

MuC-Makerspace: Academic practices in Community Innovation and (Digital) Fabrication

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Abstract

The MuC Makerspace is an experimental workshop format for “Mensch und Computer 2017” intended to showcase how Fab Labs, Makerspaces, Urban Labs and similar hubs can interact with academic institutions. Its goal is to provide an open setting that allows glimpses as well as active participation in practical walk-in-workshops and discussions around how such hub communities influence and are influenced by academic teaching, learning, research, outreach and dissemination. Furthermore, MuC Makerspace is also intended as a sharing ground for challenges and perspectives on establishing, running and integrating such communities from within academia.

1 Introduction

The MuC-Makerspace¹ substitutes the workshop "Academic practices in (community) innovation and (digital) fabrication" as a more hands-on format and will run during the first conference day. It will be open and accessible for passers-by and intends to present a mix of showroom, hands-on workshops area, speakers-corner and opportunity for networking. The Makerspace will be equipped with a set of “typical” digital fabrication machines like 3d printers and a lasercutter, but also conventional tools, DIY electronics, meters, kits and models for everyone to experiment, create, learn and share their knowledge. The purpose of the Conference Makerspace is to be on display and accessible for the entire conference audience to hear and learn about *making*, meet other makers and hackers or people interested in making. The Makerspace is organized by Fab Lab Siegen and University of Siegen in cooperation with TU Berlin and Binary Kitchen e.V. – Hackspace Regensburg.

¹ <http://www.muc-makerspace.fab101.de/>

2 Digital Fabrication and Academic Practices

Makerspaces, Fab Labs, Hackspaces, the ‘Maker movement, community hubs, industry labs and similar organizations have become an area of intense interest, debate and emerging new practices, methods and possibly even disciplines - or, at the very least, new perspectives on the boundaries of disciplines. The topical foci of such communities - digital fabrication, community innovation, distributed manufacturing, (open source) modular/DIY hardware, social innovation and similar topics – are of great interest to a wide range of disciplines (see Hielscher & Smith, 2014 for a literature review). The educational potential of maker-type activities and communities has been well established (Blikstein, 2013; Eisenberg, 2007; Katterfeldt, Dittert, & Schelhowe, 2015) and especially in HCI, research interest as well as cooperation with maker-type organizations has increased (see eg. Lindtner, Bardzell, & Bardzell, 2016 as well as growing numbers of maker-related slots at HCI conferences). Consequentially, there is also interest in establishing and running Makerspaces at or co-located with academic institutions. However, as of 2017, there is hardly any systematic integration of Makerspaces and maker communities with academic teaching and research: Many universities have isolated, sometimes discipline-specific approaches on if /how project-oriented work in and with Makerspaces is integrated into curricula and how Makerspaces are maintained organized and managed. Research projects such as COWERK² and FAB101³ in Germany or MANUS⁴ are attempting to understand and systematize this grown landscape of (academic) Makerspaces in order to enable better collaboration between Makerspaces and universities, better curricular integration and to identify well-working practices in how to manage and maintain such communities within and between academic and other ecosystems.

MuC Makerspace is an attempt at a forum for discussion about such research and application interests. Its intention is to provide space for discussion and sharing and its topical foci include - but are not limited to – cases on academic (fab) labs, makerspaces or other (open?) innovation and fabrication infrastructures, curricular and didactic implications / developments / cases / concepts, positions, organizational or governance challenges and solutions, critique or “maker culture” and academia in general.

3 MuC Makerspace Activities

The Makerspace will offer a program which is open for participation:

² <http://www.cowork.org/>

³ <http://fab101.de/> (BMBF FKZ 16DHL1026 – the project funding this research)

⁴ <https://project-manus.mit.edu/>

- Drop-in workshops /ideation /story collection formats on community innovation and academic practices around Makerspaces and academia
- Short presentations & Makerspace project showcases
- Hands-on opportunities to try out Makerspace infrastructure such as 3D printers, a lasercutter and other tools.

There will also be a showroom with artefacts from Fab Lab Siegen and the Binary Kitchen as well as brief demonstrations of projects by makers and students.

4 Outlook and Context

The MuC-Makerspace is inspired by Makerspaces in general but also by the the Global Innovation Gathering Makerspace at re:publica as a conference Makerspace, meeting area and sharing space. Research project *FAB101* has taken up the concept and is experimenting with “Makerspaces at conferences” in the context of the Conference on Communities and Technologies 2017⁵ and Mensch und Computer 2017 as well as smaller, regional events. The data and experiences from these accelerated, temporary Makerspaces will supplement more long-term empirical data on Makerspaces and academia from the FAB101 consortium labs and will be taken up in more long-format publications in 2018.

Literature

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⁵ <http://www.digifab-commongood.fab101.de/>

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Oliver is founder and coordinator of the university's [Fab Lab](#), researcher, general project instigator and lecturer in HCI- and Maker-methods. He has published on digital fabrication, field studies involving 3D printing in Palestine, regional innovation communities and agile methods.



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