

# Introduction & Application Guide to Falling Walls Lab Sendai 2020

**This year online due to the corona crisis**

**Tohoku Forum for Creativity in  
Collaboration with URA Center  
2020.06.23**



# What's this event about?

## Short History of Falling Walls and the Falling Walls Foundation

Falling Walls is a unique international platform for leaders from the worlds of science, business, politics, the arts and society. It was initiated on the occasion of the 20th anniversary of the **fall of the Berlin wall**.

Inspired by this world-changing event on 9 November 1989, the question of every Falling Walls gathering is: **Which walls will fall next?** Falling Walls fosters discussion on research and innovation and promotes the latest scientific findings among a broad audience from all parts of society.

The Falling Walls Foundation, a charity, is generously supported by the German Ministry for Education and Research, the Robert Bosch Stiftung, the Helmholtz Association and numerous other acclaimed academic institutions, foundations, companies, non- governmental organisations and prominent individuals.

For more information, please visit at <http://www.tfc.tohoku.ac.jp/fwls/about.html>

# A pitch event that blows your mind!

Great minds, 3 minutes, 1 day:

- Oral presentation contest
- Compact format (3 minutes/4 slides)
- Eligible for young academics and professionals
- Distinguished Jury
- **All disciplines are welcome!**

You can find more information at

<http://www.tfc.tohoku.ac.jp/fwls/index.html>



FOR CREATORS,  
INNOVATORS,  
TRAILBLAZERS,  
AND VISIONARIES

APPLY  
NOW!  
falling-walls.com/  
lab/apply

WIN  
YOUR SPOT  
AT THE  
GLOBAL  
FINALE THIS  
NOVEMBER!

28 AUGUST 2020 **ONLINE EVENT!**

## FALLING WALLS LAB IS COMING TO SENDAI

Which wall will your research break? Pitch your innovative idea in just 3 minutes, showcasing a breakthrough that creates a positive impact on science and society.

**WHO**  
Students, entrepreneurs, early-career researchers, & academics of all disciplines

**WHAT**  
Convince a jury of your idea – in 3 minutes!

**WHY**  
Join the growing Falling Walls community & win your spot at the global Finale this November!

**WHERE**  
ONLINE – delivery from TOKYO ELECTRON House of Creativity, Tohoku University

**QUESTIONS**  
fwls@grp.tohoku.ac.jp

**APPLY HERE**  
falling-walls.com/lab/apply  
**Deadline: 14 July 2020**

\*Public event – attendance is free & encouraged

Held by: **FALLING WALLS LAB**  **TOHOKU UNIVERSITY**

In association with:  **Sendai Forum for Creativity**

Supported by:  **TEL TOKYO ELECTRON**  **TOKIN A KEMET Company**  **Nitobe College**

# Presentation Format and Evaluation Criteria

## Your Presentation

- ✓ 3 minutes (**2.30 minute-presentation and a half-minute Q&A**)
- ✓ presentation file containing **4 slides**.

1st slide: Your presentation title, your name and affiliation

2nd slide: Problems you are going to solve/the Wall you are going to break

3rd slide: Your innovative solution

4th slide: Q&A (template provided)

## Scoring System

- ✓ **jury from science and business**
- ✓ **3 criteria:**

### a) **Breakthrough Factor**

How innovative is the proposed idea? 50%

### b) **Relevance/Impact**

How relevant is the idea for the discipline and beyond? 30%

### c) **Structure/Performance**

How convincing was the presentation? 20%



# What do you gain from participating?

**Share your ideas** with a broader local audience

**Appeal to a global community** through video recordings & media mentions

**Networking** internationally

**Receive feedback** from a distinguished jury & the audience

**Improve your oral presentation skills** & gain experience on stage

**OPEN CALLS**

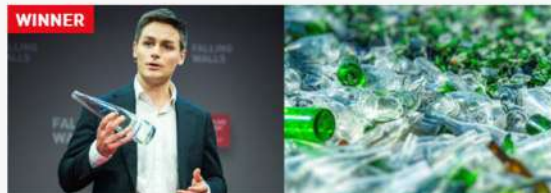
# Past Falling Walls Lab Berlin Finale Winners

