



2019 Program for Scientifically Inspired Leadership (PSIL)

in Imphal, India

Program Handbook

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HARVARD UNIVERSITY
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Director's Welcome



Welcome to the **2019 Program for Scientifically-Inspired Leadership (PSIL)**. It is no secret that Harvard has an abundance of resources. I always wondered how I could share these resources with Manipur, a place I once called home. With PSIL, I am able to share Harvard's most valuable resource – its best minds – through this five-day conference for high-

school students in Imphal. We have an excellent team of teachers who are Harvard students from a diverse range of academic and extracurricular interests who share a common passion for education and outreach. Over the course of the program, PSIL teachers will conduct sessions that focus on the essential skills that form the core of professional development. These skills are important regardless of the path you pursue in higher education and future careers.

The curriculum is structured with **the scientific method as its central theme**. This is because the scientific method ensures unbiased and objective investigations in the pursuit of knowledge. PSIL focuses on the scientific method rather than concepts one learns in science classes and applies this scientific method towards the development of soft skills critical for growth.

It is important to note that **by no means is this a one-way transaction of ideas and thoughts**. Through their interactions with you, PSIL teachers will hone their teaching skills and get an opportunity to immerse in and absorb the rich cultural heritage of Manipur. I am certain you will show your PSIL teachers a glimpse of the hospitality that the region is known for!

This program would not have been possible without the help and support of local community members. We all owe a huge debt of gratitude to the sponsors and people who have helped make PSIL a reality! Thanks to our sponsors, **this program is completely free for all admitted participants**.

Dominic Mao, Ph.D.
Program Director

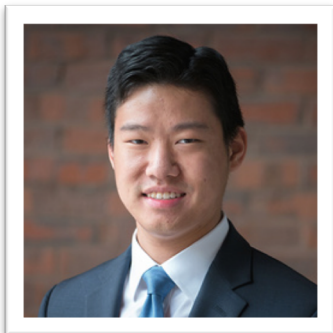


Program Director



Dominic Mao is the Assistant Director of Undergraduate Studies for two of Harvard's life science concentrations and a lecturer in the Department of Molecular and Cellular Biology at Harvard. He was born in Imphal, Manipur and lived there for 16 years during which he attended Don Bosco, Chingmeirong. Looking back at his journey so far, he remembers a handful of people who genuinely cared and steered him in the right direction. He loves photography and music (there is a special place in his heart for rock music!). He also loves to cook!

Associate Director



Christopher Li is a Research Assistant at the Belfer Center for Science and International Affairs, where he focuses on Chinese foreign policy, Asia-Pacific security, and the effects of scientific and technological innovation on great power competition. Prior to joining Belfer, Chris was a special assistant for life sciences strategy in the Office of the Provost at Harvard and conducted research on stem cell reprogramming at Massachusetts General Hospital. He previously worked as a legislative intern for Senator Mazie Hirono and as an editorial and book researcher for former New York Times Executive Editor Jill Abramson. A 2018 Hertog Fellow at the Institute for the Study of War, Chris received his A.B. with high honors in Human Developmental and Regenerative Biology from Harvard University.



Sam Kessler is a junior (third year) at Harvard studying computer science. Originally from Blue Bell, Pennsylvania, Sam is interested in journalism and politics, and he leads the Harvard Political Review while he's on campus. In his free time, Sam enjoys programming, photography, and skiing and he is headed to Google next year as a product manager. Sam is also passionate about education, and he enjoys working with students from outside of the United States through the organization CISV, which brings students from around the world together to build friendships and learn about topics ranging from sustainable development to conflict resolution. On that note, he is very excited to meet and work with everyone in Manipur!



Allison Pao is a sophomore (second year) at Harvard studying Social Anthropology and Human Evolutionary Biology with a secondary in Educational Studies. She grew up in New York City, Tennessee, and Switzerland, and she now calls all three places her home. A passionate educator, Allison spent her most recent summer working at an education non-profit in Shanghai, China, and she's leading a volunteer teaching trip to Beijing, China next year. On campus, she enjoys teaching students of all ages and backgrounds through the Harvard Ed Portal, the Harvard Food Literacy Project, and the Harvard Chinatown Citizenship Program. As a research assistant for the Harvard Democratic Knowledge Project, she is helping to develop the new 8th grade civics curriculum for Cambridge Public Schools. She also loves performing, listening to, and writing about all kinds of music, and therefore her home away from home is the Harvard radio station, WHRB.



Ellen Zhang is a senior (fourth year) at Harvard studying Integrative Biology with a secondary in Global Health and Health Policy. Outside of the classroom, she researches on Parkinson's Disease, volunteers with Alzheimer's Disease patients, and writes creatively. Ellen is very invested in education: she has taught classes ranging from life sciences to physics, travelled to Vietnam to teach high schoolers, and frequently mentors younger students. In her free time, Ellen enjoys baking, exploring new restaurants, and traveling. After graduation, she will pursue a medical degree. She's extremely excited for PSIL and to meet new people in Manipur!



