Hackteria goes ZKM:
Participation at Education Program

a project by

International Hackteria Society

In den mittlerweile 6 Jahren seit der Gründung von "Hackteria | Open Source Biological Art" hat sich ein globales Netzwerk entwickelt, welches mit einem Ansatz der radikalen Transdisziplinarität, wie auch einer Offenheit zum Amateurismus in der Ausseinandersetzung mit Themen der Biologie durch künstlerische, wissenschaftliche und DIY (do-it-yourself) Praktiken widmet. Ein Schwerpunkt des Projektes ist es über die Website hackteria.org einen niederschwelligen Zugang zu schaffen für Künstler, Hacker / Maker, Forscher und Pädagogen sich ein Know-how anzueignen um selbstständing in einfachen und selbstgebauten Heimlaboren mit Biotechnologie, Umweltanalytik und Genetik zu experimentieren. Im Rahmen von 1-2 wöchigen Veranstaltungen, das HackteriaLab 2010 - 2014, trafen sich regelmässig eine Vielzahl von internationalen Teilnehmer, um gemeinsam in kollaborativer Praxis an neuen Projekten zu tüfteln, ihr Wissen durch Workshops und Präsentationen untereinander und mit der Öffentlichkeit zu teilen und durch interdisziplinäre Zusammenarbeit eine gemeinsame und konstruktive neue Sprache und Methodik zu finden.

Over the last 6 years since the initiation of "Hackteria | Open Source Biological Art" a global network has been established, which works on various themes of lifesciences and biology with a radically transdisciplinary approach and openness to amateurism, through artistic, scientific and DIY (do-it-yourself) practices. One of the core activity is to create access to that know-how through the website hackteria.org enabling artists, hackers, makers, researchers and educators to independantly work and experiment through simple and self-made instruments in their home laboratories/studios on topics of biotechnology, environmental monitoring or genetics. Within the Hackteria framework, the HackteriaLab (2010 – 2014), an international two weeks immersive and collaborative format, plays a key role in experimentation and the development of new projects, sharing of knowledge through workshops and presentations among the participants and a wider public audience, and defining a common constructive language and new methodologies for interdisciplinary collaborations.

Authors

Marc Dusseiller

Update Oktober 2015 **„Fokus: Workshops"**

Overview Workshops by Hackteria @ ZKM

Workshops – throughout the program

Overview

Workshops on bio art and DIY biology could be held throughout the whole program of <GLOBALE: Exoevultion> selected through the hackteria network in coordination with the ZKM education department. With it's strong focus on the development of new workshop methodologies at the art/science interface, the hackteria network could provide an interesting series of workshops, mentors will be selected through an open call among the hackteria network.

Suggested topics: DIY Microscopy, Bio-Cyber Kidzz, Art of Fermentation, BioElectronix, NanoHacking and many more.

See online living document: http://hackteria.org/wiki/Hackteria_Workshops_in_ZKM_2016

BioCyberKidzzz

Zielgruppe 1: Kinder (5 - 15)

Dauer als Workshop: 1 – 2 Tage, auch also Halbtage verteilt auf eine Woche

~~Cancelled: Ideale Dauer als Walk-in-Lab: 4 – 5 Tage~~

Hacking the human body has become commonplace and many people have body modifications such as tattoos, piercings or even advanced medical prosthetics. Simple and playful body hacks that allow enhancing our human performance can be made with just few and cheap materials, such as cardboard, magnets and LEDs. In this playful laboratory setting we will investigate with the children: hearing with a Bio-Acoustics Ear and hacking their touch perception by the Magnetic Finger or a Disco-on-a-Fingertip and finally explore a Photosynthetic Skin.

Mehr: http://hackteria.org/wiki/BioCyberKidzz,_Maribor

NanoHacking: Convergence of Life and Tech at the Nanoscale – A Hands-on Introduction for Students

Zielgruppe 1: Junge Erwachsene und Studenten (16 -25)

Dauer: 4 Tage, verteilt über 2 Termine

During this course, the students will be introduced into the merging disciplines of of art, science and engineering that meet at the nanoscale. But what is nanotechnology? It promises huge beneficial impact on global health, sustainable energy and novel materials. At the same time utopian visions, science-fiction scenarios and fundamental fears are clashing at discussions in society. Throughout the course, we will lift the fogs of these superficial discussions and through hands-on activities get closer to grasp the world of the small. We will build our own simple DIY (do-it-yourself) optical and electronic instruments to learn more about nanoparticles and nanosensors, how to "see" them, how to "hear" them.

