

# Makers, 3D printers and co-design- a view from Ireland

---

**Alan T. Ryan  
Gabriela Avram  
Interaction Design Centre  
University of Limerick,  
Ireland**

# Alan Ryan

---

- ❑ **BSc in Digital Media Design (2014) at the University of Limerick, Ireland**
- ❑ **Internships at the Interaction Design Centre (2012, 2013)**
- ❑ **Lurker at miLKlabs - the Limerick maker space**
- ❑ **Considering Digital Fabrication as a master/ PhD topic**

# Gabriela Avram

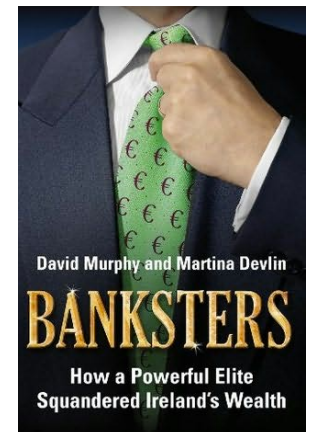
---

- ❑ Lecturer & Senior Research Fellow at the Interaction Design Centre
- ❑ Co-organiser of 3Dcamp
- ❑ Founding member of miLKlabs
- ❑ Active member of the Irish makerspaces network
- ❑ Part of an initiative group for creating a FabLab at the University of Limerick

# Eire/ Ireland / The Emerald Island

---

- We would like to formally thank Britain for colonising us, as we Irish people now only have to learn one language!
- Trying hard to get out of the mess the bankers brought upon us!



# Our local maker space -miLKlabs

- MiLKlabs ( ‘Made In Limerick’ -started in Aug 2010



# Makerspaces / Hackerspaces

---

- ❑ TOG.ie – Dublin
- ❑ 091labs - Galway
- ❑ miLklabs- Limerick
- ❑ Nexus- Cork
- ❑ Lightbox- Drogheda
- ❑ NUIM Makers Club - Maynooth
- ❑ Farset Labs – Belfast

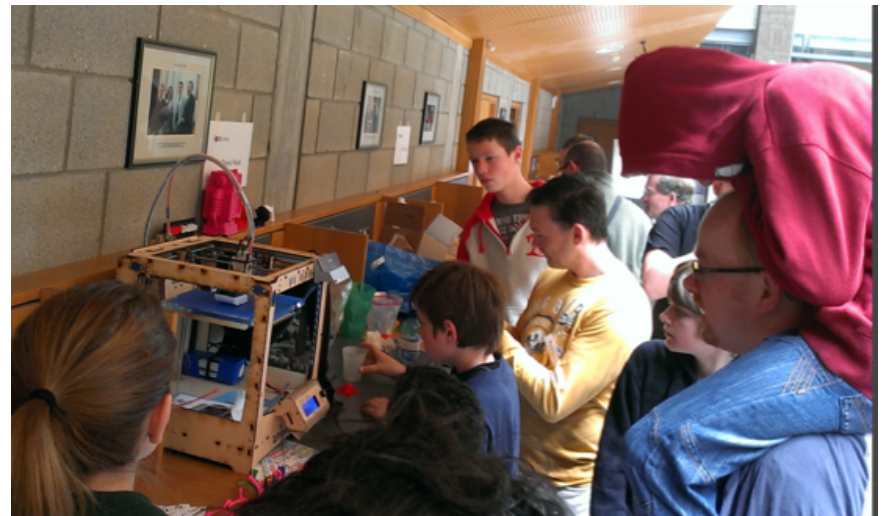


Source: <http://hackerspaces.ie/>



# 3D Camp at the University of Limerick

- ❑ Annual barcamp style conference dedicated to the use of technology beyond the desktop;
- ❑ from virtual worlds to art installations, games and innovative businesses;
- ❑ in the last 2 years, the emphasis was clearly on digital fabrication;



