

The image shows the famous bronze sculpture 'The Thinker' by Auguste Rodin, positioned on a dark pedestal in a museum gallery. The sculpture is the central focus, with its muscular form and contemplative pose. In the background, several people are blurred, suggesting movement and a public viewing space. The lighting is warm and focused on the sculpture.

# Industrial Research & Grad School

Gordon Kurtenbach, Director of Research, Autodesk

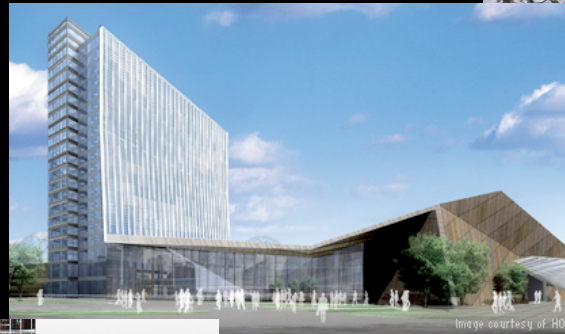
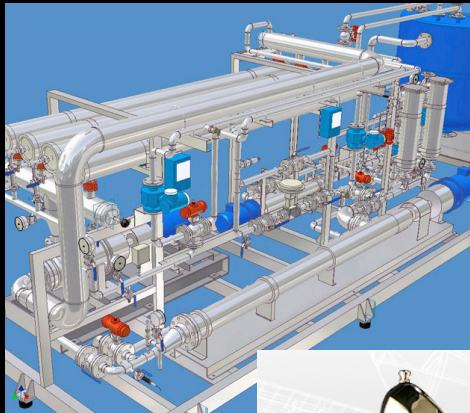
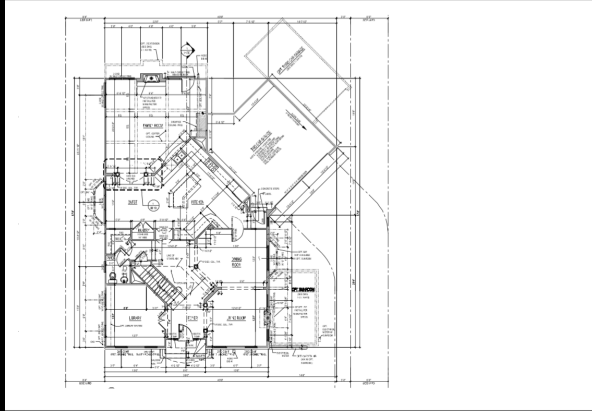
**Autodesk** is a world leader in 2d and 3d design, engineering, and entertainment software

# Autodesk

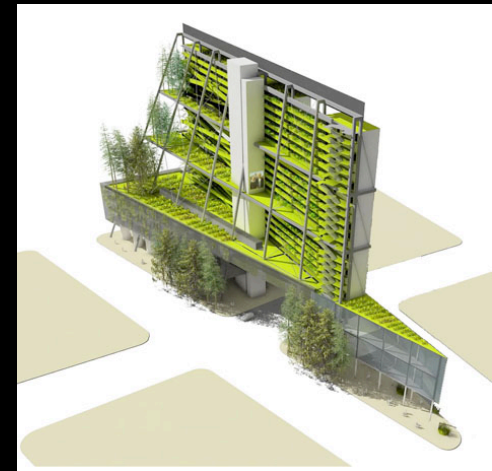
**Makes design software: AutoCAD, Inventor, Maya, Max,...**

**9 million professionals in 185 countries use Autodesk products**

# Anything built



BKS Design, Inc.