1 Day, 100 Young researchers, 3 Minutes

2019



**WINNER**  
**BREAKING THE WALL OF AFFORDABLE HOUSING AND WASTE PLASTIC**  
 RUSHABH CHHEDA

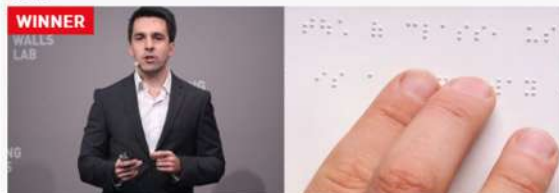


**WINNER**  
**BREAKING THE WALL OF BROKEN GLASS**  
 RHYS PIRIE



**WINNER**  
**BREAKING THE WALL OF UNLABELED DATA**  
 MARIËLLE VAN KOOTEN

2018



**WINNER**  
**BREAKING THE WALL OF BRAILLE LITERACY**  
 ADAM FULOP



**WINNER**  
**BREAKING THE WALL OF INEFFICIENT FILTERS**  
 ANKITA POUDYAL



**WINNER**  
**BREAKING THE WALL OF SURGICAL ERROR**  
 AHMED GHAZI

2017



**WINNER**  
**BREAKING THE WALL OF MOSQUITO BORNE DISEASES**  
 SRILAHARI NAMANI



**WINNER**  
**BREAKING THE WALL OF OVARIAN CANCER DIAGNOSIS**  
 AGNES REINER



**WINNER**  
**BREAKING THE WALL OF WASTEWATER TREATMENT**  
 ASHWIN CHARLES

You can find more information at <https://falling-walls.com/lab/winners/>



# Past Falling Walls Lab Sendai Winners

## Falling Walls Lab Sendai 2019

1<sup>st</sup> Place: Kazuo Kakinuma - Breaking the Wall of Cognitive Brain Mapping

2<sup>nd</sup> Place: John Artieda - Breaking the Wall of Inaccessible Healthcare with Upcycled

3<sup>rd</sup> Place: Cindy He - Breaking the Wall of Missing Teeth

## Falling Walls Lab Sendai 2018

1st Place: Dr. Yuanyuan Guo - Breaking the Wall of Brain-Machine Interface

2nd Place: Mr. Fabien Dalsheimer - Breaking the Wall of Heart Transplant Candidates' Quality of Life

3rd Place: Ms. Yuri Sasaki - Breaking the Wall of Vaccine and Adjuvant

## Falling Walls Lab Sendai 2017

1st Place: Ms. Makiko Hayashi - Breaking the Wall of Difficulty in Cancer Therapy

2nd Place: Dr. Shogo Kumagai - Breaking the Wall of Hard-to-Recycle Polymeric Wastes

3rd Place: Dr. Yukiko Ogawa (NIMS) - Breaking the Wall of Development of Novel Lightweight Alloys



You can find more information at <http://www.tfc.tohoku.ac.jp/fwls/videos.html> or at Youtube "Falling Walls Lab Sendai".

# Overall Schedule

## Pre-events (Please check TFC website!)

**Training sessions** not only provide opportunities to brush up your skills in English oral presentation, but also the venue for networking with people that share common interests.

<http://www.tfc.tohoku.ac.jp/fwls/index.html>

## July 14, 2020

**Application Deadline** for Falling Walls Lab Sendai

Apply online: [falling-walls.com/lab/apply](http://falling-walls.com/lab/apply)

## August 17, 2020

Day of **Recording**. Further information will be send to registered applicants.

## August 28, 2020

Falling Walls Lab Sendai (FWLS)

Time: 14:00 –

Venue: **Online** - delivery from TOKYO ELECTRON House of Creativity, Tohoku University

The winner will attend the Falling Walls Lab Finale in Berlin.

## November 8, 2020

Falling Walls Lab **Finale** 2020 in Berlin, Germany

All three winners of the Finale attend the Conference and give their 3 minutes talks again in front highly distinguished guests.

## November 9, 2020

Falling Walls Conference 2020, Berlin, Germany

**Keep in mind that nearly all activities will be online due to the corona crisis!**

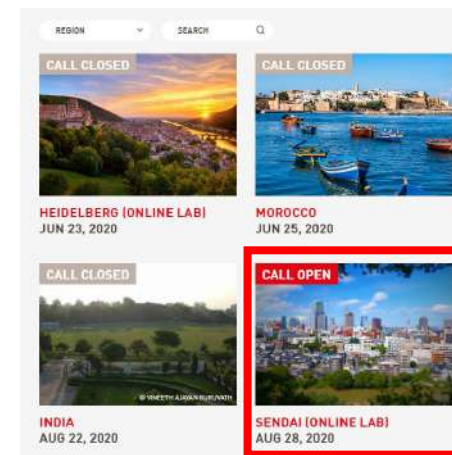
WHICH ARE  
THE NEXT  
WALLS  
TO FALL?