One key aspect of the nanosciences is the fact that the traditional disciplinary borders of physics, biology, engineering, to name a few, are merging. With the current tools and methods of understanding matter on the smallest scales of atoms and molecules, only a true collaborative and transdiscplinary approach can lead to new insight, application and constructive discourse of its societal implications.

Mehr: http://hackteria.org/wiki/NanoHacking-UNILI

Other Options for future workshops

DIY Microscopy (maybe at another time in spring together with the local ZKM edu Team)
**Zielgruppe 1: Kinder und Jugendliche (12 -18)**

Ideale Dauer: min 1 Tag für nur Mikroskop. 2-5 Tage als Teil anderer Themen, Umwelt, Biodiversität, Bodenmessungen

Mehr: http://hackteria.org/wiki/DIY_microscopy

Anleitung: http://hackteria.org/wp-content/uploads/2013/05/hm3-hackteria-pages.pdf

Educational Training „J'aime art/sci workshopology"
Zielgruppe: Internes ZKM Education Team / Lehrerfortbildung
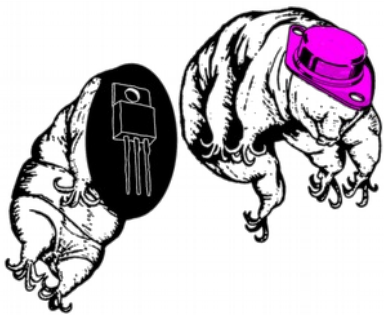
Dauer: 2 Tage

Case Study „DIY Microscopy" Bau und hack des DIY Mikroskopes, Diskussionen und Beispiele über Integration in Unterricht, process over product, Kit-Without-Parts. http://hackteria.org/wiki/J%27aime_DIY_Microscopy

Case Study „BioElectronix", will be updated on the wiki

Case Study „BioCyberKidzz", see wiki

Case Study „The Art of Fermentation or How to Make Cheese and Wine", see wiki

BrainHacks and Playing with Perception

Zielgruppe 1: Kinder und Jugendliche (8 -20)

Rubber Hands, Dream-Machines, Fish-Hacks and more

Mehr: http://hackteria.org/wiki/Fish-to-Brain_Interfaces,_Antony_Hall,_Ljubljana

Hacking Plants - ...and hear them

Zielgruppe 1: Kinder und Jugendliche (12 -18)

Ideale Dauer: 1 Tag

Einfache Elektronik in Verbindung mit Pflanzen.

Mehr: http://hackteria.org/wiki/PIFcamp_Plant_Analyzer

Video: http://hackteria.org/workshops/reflections-on-biosense-dudu-nanosmano-zivisistemi-2012/

Zielgruppe 2: Junge Erwachsene und Studenten (16 -25)

Ideale Dauer: 2 Tage nur Basteln und Experimentieren oder...

Long Version: 5 Tage inklusive Einführung in Arduino und allgemeine Biosensorik
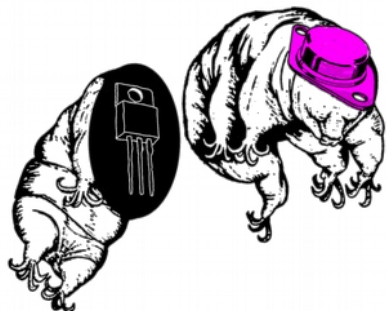
Mehr: http://hackteria.org/wiki/Plant_Electrophysiology

The Art of BioHacking or How to Make Wine and Cheese – A Hands-on Introduction for Students

Zielgruppe 1: Junge Erwachsene und Studenten (16 -25)