# Dublin Mini Maker Faire - 2012, 2013





# Our exploratory study

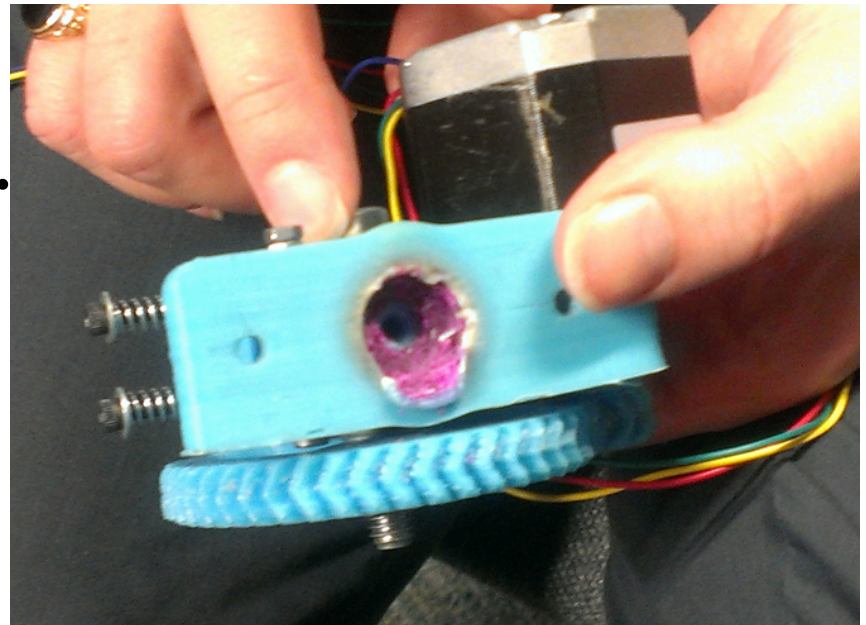
---

- ❑ We are interested in the social aspects of digital fabrication, and especially in its potential to change our lifestyle;
- ❑ We launched an email survey targeting Irish hackerspaces, organisations and groups with an involvement in digital fabrication;
- ❑ The survey focused on 3 aspects: the existing situation, future plans and vision for the next 5 years.

# Hackerspaces

---

- ❑ **Machines: mainly 3D printers, most assembled from kits;**
- ❑ **Emphasis on learning - even if this involves melting printing heads!**
- ❑ **Open to the public;**
- ❑ **Open to experiments.**



# FabLabs

---

- ❑ NerveCentre - Derry (UK) \*
- ❑ WeCreate – Cloughjordan eco-village
- ❑ SAUL “FabLab”

- ❑ Public access;
- ❑ Training;
- ❑ Facilitation.



# Other (semi)professional entities

---

- ❑ 3Dprinting - Dublin
- ❑ Inspire 3D- Ashford
- ❑ Layerlabz - Dublin
- ❑ 3D Dave- Dublin
- ❑ Creodrone- Galway
- ❑ The Civic Works-  
Dublin
- ❑ Fab All Things- Dublin
- ❑ Providing services for money;
- ❑ No public access;
- ❑ Protecting their own designs;



# What did the survey participants say:

---

- “The common perception in hackerspaces is that Fablabs are just like hackerspaces without the community. People go there and make things and leave. We get that too in hackerspaces but we also get more people who come and make something and stay around because the community is great.”
- “Where I think the really interesting impact is, is less in the tangible \*things\* we have about and more in our relationships with these objects. How will our perceptions of consumer goods shift when we can easily produce our own high-quality products?”

## ...and:

---

- **“Digital fabrication has been slow to come to Ireland. At the moment there are only a handful of places to get things made and access these technologies.”**
- **“Ultimately, 3d printing and digital fabrication lower the barrier of entry for individual designers and makers to bring new products to market and invent new things. This, we hope, will bring more choices to the consumer and will help in re-distributing wealth from the few to the many.”**

## Other elements:

---

- ❑ FindItMakelt.ie – a digital fabrication directory
- ❑ Fabri-con – a Dublin meetup for people involved in digital fabrication
- ❑ FabAllThings, The Civic Works – platforms for co-creation involving designers all around the world; the community votes on the best designs, the objects get made and sold online and the profits are split between the designers.

# Our perspective: Sustainable Interaction Design

---

- ❑ “As a starting point for a *perspective of sustainability, design* is defined as an act of choosing among or informing choices of future ways of being. This perspective of sustainability is presented in terms of design values, methods, and reasoning.” (Bleviss, 2007)
- ❑ We want our students to learn how to design and produce their own prototypes, and do so mindfully and responsibly.
- ❑ And we want to make our own!



# Establishing a FabLab at the University of Limerick

---

- ❑ In 2010 – visit at FabLab Aachen;
- ❑ 2011- Rene Bohne came on a mission to help us convert everybody;
- ❑ An initiative group was formed;
- ❑ in July - Fab Academy graduate living in Limerick re-ignited the initiative;
- ❑ we have Product Design, Architecture, Interaction Design courses, a start-up incubator and a technological park;

# Sustainability implications

- ❑ The dream of the paperless office vs. the impact of cheap printers and copiers;
- ❑ With 3Dprinting and laser cutting, we already see a proliferation of not-very-useful-objects.
- ❑ Personal and social digital fabrication are in their infancy and we need to experiment.



# Lowering the barrier for adoption

---

- ❑ Home mini fablabs are becoming a reality;
- ❑ There is a current trend toward Personal Fabrication and Personal Design(Borchert& Bohne 2013);
- ❑ Could we incorporate minimal sustainability constraints into the future user-friendly interfaces?
- ❑ Or is it necessary to go through an experimentation phase first, where we waste a lot, but also learn a lot?
- ❑ Could we experiment with the digital instead?

---

**Thank you!**  
**Come talk to us!**  
**We welcome any suggestions!**



**@ahotlunch - Alan**  
**@gabig58- Gabriela**

