



Google for Academics

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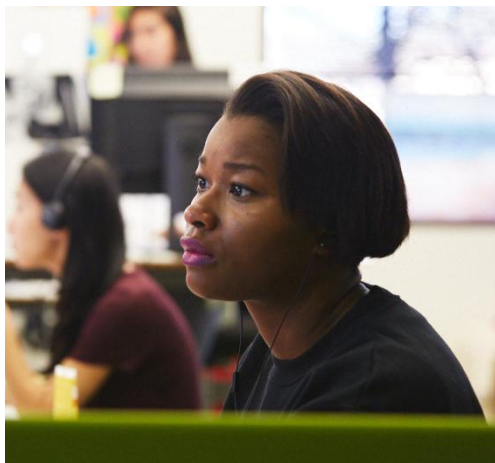
Ryo Shigeta, Ph.D.

Bio

Joined Google Japan in Feb 2020 and supports collaborations between Google and Japanese universities.

Started my career at Microsoft as a Program Manager but was backed to the University of Tokyo to pursue PhD. Received PhD in 2018 and worked as a researcher for agricultural IoT projects. Also worked closely with deep-tech start-ups ([SenSprout](#), [Tenchijin](#))

Organize the **world's**
information and
make it **universally**
accessible and
useful.



Four dimensions of Google research

Basic research and fundamental applied research	New product innovation
Critical product contributions	Infrastructure

University Relations @ Google

What do we do?

- Enable academic collaborations for Google Research
- Promote academic research in areas of interest to Google
- Support the pipeline of CS researchers globally

Why do we do this?

- Augment research capacity
- Create research results and impact that would not otherwise be possible



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- Create research results and impact that would not otherwise be possible
- **Positively impact as many people as possible to make the world a better place**



Where is Google Research?

N.AMER

Atlanta
Austin
Cambridge
Los Angeles
Montreal
Mountain View
New York
Pittsburgh
San Francisco
Seattle
Toronto



EMEA

Accra
Amsterdam
Berlin
Grenoble
Haifa
London
Munich
Paris
Tel aviv
Zürich

APAC

Bangalore
Seoul
Singapore
Sydney
Tokyo

Overview

Opportunities
for faculty

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Opportunities
for students

Research
resources

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Research values

Education &
teaching

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Opportunities for faculty

Research Scholar Program

Supports research conducted by early-career faculty globally.

Early-career faculty means who received PhD within 7 years.

Application is now open!

Deadline: 2022/12/1.

Award for Inclusion Research Program

Supports research addressing the needs of **populations historically underrepresented in the tech industry.**

Applications will open in June.

Visiting Researcher Program

Invite-only program for academic researchers to visit Google for 3-12 months to **collaborate with research and engineering teams.** In Japan, cross appointment system can be applied with some conditions.

Research Grant Opportunities

Google will continue to support research collaborations through sponsored research and unrestricted gifts in areas of mutual interest. Reach out to Googlers to explore areas of interest.

research.google/outreach

Silicon Research Program

Objectives

- Build an academic-industry network surrounding Silicon research
- Contribute to the open & inclusive Silicon research community
- Accelerate the potential collaborations on Silicon research efforts

How it works

1. Silicon Research Workshop to build the network to know from each other.
 - a. Professors should have better understanding on Google's interests.
 - b. We encourage professors to find Google Sponsor to work together.
2. Professors come up with proposals (2-3 pages).
3. Google review committee to review proposals. (matching Google Sponsors where needed)
4. Google decision and announcement.