# Autodesk Research

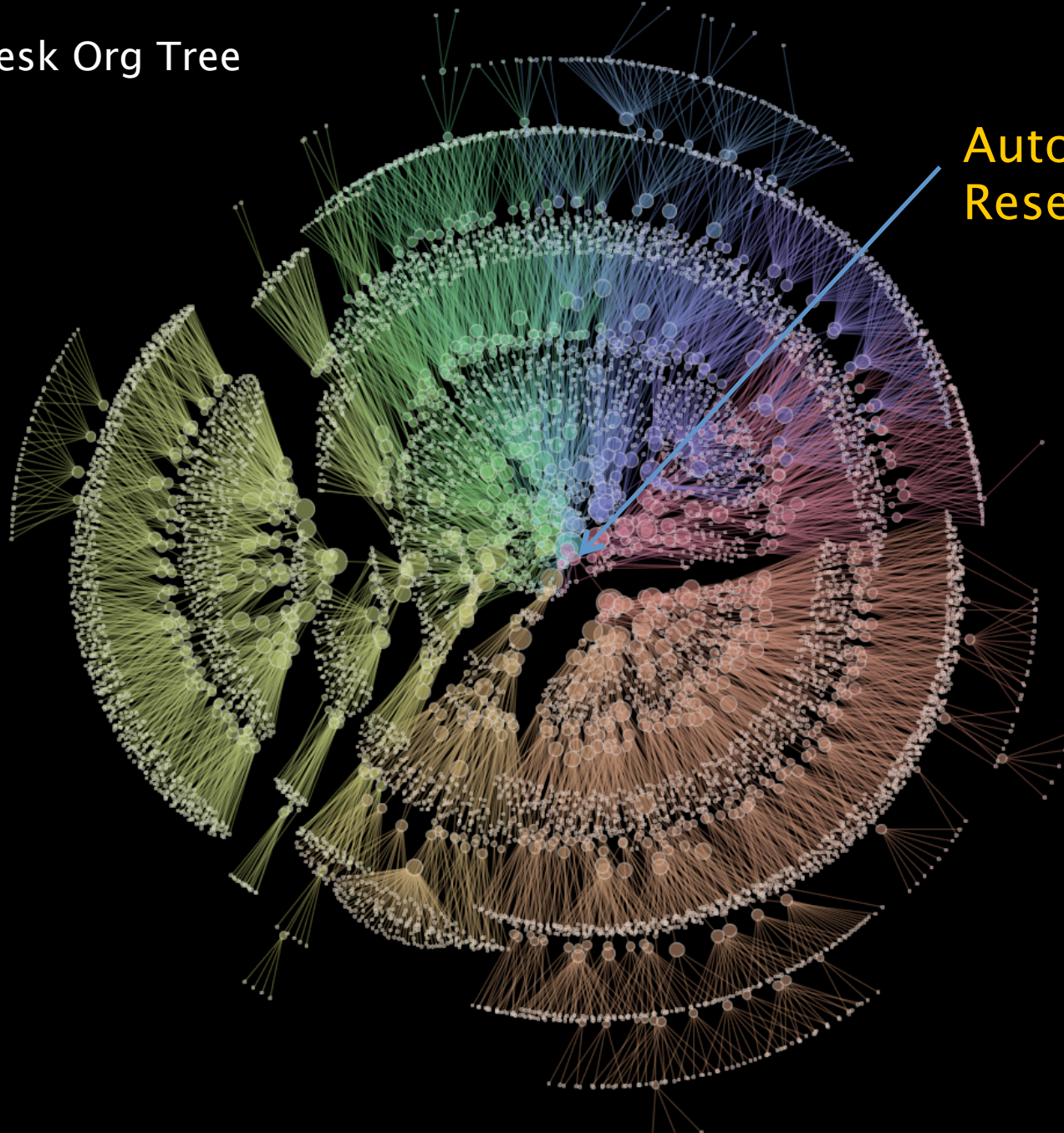


Collection of Ph.D.s on mission to discover new technology and insights

Works with academic community

Thought leadership, publications

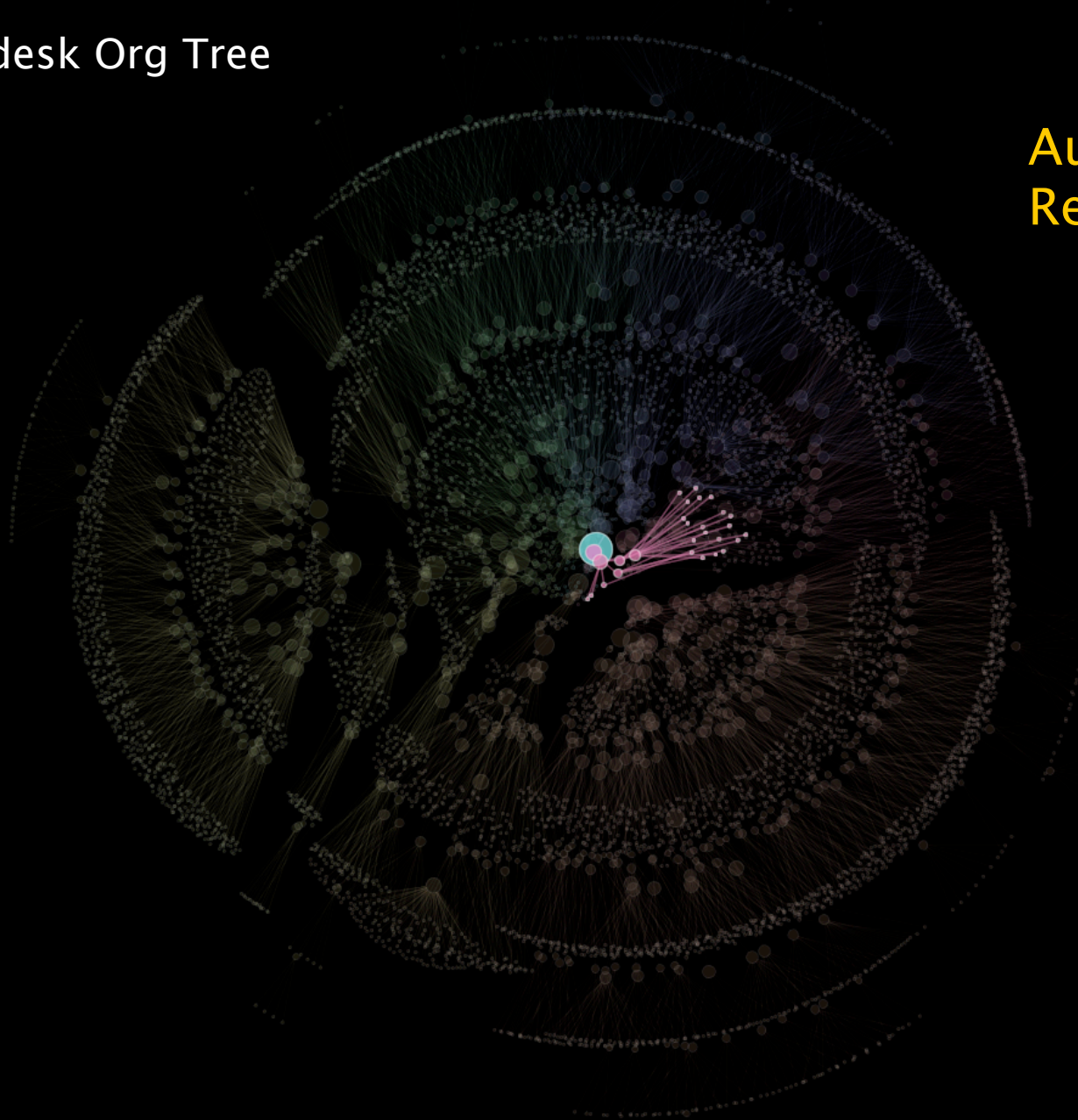
# Autodesk Org Tree



Autodesk  
Research

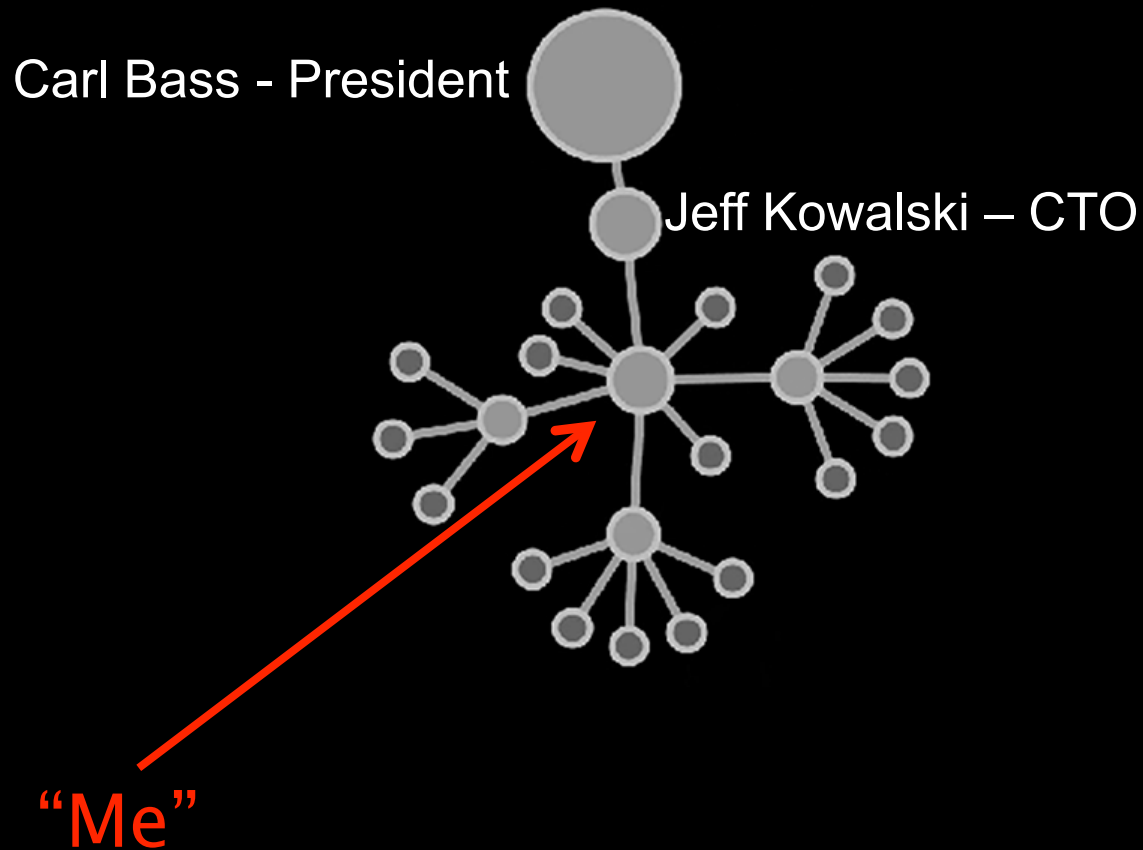
Autodesk Org Tree

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# Autodesk Research

About 30 people





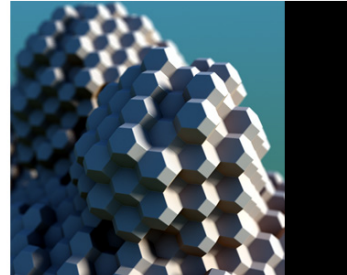
## Autodesk Research

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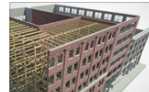
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### Groups

Within Autodesk Research, there are four domain groups focused on User Interface research, Environmental & Ergonomics research, Simulation & Graphics research, and High Performance Computing research. In addition, an important part of Autodesk Research is our Research Transfer group that bridges the gap between Research and Development. Together, our five groups form a team of dedicated world-class professional research scientists and software developers working on some of the most interesting and challenging research topics of our time.



