

Application for an Art +Technology Lab at LACMA Grant

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Contact Information

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Application Q & A

Name of project: A Piece of the Pie Chart

One sentence description of the work for which you are seeking support:

A Piece of the Pie Chart is an interactive food robotics project that puts pie charts on to real, edible pies in order to examine gender equity in art and tech.

Full description of the proposed project (250 word maximum):

The project *A Piece of the Pie Chart* is inspired by the cover of "A report on the Art and Technology program at the Los Angeles County Museum of Art" which exclusively shows men. My project addresses this gender gap in the art and tech world. It is an interactive robotic gallery installation consisting of a computer workstation and a food robot. It also tweets. The audience can use the food robot to automatically put pie charts onto real, edible, pre-baked pies. They depict the gender gap in technical and tech-driven art environments, such as universities, companies, public administration, appropriate exhibition spaces, art funding organizations, etc. Visitors can use the robot to create pies. As part of the process, the machine photographs the pies and disseminates the pictures via Twitter. The pies can also be mailed by the exhibition visitors to the places where the data originated in order to remind companies, universities, art organizations, and public sector entities how large (or rather small) the piece of the pie is that women in technology can claim for themselves. The project is an interactive robotic data visualization that is designed to inspire an audience to take action and protest the lack of women in today's tech and tech-driven art workplaces. The machine combines tools and products of traditionally female housework and combines it with technology to make an argument that a diversity of approaches is needed to fuel the next tech revolution.

Bio

Annina Rüst produces electronic objects and software art. She creates technologies that are artistically and socially motivated. Her projects happen at the intersection of activism, algorithm, data, electricity, humor, politics, and pop culture. Her projects have been shown internationally in museums, galleries, at festivals, and in less conventional spaces. Her work has been reviewed in publications such as *Wired* and the *New York Times Magazine*. She has an MFA from UC San Diego and MS from the MIT Media Lab. She is currently employed as Assistant Professor in the Department of Transmedia at Syracuse University.

Her website is [anninaruest.com](http://www.anninaruest.com). You can find a detailed CV at the link:
http://www.anninaruest.com/a/bio/CV_annina_043011.pdf

Please describe the artistic or creative merit of the proposed project (250 word maximum):

The project contributes to the exploration of artistic food robotics. It also contributes to data visualization, specifically to data mapping using food. More importantly though, the project combines gender studies as well as technofeminist activism with the creation of actual feminist technology. Feminist activism in art is not without precedent: Starting in 1985, the Guerilla Girls protested the lack of female representation in the art world. As part of their project, the group visualized gender statistics in a humorous, performative way. In my proposed project, I am borrowing their playful style of data presentation. However, as a female artist-technologist, I am choosing robotics as the performative element. Therefore, I am extending the criticism from the art world into the technology world.

In the project, I focus on the gender politics of spaces where technology and technology-driven art are produced. To produce the project, I am using components of popular robotics kits. But instead of making the usual robotics projects like a tank, humanoid robot, or other vehicle, I am using the components to build a critical robotic technology. The project can be seen as institutional critique of the art world as well as of technology culture. I want to shed light on the complicated relationship between art, technology, and humans and how we are all involved.

Why do you consider this project to be a meaningful exploration of emerging technology? (100 word maximum):

The project makes robotics, politics, and political action poetic. The main goal of the proposed project is not to solve a purely technical problem. Rather, it addresses political issues using robotics as a medium and extends the capabilities of a machine beyond a pragmatic use-case. The project combines gender studies and computing which is fairly unusual in both art and tech. This intersection between politics, poetics, and technology makes the proposed project a meaningful exploration in emergent technology.

In what ways does your project inspire dialogue about the issues at hand, including the relationship between technology and culture? (100 word maximum):

I understand technology, art, and culture as a mirror of societal values. Consequently, I also understand society as a mirror of the technology, art, and culture it produces. *A Piece of the Pie Chart* is therefore a mirror of myself, the female tech producer. The machine is a miniature version of an industrial assembly line, a symbol of the industrial revolution, a period where much social and technical transformation happened. In my factory-style setup, I am producing not just pies but an audience that takes action to make technology more diverse and equitable.

