaos Computer Club, ver.di. Past: UPA, GIG, Hasi.

#### **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 the practical part (and a lot of the lectures) of the annual introduction to Human Computer Interaction for many years, i.e. 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 tought 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.

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 share course material. I was part of the proposal team and occasionally

2022-2024

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.

2017-2020

Federal Ministry of Education and Research, about 1.2m€.

YALLAH - "You All Are Hackers" was a student exchange / hackathon project. Students from Palestine and Germany visited each other, worked on socio-economical issues using "maker-methods" and created an art exhibition. 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.

2012-2015

Federal Ministry for Economic Affairs and Energy, about 800.000€.

# Awards and honors

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

Publications	Handbuch Fab Labs: Einrichtung, Finanzierung, Betrieb, Forschung & Lehre by Iris Bockermann, Jan Borchers, Anke Brocker, Marcel Lahaye,	2021
	Antje Moebus, Stefan Neudecker, Oliver Stickel, Melanie Stilz, Daniel Wilkens, René Bohne, Volkmar Pipek, Heidi Schelhowe. Bombini-Verlag.	
	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 by Oliver Stickel, Melanie Stilz, Anke Brocker, Jan Borchers, Volkmar Pipek. Workshop at Fab Learn Europe Conference '19.	2019
	Fab Lab Education in German Academia by Oliver Stickel, Anke Brocker, Melanie Stilz, Antje Möbus, Iris Bockermann, Jan Borchers, Volkmar Pipek. Proceedings from the Fab14 Conference '18, pp. 39-46.	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. Tagungsband Do it! Yourself? Fragen zu (Forschungs-)Praktiken des Selbermachens.	2018
	Fab Labs and Interdisciplinary Academic Teaching: A research agenda by Oliver Stickel, Melanie Stilz, Volkmar Pipek. Profeedings from the Fab Learn Europe Conference '18, pp. 104-105.	2018
	<b>3D printing/digital fabrication for education and the common good</b> by Oliver Stickel, Konstantin Aal, Verena Fuchsberger, Sarah Rüller, Victoria Wenzelmann, Volkmar Pipek, Volker Wulf, Manfred Tscheligi. <b>Workshop</b> at Communities & Technologies conference '17.	2017
	MuC-Makerspace: Academic practices in Community Innovation and (Digital) Fabrication by Oliver Stickel, Melanie Stilz, 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 Ogonowkski, 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
	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 by Thomas Ludwig, Oliver Stickel, Alexander Boden, Volkmar Pipek, Volker Wulf. Proceedings of the iConference '15.	2015
	Praktiken der Nutzerintegration im Entwicklungsprozess von KMU 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
	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	2015
	Systems and New Media & the CSCW research group, University of Siegen.  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.,	2014

Hoch, G., Schröteler-v. Brandt, H., Stein, V. (eds.) - DIAGONAL Jahrgang 2014: Umnutzung - Alte Sachen, neue Zwecke. V&R unipress.	
Towards Sociable Technologies: An Empirical Study on Designing	2014
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.	
Computer supported urban gardening by Oliver Stickel, Thomas Ludwig.	2014
Proceedings of the Designing Interactive Systems Conference (DIS) '14, pp. 77–80.	
Nutzerintegration in Softwareprojekte durch Multi-Channel Feedback.	2014
by Sebastian Draxler, Oliver Stickel, Dominique Winter, Gunnar Stevens.	
Tagungsband der Mensch & Computer Konferenz (MuC) '14, pp. 175-184.	
Playful, collaborative approaches to 3D modeling and 3D printing by	2014
Thomas von Rekowski, Alexander Boden, Oliver Stickel, Dominik Hornung,	
Gunnar Stevens. Tagungsband der Mensch & Computer Konferenz (MuC)	
'14, pp. 363-366.	
Computer im Grünen: IT-Systeme zur Unterstützung urbaner Gärten by	2014
Oliver Stickel, Thomas Ludwig, Volkmar Pipek. Tagungsband der Mensch &	
Computer Konferenz (MuC) '14, pp. 303-306.	
3D Printers as Potential Boundary Negotiating Artifacts for Third Places	2014
by Thomas Ludwig, Oliver Stickel, Volkmar Pipek. Workshop Proceedings	
of the Designing Interactive Systems Conference (DIS) '14.	
Come_in@ palestine: adapting a german computer club concept to a	2014
palestinian refugee camp by Konstantin Aal, George Yerousis, Kai	
Schubert, Dominik Hornung, Oliver Stickel, Volker Wulf. Proceedings of the	
5th ACM international conference on Collaboration across boundaries:	
culture, distance & technology '14, pp. 111-120.	
Customer Feedback and UCD in Agile Software Development by Oliver	2014
Stickel, Sebastian Draxler, Gunnar Stevens. Workshop Proceedings of the	
NordiCHI '14.	
Come_IN: Expanding Computer Clubs Towards Tinkering and Making	2014
by Oliver Stickel, Dominik Hornung, Volkmar Pipek, Volker Wulf. Workshop	
Proceedings of the NordiCHI '14.	
Page navigation in touch based interfaces. My bachelor thesis at the	2012
Interactive Systems research group, University of Duisburg-Essen.	

# Additional links

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

My old blog posts on the Fab Lab Siegen website