# 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) 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 annual conference of Fab Lab managers at German universities - multiple times and help maintain its website. I've also (co-)organized many different events, temporary (Maker)spaces and meetups such as the World Usability Day Siegen (2014-2018).

I was reviewer/chair for conferences and journals like CHI, JCSCW, C&T or M&C. Occasionally, I've been asked to join expert committees about community innovation spaces. I've also been an elected member of different bodies of (self)-governance such as the Senate commission on Strategic University Development at Uni Siegen and 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

Languages: German (native), English (fluent), French (very rudimentary). 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.

2023-today

Regional donors, 20-40.000€ p.a.

**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€.

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.

2019-2022

2016-2018

2016-2018

2013-today

2012-2015

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€.

**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).

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.

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.

**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€.

#### 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's 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
<b>Scholarship</b> Tallinn Summer School on research methods in Human-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	2021
	Computer Supported Cooperative Work 30, pp. 119–167.  Fab:UNIverse - Makerspaces, Fab Labs and Lab Managers in Academia by Oliver Stickel, Melanie Stilz, Anke Brocker, Jan Borchers, Volkmar Pipek.	2019
	Workshop at Fab Learn Europe Conference '19.	2010
	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	2018
	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.	
	Fab Labs and Interdisciplinary Academic Teaching: A research agenda	2018
	by Oliver Stickel, Melanie Stilz, Volkmar Pipek. Profeedings from the Fab Learn Europe Conference '18, pp. 104-105.	
	<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	2017
	(Digital) Fabrication by Oliver Stickel, Melanie Stilz, Volkmar Pipek. Workshopband der Mensch & Computer Konferenz (MuC) '17.	
	User Integration in Agile Software Development Processes: Practices	2016
	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.	
	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	2015
	Computer Supported Cooperative Work (ECSCW) '15, pp. 83-102.  Appropriating digital fabrication technologies—a comparative study of	2015
	<b>two 3d printing communities</b> by Thomas Ludwig, Oliver Stickel, Alexander Boden, Volkmar Pipek, Volker Wulf. Proceedings of the iConference '15.	2013
	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	2015
	marginalized refugee children: Exploring Making and digital fabrication	_010
	from a HCI perspective through an exploratory field study in refugee camps in the West Banks by Oliver Stickel. Master Thesis at the institute for Information Systems and New Media & the CSCW research group,	
	University of Siegen.	
	Bottom-Up Kultur in Siegen: Ein Bericht über aktuelle Strukturen,	2014
	<b>Entwicklungen und Umnutzungsprozesse</b> 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.	
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. 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 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
<b>3D Printers as Potential Boundary Negotiating Artifacts for Third Places</b> 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 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.	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
<b>Page navigation in touch based interfaces</b> by Oliver Stickel. Bachelor Thesis at the Interactive Systems research group, University of Duisburg-Essen.	2012

# 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