Please describe your proposed plan for public engagement. What opportunities do you foresee to share prototypes, demonstrations and process with the public? (100 word

The project is an interactive robotic art work. It is therefore designed to interact with the public. I have shown a prior, site-specific version of the project at Stadtgalerie Bern (Switzerland) over five weeks in October/November 2013. As part of the research process, I would be interested in talking with women and men in the companies involved in Art + Technology Lab about art, technology, and gender. I would also be happy to share the project creation process with a wider public electronically through writings, videos, and program code. If possible, I could also conduct electronics and food visualization workshops.

What data will your project produce that may be of interest to other artists, technologists, or arts organizations? (50 word maximum):

The project explores the intersection of computing and gender studies. I will do extensive research into the representation of women in art and tech and publish it as part of the project and in articles. I will also publish my research into gender studies, robotics, and software as tutorials.

Supporting Images, Videos, and Sketches

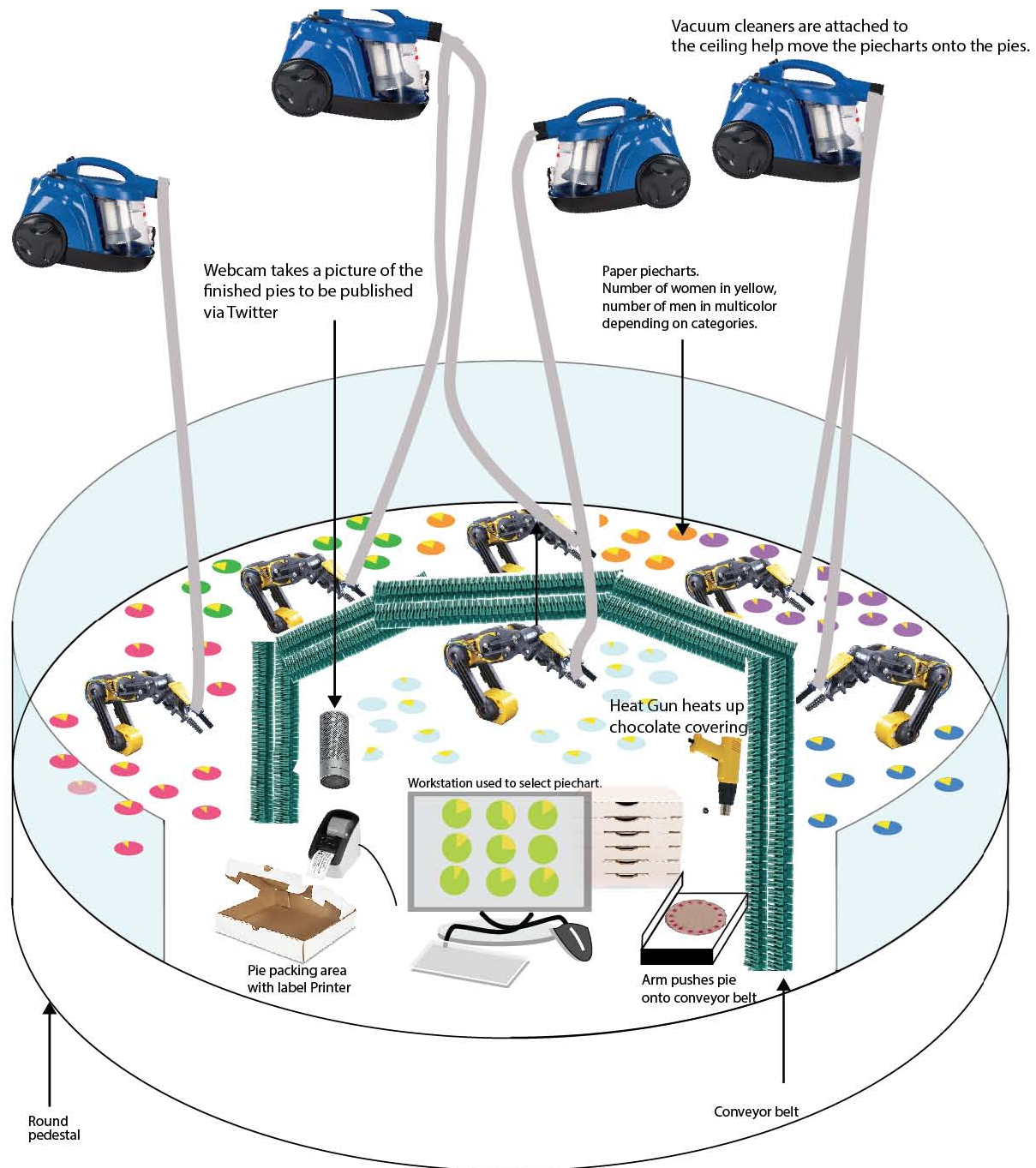
Images of the previous Switzerland-specific iteration of the project (exhibited at Stadtgalerie Bern, Switzerland in November 2013).