Ideale Dauer: min 4 Tage, eventuell verteilt über 2 Termine

Mehr: http://hackteria.org/wiki/The_Art_of_BioHacking_-_HEAD

Budget

Summary	#	time/work per unit	Cost
1-2 days Workshop for children (max 15 participants)			
Travel Expenses Dusseiller, Zurich, depends on scheduling	0	300.00	0.00 €
Travel Expenses in Europe (1 Extra Mentor)	2	400.00	800.00 €
Preparation / Pauschale	1	200.00	200.00 €
Mentor fee/day (calculate if you want more days)	1	650.00	650.00 €
Assistant fee/day (calculate if you want more days)	1	350.00	350.00 €
2nd Assistant by ZKM	1	0.00	0.00 €
Materials	1	300.00	300.00 €
Total			**2,300.00 €**
4 days Workshop for young adults & students (max 15)			
Travel Expenses Dusseiller, Zurich	1	300.00	300.00 €
Travel Expenses in Europe (1 Extra Mentor)	1	400.00	400.00 €
Preparation / Pauschale	1	500.00	500.00 €
Mentor fee/day	4	500.00	2,000.00 €
Assistant fee/day	4	300.00	1,200.00 €
2nd Assistant by ZKM	4	0.00	0.00 €
Materials	1	600.00	600.00 €
Total			**5,000.00 €**
2 days Internal Training on Art/Sci Workshopology			
Travel Expenses Dusseiller, Zurich, depends on scheduling	0	300.00	0.00 €
Travel Expenses in Europe (1 Extra Mentor)	1	400.00	400.00 €
Preparation / Pauschale	1	500.00	500.00 €
Mentor 1 fee/day	2	800.00	1,600.00 €
Mentor 2 fee/day	2	600.00	1,200.00 €
Materials	1	100.00	100.00 €
Total			3,800.00 €
Cancelled			**0.00 €**
Accommodation			
to be calculated and covered by ZKM	0	0.00	0.00 €
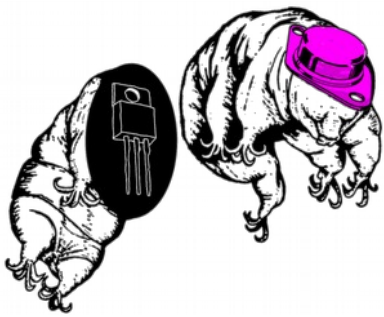
Biographies of the Core Team

Marc Dusseiller (CH)

Organisation, Education Research and Workshop Mentor

Dr. Marc R. Dusseiller is a transdisciplinary scholar, lecturer for micro- and nanotechnology, cultural facilitator and artist. He works in an integral way to combine science, art and education. He performs DIY (do-it-yourself) workshops in lo-fi electronics, hardware hacking, microscopy, music and robotics. He was co-organizing Dock18, Room for Mediacultures, diy* festival (Zürich, Switzerland), KIBLIX 2011 (Maribor, Slovenia), workshops for artists, schools and children as the former president (2008-12) of the Swiss Mechatronic Art Society, SGMK. In collaboration with Kapelica Gallery, he has started the BioTehna Lab in Ljubljana (2012 – 2013), an open platform for interdisciplinary and artistic research on life sciences. Currently, he is developing means to perform bio- and nanotechnology research and dissemination (Hackteria | Open Source Biological Art) in a DIY fashion in kitchens, ateliers and in developing countries.

http://www.dusseiller.ch/labs

J'aime Workshopology Network

Collaborators through a call inside the network is already ongoing.

Proposed Co-Mentors: Andy Gracie, Spela Petric, Antony Hall, Paula Pin, Robertina Sebjanic and more tba

http://hackteria.org/wiki/J'aime

Actioncy

Agentur für Workshops in zeitgenössischen Medien

Die Agentur Actioncy koordiniert Workshops mit Schwerpunkt in zeitgenössischen Medien. Dank der Vernetzung mit Partnerorganisationen und Communities verfügt die Actioncy über ein breites und erprobtes Kursangebot. Der kreative Umgang mit modernsten Technologien wird in handwerklichen Aktivitäten vermittelt. Die Kursleitung verfügt über grosse Erfahrung im Durchführen von technischen und gestalterischen Workshops.

Die Agentur Actioncy arbeitet mit Firmen, Schulen, Institutionen und Privatkunden zusammen und freut sich auf ihre Anfrage.

http://www.actioncy.net/
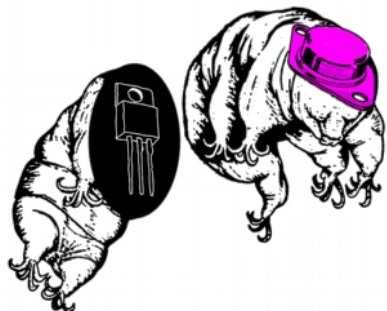
Appendix I: Workshops... a global success story 2009 – 2015