# Application Form – 6 Easy Steps

<https://falling-walls.com/lab/apply/sendai-online-lab/apply/>

- Check your Eligibility
- Fill in Name and Contact Information
- Fill in Educational Background and Upload Detailed CV
- Give Details on Presentation (Title, Problem, Solution, Motivation)
- Agree to Terms and Conditions
- Submit



**Prepare the information before you start filling out the online form!**

# ① Check your Eligibility

CALL OPEN

AUG 28, 2020

## FALLING WALLS LAB IS COMING TO SENDAI

① ————— ② ————— ③ ————— ④ ————— ⑤ ————— ⑥

### WHO CAN APPLY?

- For outstanding scholars, researchers, scientists, entrepreneurs, young professionals, and innovators.
- All disciplines welcome

### ELIGIBILITY CRITERIA

You must be 18 years or older when submitting your application. You must fulfil at least one of the following formal requirements:

- You are currently enrolled in university
- You are currently a postdoc
- You received a Bachelor's degree no more than 10 years ago
- You received a Master's degree no more than 7 years ago
- You received a PhD no more than 5 years ago

\* An MD (medical degree excl. a doctoral dissertation) is considered equivalent to a Master's degree. A Dr. med. (medical degree incl. a doctoral dissertation) is considered equivalent to a PhD.

### BEFORE APPLYING, PLEASE NOTE

- Applications must be submitted in English.
- Travel & accommodation expenses for international Falling Walls Labs will not be covered unless otherwise stated by the local organisers.
- This is a once in a lifetime opportunity. Past participants are no longer eligible to apply.
- No ticket purchase necessary when applying to an international Falling Walls Lab.

I confirm that I have not previously participated in a Falling Walls Lab. \*

I've read and accepted these conditions \*

NEXT STEP

Double-check whether you fulfill the requirements for participation.

Multiple participation is not permitted.

Agree to conditions.

## ② Fill in Name and Contact Information

1 — 2 — 3 — 4 — 5 — 6

GENERAL INFORMATION	
HONORIFIC * <input type="text"/>	TITLE * <input type="text"/>
FIRST NAME * <input type="text"/>	LAST NAME * <input type="text"/>
COUNTRY OF CITIZENSHIP (SELECT A COUNTRY) * <input type="text"/>	CURRENT CITY OF RESIDENCE * <input type="text"/>
CURRENT COUNTRY OF RESIDENCE (SELECT A COUNTRY) * <input type="text"/>	
EMAIL * <input type="text"/>	TELEPHONE NUMBER * <input type="text"/>

[Previous Step](#)

[NEXT STEP](#)

Fields marked with an asterisks \* are mandatory. Please use your university e-mail address if provided.

### ③ Fill in Educational Background and Upload Detailed CV

1 — 2 — 3 — 4 — 5 — 6

**EDUCATION & CURRENT AFFILIATION**

**EDUCATION \***

PLEASE SELECT YOUR EDUCATION STATUS \*

UNIVERSITY/COLLEGE \*      NAME OF STUDIES/MAJOR \*

FIELD OF STUDY \*      GRADE ON A GENERAL SCALE \*

EXPECTED DEGREE \*      EXPECTED GRADUATION YEAR \*

ADD ANOTHER EDUCATION

**CURRENT AFFILIATION**

INSTITUTION NAME \*

POSITION [E.G. STUDENT, ASSISTANT, MANAGER, FOUNDER, CEO, ETC.] \*

INSTITUTION CITY \*

INSTITUTION COUNTRY \*

**AWARDS**

1	INSTITUTION	NAME OF AWARD	YEAR RECEIVED
ADD AWARD			

UPLOAD CV IN PDF FORMAT, MAX. 3MB \*

ファイルを選択 選択されていません

Previous Step      NEXT STEP

Provide basic Information about your educational background.

More information can be added if needed via the “Add another education” button.

Provide basic Information about your current affiliation and position.

Information on awards is optional, but could be a plus when there are more candidates than speaker slots available.

Upload a basic curriculum vitae (CV) in English. PDF file should not exceed 3MB.

## ④ Give Details on Presentation

Be clear, be concise, write so that even people outside your field would be able to understand you! Find some samples on the following slides!

Give the presentation a clear title.  
Up to 40 characters possible.

Select a research field that fits your project best.

To what subfield does your project belong to?

Describe the problem/wall in 200 characters (spaces and punctuation Included). Up to three rows in word, approx. two to three sentences.

Same goes for the solution/idea to break the wall you stated above.

End the description with a few words about your motivation, whether you work in a team or any other viable additional information.

Be sure to check for any possibilities of COI (Conflict of Interests), particularly IP (intellectual Property).

1 — 2 — 3 — 4 — 5 — 6

INNOVATIVE IDEA

PRESENTATION TITLE (BREAKING THE WALL OF ...) \*

Breaking the Wall of

40 characters remaining

PROJECT FIELD \*

▼

SUBFIELD WITHIN PROJECT FIELD \*

40 characters remaining

PLEASE STATE THE PROBLEM YOU PLAN TO ADDRESS \*

200 characters remaining

PLEASE STATE YOUR SOLUTION TO THE PROBLEM \*

200 characters remaining

PLEASE DESCRIBE YOUR PROJECT IN 1-2 SENTENCES \*

200 characters remaining

confirm that the idea presented above is mine/my team's, and that I am not claiming other peoples' intellectual property as my own. \*

[Previous Step](#)
[NEXT STEP](#)

# 1) Breaking the Wall of Reducing Plastic Waste

**Field:** Architecture

**Subfield:** Building Materials Science

**Problem:** There are mountains of non-biodegradable waste plastic

**Solution:** Build housing using waste plastic

**Description:** We have invented a way to treat waste plastic so that it can be used as building material for affordable housing.