### Environment & Ergonomics Research



**Azam Khan**

The Environment & Ergonomics Research Group focuses on how to minimize the impact of the built environment on the natural environment. Humans are the bridge between these two worlds and it is human activity that has created every environmental problem from factory farms destroying local environments to factory cities destroying global environments.

### High-Performance Computing Research



**Francesco Iorio**

The High Performance Computing Research Group is focused experimenting with new multiprocessing paradigms to improve performance and scalability of software applications. From embedded systems to cloud computing, from bleeding-edge accelerators and hybrid computing infrastructures to large parallel systems, the group researches and evaluates computing systems, data networks and their interaction.

### Nanotechnology

**Carlos Olguin**

Nanotechnology, the control of matter on an atomic and molecular scale, is an emerging meta-field growing at an accelerated pace. Almost every industry is or will be affected by nanotechnology in a potentially radical way. Nanotechnology will ultimately bring a new age in humanity's ability to design and make things.

### Research Transfer

**Thomas White**

At Autodesk Research, we believe in making a difference. We are not satisfied with creating abstract solutions locked away in a journal publication. Our researchers are proud to have a dedicated team of professionals to help move research outcomes from their prototypes and publications into real products. We gain great satisfaction from helping people to solve their problems faster, better, and more intuitively.



### Simulation & Graphics Research



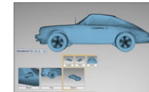
**Jos Stam**

Our group has a long history of developing advanced natural phenomena simulation. Our research has resulted in a real-time fluids solver, an advanced cloth solver and self-affecting particle system, all available in Maya.