Silicon Research Program in Taiwan 2022

Architecture: Low Power and High-Performance Computing Architecture

- There is a growing trend towards heterogeneous systems for high-performance computing (HPC) systems in both the edge and cloud computing. Looking forward to the new ideas and research results in the low-power and high-performance computing architecture area. Under the 'Architecture', the potential collaboration will be based on a broad range of topics (but not limited to):
 - High-Performance Embedded processor design
 - Hardware/software acceleration architecture for computational photography and ML applications
 - Low power architecture and optimizations for mobile silicons

Algorithm: deliver best-in-class imaging experience

- For state-of-the-art camera pipeline, research direction has been focused on computational photography utilizing ML models, adaptation of newer sensor/HDR technologies to boost image SNR, and enabling new features on video recording.
- Potential research collaboration opportunities:
 - Pixel processing ML
 - Semantics ISP
 - Learned Image Buffer Compression/Decompression
 - Video Super Resolution
 - Video Deblur
 - Multi-exposure Super Resolution / HDR fusion
 - Multi-sensor fusion

Opportunities for students

PhD Fellowship Program

Fellowships recognize outstanding graduate students doing exceptional and innovative research. The program supports promising PhD candidates of all backgrounds who seek to influence the future of technology.

Applications open in Mar.

www.google.com/intl/en_cn/university/research/phdfellowship.html

Scholarships & internships

Scholarships to encourage students to excel in their studies and become role models and leaders. Additionally, **internship opportunities** are available across various research areas. buildyourfuture.withgoogle.com/

exploreCSR

Awards that support universities to host **computer science research (CSR) workshops** in order to **increase the number of students from groups traditionally underrepresented in CS** to pursue graduate studies and research careers in computing. Applications open in June.

Student Travel Grant

Student Travel Grants supports outstanding research students to have the flexibility to **join the conference for presenting research work**. Applications open any time.

If it's a virtual event, you can use it for your registration fee.

buildyourfuture.withgoogle.com/scholarships/google-travel-scholarships/

research.google/outreach

Research resources

Google Cloud Research Credit

Google Cloud research credits can advance your research by giving you access to computing power. **\$1,000 USD** for PhD student and **\$5,000 USD** for PostDoc or faculty.
edu.google.com/programs/credits/research/

Datasets

Google open-sourced data of interest to researchers in a wide range of CS-related disciplines contributed to the broader research community.
research.google/tools/datasets/

TensorFlow

An **end-to-end open source machine learning platform** offering a flexible ecosystem of tools, libraries and community resources that lets researchers push the state-of-the-art in ML
tensorflow.org/

Open hardware

Google provides a **fully open source Process Design Kits (PDKs) and associated tooling** so that any developer can create manufacturable silicon designs.
developers.google.com/silicon

Research values

People + AI Research (PAIR) guidebook

Toolkit of methods and best practices for designing human-centered AI products.

pair.withgoogle.com

Responsible AI

AI Principles that guide Google research and applications, best practices for communities outside of Google, and programs to operationalize our efforts to **develop artificial intelligence responsibly in order to benefit people and society.**

ai.google/responsibilities

Learn with Google AI

Information, courses, and exercises from ML experts at Google to help **develop skills and advance projects.**

ai.google/education/

Education & teaching

Teaching resources

Resources and tools created by Google to **inspire creativity, encourage hands-on learning, and equip students** with digital skills.

edu.google.com/teaching-resources

Training and resources

A **range of advanced training courses** on distance learning in response to the COVID-19 pandemic.

edu.google.com/teacher-center

Accelerated registration for Google Workspace

Google Workspace for Education is a **suite of tools designed to empower educators and students** as they learn and innovate together.

edu.google.com/

Extended Google Meet feature

Extended functions in Google Meet to **facilitate remote learning**.

meet.google.com/



Teach from home

A temporary hub of information and tools to **help teachers during the COVID-19 crisis.**

teachfromanywhere.google/intl/ja/

Work from home

Discover Productivity tips from Google's Executive Productivity Advisor to **make "work from home" work for everyone.**

blog.google/inside-google/googlers/make-work-from-home-work-for-you/

Learn more

Google research

<https://research.google>

Research Tokyo

<https://research.google/locations/tokyo/>

Google AI Blog

<https://ai.googleblog.com>

Questions?

Contact me: eastasia-ur@google.com