Click here for a video: <https://vimeo.com/79534316>

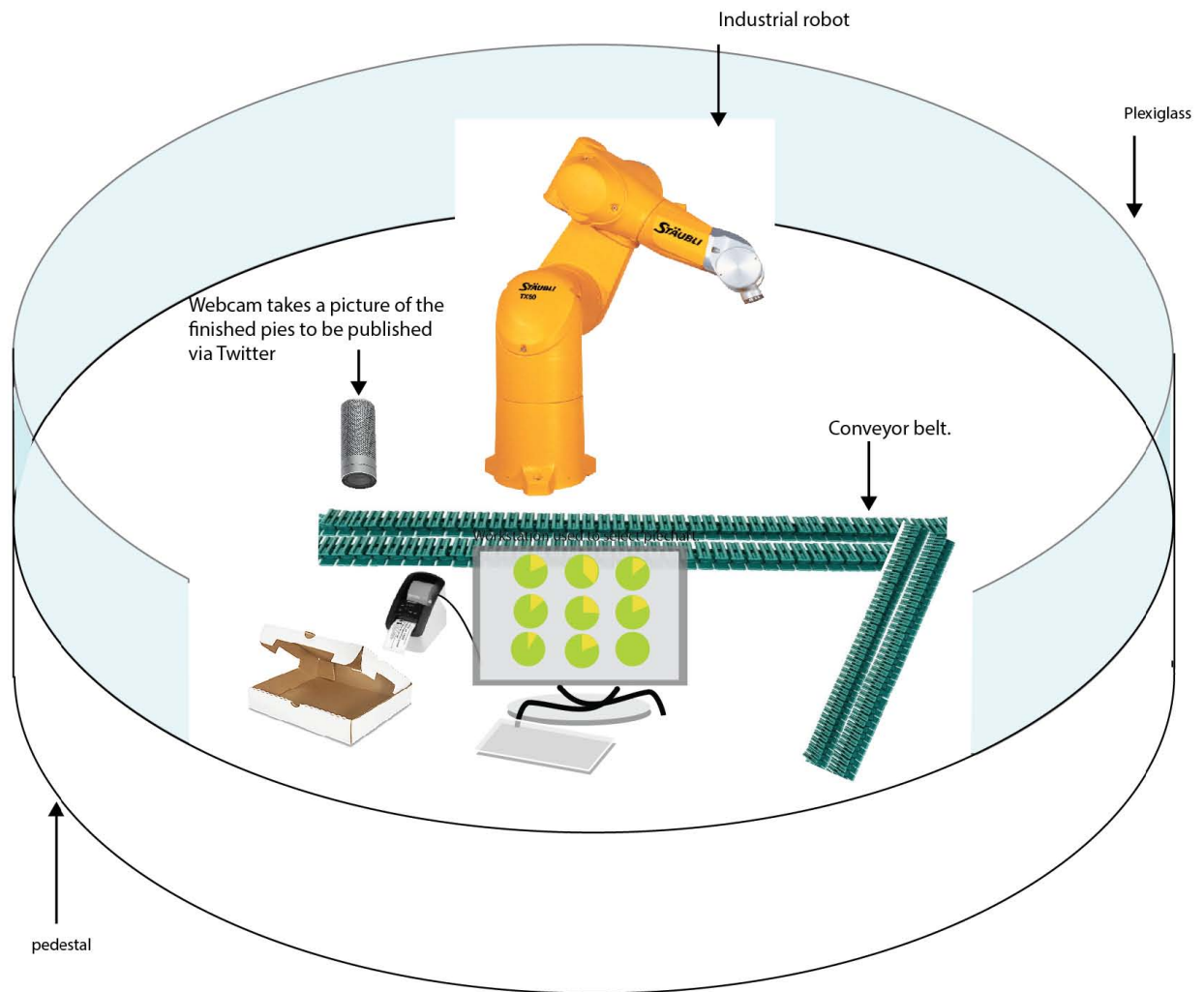
Click here for images: <http://www.flickr.com/photos/12694553@N03/sets/72157637812833314/>



Image of the Project's Twitter feed



Sketch 1



Sketch 2

Budget/Support

Please list any other sources of funding for this project, including in-kind support, and, if applicable, any conditions related to that funding or support:

Received Funding: I have received three grants totalling [REDACTED] for a Switzerland-specific version of the project exhibited at Stadtgalerie Bern (Switzerland). These partially funded the previous site-specific version of the project and there are no strings attached.