### User Interface Research

**George Fitzmaurice**

The User Interface Research Group is focused on advancing the field of human-computer interaction research both at the hardware and software levels. We are constantly exploring new ways to make the software which we work with easier to learn, friendlier to use, and more efficient. Our interests lie in both seeking novel yet immediately applicable solutions to the user interface challenges existing in today's software applications, and also rethinking the underlying concepts for which today's user interfaces are designed, by exploring new paradigms which could shape the future generation of application user interfaces.



My background:

**B.Sc Comp. Sci.**

Research associate at U of Sask.

**M.Sc. Comp. Sci. U of Toronto**

Apple Advanced Technology Group (intern,  
consultant)

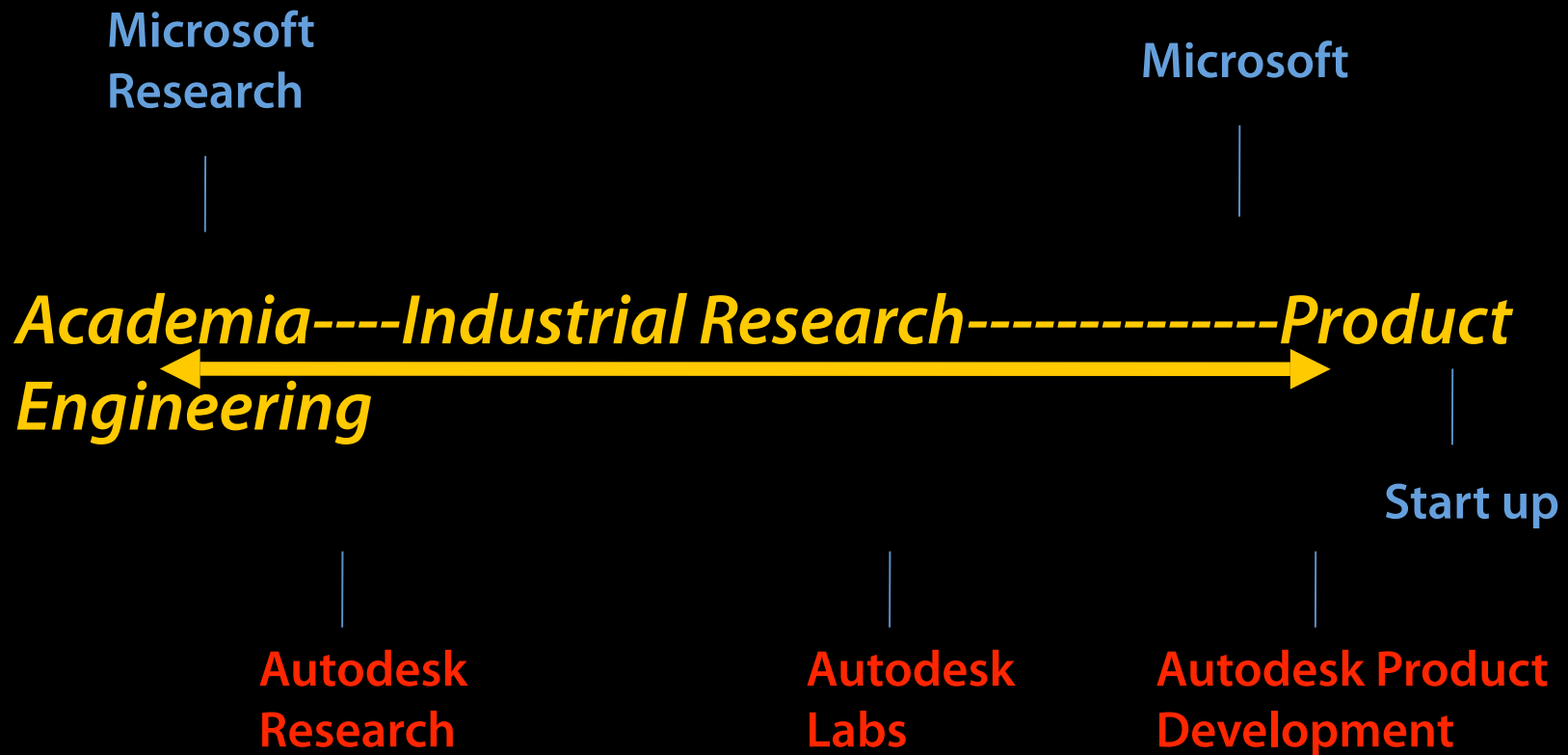
**Ph.D. U of Toronto**

Xerox PARC (intern, post doc)