**Motivation/Comments:** This project allows us to kill two birds with one stone: help to deal with non-biodegradable waste plastic, and at the same time provide affordable housing to help poor and homeless people. I am happy to be able to help poor people, while also helping to clean up the environment.



**Field:** Philosophy and Robotic Science

**Subfield:** Kantianism

**Problem:** Kant's synthesis of recognition as a concept imposes limits on AI development. Kant stated that to recognize objects, at least two things are required. One is memory, the other is to relate objects stored in memory with the characteristics of the object requiring recognition. This implies that for robots to recognize an object requires that the robot must have a huge memory just for this purpose, in order to be able to recognize all objects.

**Solution:** We break the wall of large memory requirement by inventing the concept of a comparator which accesses pattern information available on the internet to classify objects. In this way, a robot can recognize objects without needing a very large memory.

**Motivation/Comments:** We are excited that our fundamental philosophical approach allows us to attack basic scientific problems. It is clear to us that universities are a unique source of original advances. This approach is difficult to expect from industry or other parts of society as a whole.

### 3) Breaking the wall of corona virus contagion

**Field:** Materials Science

**Subfield:** Aerosol Technology

**Problem:** The Covid-19 coronavirus is spread from person to person by contamination of surfaces by infected people.

**Solution:** We propose to limit infection by the invention of a new spray-on surface coating which kills the coronavirus effectively for a prolonged period of up to 6 months.

**Motivation/Comments:** We are excited that our technological knowledge can be applied to resolving new problems affecting society, from the point of view of both health and economics.

## ⑤ Agree to Terms and Conditions

1 — 2 — 3 — 4 — 5 — 6

**TERMS & CONDITIONS**

HOW DID YOU HEAR ABOUT FALLING WALLS LAB?

Social Media  Friends/Family/Colleagues  Your Institution  Newsletter  Newspaper  Poster/Flyer

Young Entrepreneurs in Science  Other

I agree that only my full name and email address will be archived for communication purposes after 31 December 2020. If I do not agree to these terms, I will contact the Falling Walls Foundation at [lab@falling-walls.com](mailto:lab@falling-walls.com) \*

I confirm that I am eighteen (18) years of age or older. \*

I agree to the Falling Walls Lab [Terms & Conditions](#). \*

[Previous Step](#) NEXT STEP

If you are having problems with the form, please contact us at [office@falling-walls.com](mailto:office@falling-walls.com). A draft of your application will be saved on our website and, if not submitted, deleted automatically after seven days. During this time, you can access the draft via the link above. Once you click the submit button, you will no longer be able to edit your application.

Optional, but please check for improvement of future PR activities.

Check all three mandatory fields and be ready to press the submit button at the next step!

**Congratulations, you successfully applied for an mind-blowing experience!  
We're looking forward to seeing you on stage!**

# References that might also be helpful

How to state your **problem/solution**?

<https://www.scribbr.com/research-process/problem-statement/>

<https://www.fallingwallsfragments.com/2017/11/02/powerful-presentations-tips-for-falling-walls-lab-participants-and-everybody-else/>

How to formulate your **motivation**?

You can write about your interests in the SDGs, your personal experience, people that have an influence on you, your research team and the dream you are sharing with them. But you can also describe how far your research proceeded. Do you have a prototype or conducted any field studies?

How to be more **concise**?

<https://researchinsiders.blog/2015/06/12/10-tips-for-more-concise-writing/>

[https://owl.purdue.edu/owl/general\\_writing/academic\\_writing/conciseness/index.html](https://owl.purdue.edu/owl/general_writing/academic_writing/conciseness/index.html)

<https://www.grammarly.com/blog/what-is-concise-writing/>

<https://writingcenter.unc.edu/tips-and-tools/conciseness-handout/>

# Contact



For all general inquiries related to Falling Walls Lab Sendai, please contact Falling Walls Lab Sendai Administration (English/Japanese):

[fwls@grp.tohoku.ac.jp](mailto:fwls@grp.tohoku.ac.jp)



For questions regarding the training sessions contact Tohoku University URA Center via the e-mail address below (English/Japanese):

[ura-admin@grp.tohoku.ac.jp](mailto:ura-admin@grp.tohoku.ac.jp)

**FALLING  
WALLS  
FOUNDATION**

For further information on the online application form, please refer directly to the Falling Walls Foundation's contact (English):

[office@falling-walls.com](mailto:office@falling-walls.com)