See the map online: http://batchgeo.com/map/92d1ce31505c81347b43adeb3ee9faed

Hackteria Workshops	City	Country	Date
Extreme Places Extended Senses @ ANET	Port Blair	India	2015-01-10
PiksteriaLab 2014 - Bergen	Bergen	Norway	2014-11-15
postgender body-hacks @ DanseFestival Barents	Hammerfest	Norway	2014-11-06
Explorations in Bioluminescence - Ueber das Leuchten von Würsten	Zürich	Switzerland	2014-10-20
Do-it-yourself von Laborgeräten in der Bioanalytik SATW	Muttenz	Switzerland	2014-10-13
Arte y Ciencia en el Mar	Gijón	Spain	2014-09-25
BioTransLab @ aRtropocode - Summer of Labs, Galicia	A Coruña	Spain	2014-09-17
Mestna jaga: Helsinški mestni zajec	Helsinki Rabbit Hunts	Helsinki	Finland	2014-09-04
Lick the Moonmilk	Lüdtoldsmatt	Switzerland	2014-08-10
Randen SummerLab 2014 -Forest-SoilGeeking or how to Fix-the-World	Merishausen	Switzerland	2014-07-13
Shake It Baby, HomeMade Kimchi @ KopenLab	Copenhagen	Denmark	2014-06-21
DIY Mikroskopie für SchülerInnen - Part of Hackteria Biologische Kunst	Schaffhausen	Switzerland	2014-06-12
Waterhackathon	Lausanne	Switzerland	2014-06-06
HackteriaLab 2014 - Yogyakarta	Yogyakarta	Indonesia	2014-04-13
Tourdigrade - BioElectronix for Artists and Geeks	Surabaya	Indonesia	2014-04-02
Tourdigrade - BioElectronix Hackathon and Performance	Jakarta	Indonesia	2014-03-17
BrainHacking vs. Larry's Tattoo Show @ SURVIVE!garage	Yogyakarta	Indonesia	2014-02-21
Solder Synth Sense Sore Sore Sip	Yogyakarta	Indonesia	2014-02-02
Do-it-yourself von Laborgeräten in der Bioanalytik SATW pre-workshop	Basel	Switzerland	2014-01-09
µFluidic Hackathon: Towards the Nail-Studio Lab-on-a-Chip Device	Luzern	Switzerland	2014-01-07
FolkCulture Hackathon: OpenTraps, Wine @ Underes Ätzisloo	Merishausen	Switzerland	2014-01-02
BioHackerWerk @ Hyperwerk, Basel	Basel	Switzerland	2013-12-18
NanoHacking @ Biofilia, Aalto University	Helsinki	Finland	2013-12-02
Agar is the Media @ CynetArt, Dresden	Dresden	Germany	2013-11-17
Cave µ-Safari 2: Jama Mačkovica	Logatec	Slovenia	2013-10-18
Urban Ecology meets Artist's Kitchen, Schnegge Z'Nacht	Ljubljana	Slovenia	2013-10-02
Cave µ-Safari in Vranja Jama	Logatec	Slovenia	2013-09-06
BioTehna DIY microscopy @ Sajeta Festival	Sajeta	Slovenia	2013-08-10
Hackteria BioHacking Lab @ Share Cyberpunk Academy / REPUBLIKA	Rijeka	Croatia	2013-07-18
Hackteria Appenzeller Field Trip @ poolloop festival '13	Zürich	Switzerland	2013-07-04
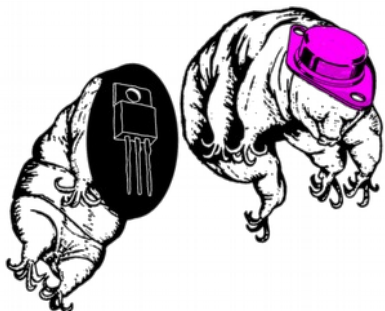
MobileLabs Hackathon	Ljubljana	Slovenia	2013-06-14
SoftBots	Ljubljana	Slovenia	2013-05-20
BioLumi HackSession	Luzern	Switzerland	2013-05-02
Hack-a-Taq @ ateliér hirokouri	Lausanne	Switzerland	2013-04-06
DIY microscopy - BioTehna	Ljubljana	Slovenia	2013-03-26
LabEasy @ Arts Catalyst - Collaboration with MadLab	London	UK	2013-03-05
The Art of BioHacking or How to make Cheese and Wine, HEAD	Geneva	Switzerland	2013-02-18
HackteriaLab 2013 - Bangalore	Bangalore	India	2013-01-28
Remote Microscopy GaudiLabs -> Lifepatch	Luzern	Switzerland	2013-01-22