UI researcher at Alias

**Autodesk buys Alias in 2006**

# Range of Jobs for PhD and MSc in industry



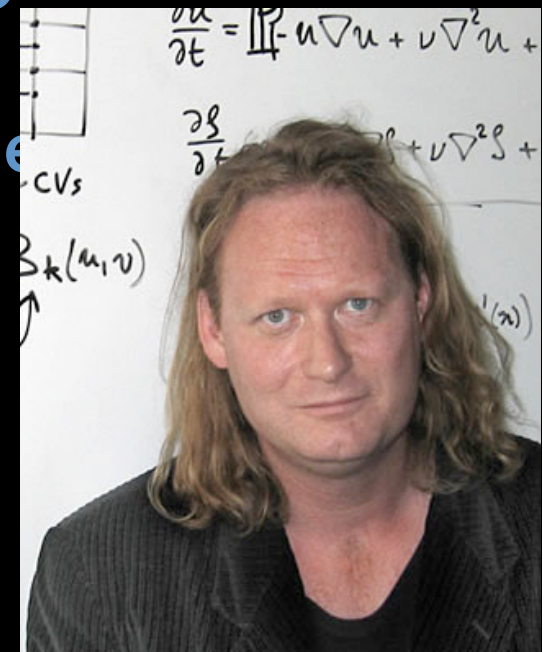
# What's different about Industrial Research over Academic?

Work on realizable, valuable solutions with real people

Potential for large influence on industry

Not on the manufacturing assembly line

Not in the academic rat race



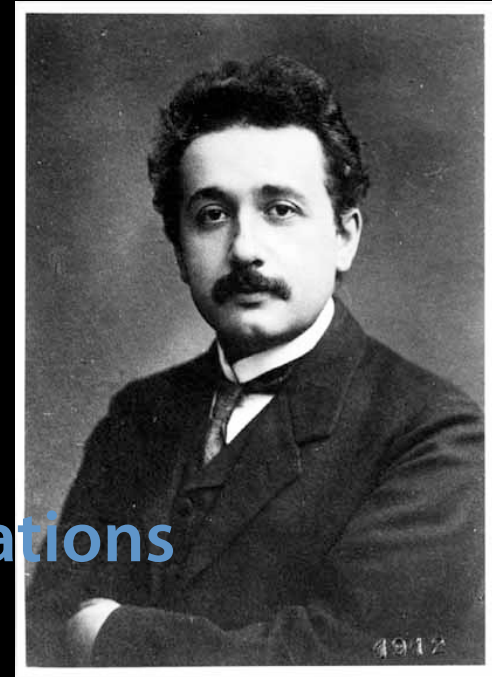
**What should your resume look like?**

A website

A website with lots of relevant publications

Your academic supervisor saying:

“This person rocks and I think he would fit into your group and do great on project X”



## Getting a foot in the door

Excel in your field (publications, systems, interests)

Persue Internships

Find research topics goals similar to the initiatives of the lab/internship

During tight economy: Consider no-fee internship, but ensure you deliver



**Industrial internships are good even if you are headed to academia**



Courtesy of GE

**Add to publications**

**Create network of collaborator/funders**

**Built internships channel for your students**

## Career paths once inside:

Researcher->Researcher Scientist-> Senior->Principal->Head-> Director

Research Engineer (don't publish)

Engineer

Management/Leadership





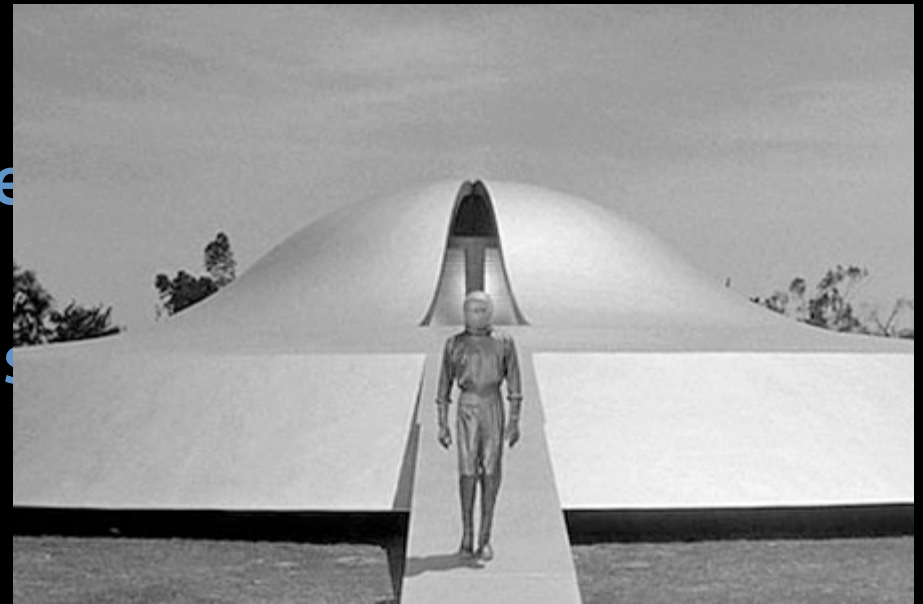
# The transition from academia to industrial research