Potential in-kind support

In terms of potential in-kind support from the companies and organizations involved in Art + Tech Lab, I would be interested in building a machine that draws a pie chart directly on the pie using liquid fast-drying icing or colored white chocolate. This machine could for example involve an industrial robot that is more precise than the hobbyist kits that I am currently able to afford. I would be interested in loaning such a robot if one were available.

Detailed Budget

Total amount requested: \$ [REDACTED]

The total amount varies depending on whether the baking of the pies is outsourced or not.

Description	Vendor	Price in \$
2 Vacuum cleaners Bissel Zing	Lowes	[REDACTED]
Lumber and screws (for frame construction)	Lowes	[REDACTED]
Laser cutting	Several vendors	[REDACTED]
Various small electronics (wire, LM291, potentiometers, etc.)	Digikey	[REDACTED]
2 Arduino Mega	Sparkfun.com	[REDACTED]
2 MegaShield Kit for Arduino	Sparkfun.com	[REDACTED]
10 Phototransistor	Sparkfun.com	[REDACTED]
Mac mini (for the exhibition)	Apple store	[REDACTED]
AmazonBasics USB Cable - 2.0 A Male to Micro B (6 Feet)	Amazon.com	[REDACTED]
Translucent plexi glass	Lowes	[REDACTED]
Black Plexiglas	McMaster Carr	[REDACTED]
6 Owi Robotic Arm	Amazon.com	[REDACTED]

Heatgun	Amazon.com	
Monitor Asus VS247H-P	Amazon.com	
Brother Label Printer QL 700	Amazon.com	
Flexible latex tubing for vacuum cleaner	McMaster Carr	
<u>Logitech Pro 9000 PC Internet Camera Webcam</u>	Amazon.com	
Several robotics building blocks by Vex Robotics	Vex Robotics	
Printing color, card stock, 750 prints (paper included)	Kinkos Online	
	Total	

Studio & Access to Machine Shop

I spend summer (May- end of August) in the Boston Area and would need access to a machine shop and studio/storage space. Artisan's Asylum (<http://artisansasylum.com/>) in Somerville, MA is a space that provides both at a reasonable cost.

4 x unlimited access to Artisan's Asylum /month	
4 x workspace 50 sqft /month	
Total	

Baking

The figure below is an estimate. The amount of pies baked would depend on the length of the exhibition. Ideally, the pies would be baked in a professional bakery according to my fairly simple recipe and size specifications (6 inch diameter). If I were to bake them, production might be cheaper, but I'd need an extra two or three days prior to exhibition and access to a kitchen with oven, hotplate, and stand mixer to make the pies. The pies made according to my recipe can be kept at 68 degrees Fahrenheit for about six weeks. Outsourcing the baking would allow getting fresh pies made more often.

"Lebkuchen" Pies with chocolate covering	
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Travel

1 Flight Syracuse - LA	
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Ground Transportation	\$ [REDACTED]
Hotel (6 nights)	\$ [REDACTED]
Project transport	[REDACTED]
Total	[REDACTED]

Fee

I have a teaching job and consequently, I do not get paid in the summer when I would do most of the work on the project. The fee below would cover some of my living costs during summer. In the implementation plan below, I made the final installment payable when the project is exhibited as I also consider the fee to also cover work done during exhibition setup.

Fee Total	[REDACTED]
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Implementation Plan

Key Milestones	Start Date	Funds Needed
Research and data collection/analysis	05/01/2014	\$ [REDACTED] for studio rental costs
Physical Construction	05/30/2014	[REDACTED] for material
Electronics	06/30/2014	\$ [REDACTED] (2% of the total) fee
Testing	08/30/2014	\$ [REDACTED] (1% of the total) fee
Interface	09/30/2014	\$ [REDACTED] (1% of the total) fee
Testing	11/15/2014 - 11/30/2014	
Exhibition of the project	?	[REDACTED] travel, transport, and hotel \$ [REDACTED] for manufacturing of pies. \$ [REDACTED] final installment of the fee.