DIY Microscopy at Tumbuh Elementary School	Yogyakarta	Indonesia	2013-01-11
Remote session to WetLab @ Waag Society	Amsterdam	Netherlands	2012-12-20
BioHacking vs. BioPunk @ I'MM	Zagreb	Croatia	2012-12-14
Nomadic Science Lab, Mutamorphosis	Prague	Czech Rep	2012-12-03
BioCyberKidzz @ Soft Control	Maribor	Slovenia	2012-11-27
BioElectronix at BioTehna Lab	Ljubljana	Slovenia	2012-10-31
Chara algae hacking session	Zurich	Switzerland	2012-10-27
DIY Laser Tweezers hack and document sprint at the Farm Lab	Lausanne	Switzerland	2012-09-29
Bioprinting, DIY microscopy with Hackteria @ BioCurious	Sunnyvale	USA	2012-08-02
Microscopy Workshop at Machineproject	Los Angeles	USA	2012-07-28
DIY microscope webcam for Hemocytometer collaborative research	Yogyakarta	Indonesia	2012-12-10
Hackteria @ POC Diagnostics Workshop	Nairobi	Kenya	2012-06-29
Hackteria Algae Sprint @ GaudiLabs	Lucern	Switzerland	2012-06-09
Expanded Technology, Yashas Shetty, Residency @ Gasworks	London	UK	2012-05-15
Riga city biosphere maping Workshop by Antti Tenetz	Riga	Latvia	2012-01-18
"Cyber Hair Wars" – Microscopy Workshop for Elementary School	Yogyakarta	Indonesia	2012-01-14
Hackteria Microscopy and Visuals Workshop	Lucern	Switzerland	2012-01-13
Autonomous Public Lab, Yashas Shetty @ OCAD	Toronto	Canada	2012-01-17
Hackteria Distillery @ Jaaga	Bangalore	India	2011-12-20
Demos at the UK DIYbio Summit	Manchester	UK	2011-10-30
Hackteria BioLab Workshop @ I'MM	Zagreb	Croatia	2011-10-25
Hackteria & SGMK BioCyberKidzz Ars Electronica	Linz	Austria	2011-09-10
DIY Microscopy workshop at Atelier Nord	Oslo	Norway	2011-09-04
HackteriaLab 2011 - Romainmotier	Romainmôtier	Switzerland	2011-08-01
Hackteria workshop	Medellin	Colombia	2011-04-12
Biolectronix for Artists Pixelache Festival with Finnish Bioart Society	Helsinki	Finland	2011-03-08
BioElectronix @ MechArtLab	Zürich	Switzerland	2011-02-19
DIY Microscopy Workshop @ MechArtLab	Zürich	Switzerland	2011-02-12
Optical Mouse Hacking	Budapest	Hungary	2010-12-07
Getting on Plant's Nerves – Hackteria DIY bio lab @ HAIP festival	Ljubljana	Slovenia	2010-11-24
Bioelectronix for Artists @ ISEA2010 Ruhr with Andy Gracie	Dortmund	Germany	2010-08-23
Haemacytometry and PS3 Eye Hacks	Yogyakarta	Indonesia	2010-07-30
USB Mikroskopie Technorama	Zurich	Switzerland	2010-06-12
DIY microscopy @ Dock18	Zurich	Switzerland	2010-04-10
HackteriaLab 2010 - Dock18	Zürich	Switzerland	2010-04-06
Webcam Microscope building workshop, Ecole Superieure D'Art	D'Aix en Prov.	France	2010-03-09
Hackteria @ PlayAround 09, NTUA	Taipei	Taiwan	2009-12-07
BioElectronix for Artists @ Piksel09	Bergen	Norway	2009-11-19
Bioelectronix for Artists @ Videotage	Hongkong	China	2009-11-14
DIY microscopy Workshop @ MIT	Boston	USA	2009-11-10
DIY Microscopy Home Made Forschungswoche by SGMK	Vico Morcote	Switzerland	2009-08-24
BioElectronix for Scientist @ UGM	Yogyakarta	Indonesia	2009-08-10
BioElectronix for Artists @CEMA with Yashas Shetty	Bangalore	India	2009-07-24
DIY Microscopy & Lab Hacking with Kaspar König @ NK	Berlin	Germany	2009-05-06