Constant gravity of product develop to coop research resources (you)

Research seen as “non-esse

Challenge of research trans

You can have big impact



# The transition from academia to industrial research

Do business proposals rather than grant applications

Life inside a business

Exciting, Frustrating, Lucrative

Constant change

"Lets get this going before the corporate immunity system recognizes it"



Your idea

Corporate focus  
on core business

The group of people you work with  
approximates quality of job

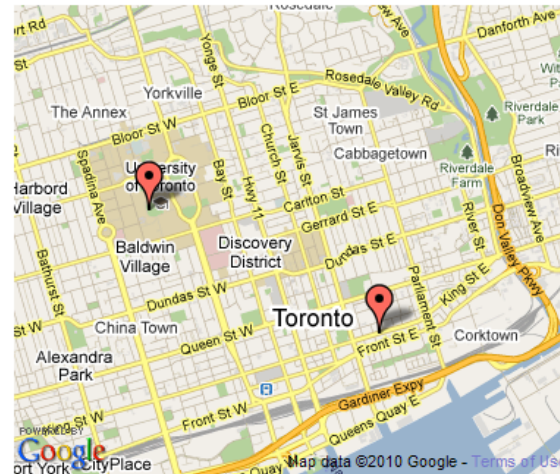
Choose wisely



## Autodesk Research Internship Program

Autodesk research has a thriving internship program and we are always looking for bright and motivated researchers to join our team. Typically interns are graduate-level university students from areas of computer science which relate to our research interests. Our internship program provides students with an incredibly valuable opportunity to apply, broaden, and strengthen their own research skills, working closely with our team of experienced computer science researchers. We accept interns at all times of the year, and look forward to hearing from you.

Please [contact us](#) if you are interested in doing exciting research at Autodesk!



**Autodesk Research**  
210 King St. East  
Toronto, Ontario, M5S 1J7  
Canada

### Employees (Formerly Interns)

[Rhys Goldstein](#)  
[Tovi Grossman](#)  
[Justin Matejka](#)  
[Ruslana Steininger](#)

### Graduate Student Interns

[Jacky Bibliowicz](#)  
[Simon Breslav](#)  
[Marco Fais](#)  
[James McCrae](#)  
[Ryan Schmidt](#)

### Undergraduate Student Interns

### Alumni Graduate Students

<a href="#">Ravin Balakrishnan</a>	<a href="#">Julian Lepinski</a>
<a href="#">Xiaojun Bi</a>	<a href="#">Saurabh Mathur</a>
<a href="#">Nicolas Burtnyk</a>	<a href="#">Michael McGuffin</a>
<a href="#">Parmit Chilana</a>	<a href="#">Michael Rooke</a>
<a href="#">Keenan Crane</a>	<a href="#">Hyunyoung Song</a>
<a href="#">Michael Ekstrand</a>	<a href="#">Michael Tsang</a>
<a href="#">Dongwoon Lee</a>	<a href="#">Xing-Dong Yang</a>

### Alumni Undergraduate Students

<a href="#">Don Almeida</a>	<a href="#">Ridhi Jhavar</a>
<a href="#">Sean Anderson</a>	<a href="#">Sobia Kwaja</a>
<a href="#">Alex Babkin</a>	<a href="#">Jessica Lo</a>
<a href="#">Ian Chan</a>	<a href="#">Igor Mordatch</a>
<a href="#">Jeannes Chan</a>	<a href="#">Paul P. Li</a>

**We have research internships all year round**

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