Head Teaching Assistant

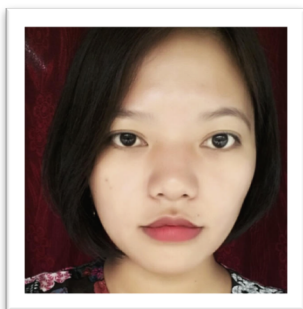


Toijam Diana is a resident of Imphal who plans to pursue a PhD in Urban Ecology and Evolutionary Ecology. While studying Zoology, the precise dissections mattered to her more than the answer sheets. One day the dissections on an amphibian commonly known as the Indian Bullfrog were cancelled, due to their threat of extinction. This further prompted her interest in environmental science and led her to pursue a Master of Arts degree in Ecology, Environment and Sustainable Development. Diana grew up listening to a lot of songs, from traditional Manipuri classics to western music, which helped develop a passion for learning a foreign

language (German), which she plans on pursuing this summer. She is also an avid reader, her last book being "Auroville: Dream and Reality" by Akash Kapur. Mathematics and cooking are two of her favourite hobbies. She also finds stargazing particularly interesting. Diana is a firm believer of 'there is something interesting in everything'.



Jyosita Elangbam is Master of Science final year (3rd semester) student at Ghanapriya Women's College studying Zoology. She was born in Keishamthong Elangbam Leikai, Imphal, Manipur. She considers herself an introvert yet is very social with people whom she finds comfortable to be with. She is a child scientist awardee. She is passionate about education and in her free time she tutors high school students in her locality. She loves listening to music, dancing and reading wisdom books. She also has an inner passion for adventure.



Chinboiling Steffi Haokip graduated with a B.Sc. degree from Dhanamanjuri College of Science Imphal in 2016 and completed her M.Sc. in Environmental Science in 2018. She successfully cleared the National Eligibility Test (NET) conducted by Central Board of Education (CBSE). She possesses great interest in teaching and loves learning new things through experiences. Currently, she is preparing for the Junior Research Fellowship (JRF) examination in order to pursue her Ph.D. degree.



Mutum Kunjarani Devi recently completed her M.Sc. degree in Environmental Science from Manipur University. Kunjarani grew up in one of Manipur's most underprivileged places in terms of education. She was determined to educate herself, and her belief in the transformative power of education led her to devote time to mentor 13-15 year old students in a temporary coaching center. She cares about the future of students from similar underrepresented places in Manipur. One of her initiatives involves bringing together and mentoring promising students from nearby localities. She is very interested in and excited to pursue teaching as a career, and plans to pursue a Ph.D degree towards that end.



Manjulika Ahanthem is an English Literature major who is pursuing M. Ed. at RKSDCE (R.K. Sanatombi Devi College of Education) in Imphal. A keen educationist, she is presently working on a project in teacher education. She is passionate about teaching and writes articles in her free time.

Two Ways To Approach Any Problem, Allison Pao

The scientific method and the design cycle provide two basic approaches to solve ANY problem. I'll outline the steps of the scientific method and the design cycle by breaking down these two key problem-solving processes with you. We'll first walk through hypothetical everyday examples of problems (why am I tired today?) and try to answer the problems by asking questions, defining variables, conducting experiments, and analyzing data. Most importantly, we'll talk about how the scientific method and the design cycle can be applied to non-scientific scenarios, and I'll give you reasons why these methods can and should be used by leaders in all fields!

Public Speaking and Debate, Christopher Li

Public speaking skills are critical in every career path and every walk of life: in interviewing for a job, giving a presentation for a class, or even having an argument with a friend. Yet so many people are ineffective at (and often afraid of) articulating themselves—clearly, eloquently, and effectively. This session will be divided into two parts. In the first half, we will explore the “big picture”—demystifying public speaking and developing concrete, foundational principles for speaking and presenting confidently in any setting. In the second, we will dive into the tools of argumentation and rhetoric, exploring how to construct (and deconstruct) compelling arguments and wield logic as a powerful tool (which has applications to writing as well). Throughout, we'll examine some famous and infamous examples of good and bad public speaking.

Living Outside of the Box, Sam Kessler

Students will come away from this lecture with a clear sense of how to take on a problem, however large, and think up a solution. Through a hands-on project which will require students to work with their peers to answer a problem, they should come away with: a sense of how to break a problem down into chunks, the ability to generate and apply creative thinking, experience working with a team, and presentation skills. Altogether, these skills should prepare students to succeed in jobs which require outside the box thinking. This lecture will give you a self-starter mentality — giving you confidence in your ability to effectively attack complex problems. The lesson will also show you how to succeed in any workplace which rewards initiative and features broadly-scoped tasks without pre-set solutions.

Be The Change: Inciting Social Progress, Ellen Zhang

You will gain a basic knowledge of the history of social movements around the world, and effective leaders of these movements. You will understand how structural forces work to constrain agency within communities, and how you have the power to actively undo those forces through strategies to have your voices heard (advocacy, lobbying, mass media, legal power). You will start thinking about different social issues within your own communities, though I won't impose my own ideas about these social issues; rather, I will provide you with the framework to start thinking about these social issues yourself.



The Power of Stories, Allison Pao

In this introspective workshop, you will first be prompted to reflect on formative moments in their own lives. Then, by workshopping your stories with their group, they will choose one personal story to develop through a storytelling medium of their choice: oral (as a poem or speech), written (as a narrative or article), and visual (as some kind of artwork). You will gain confidence as they learn how to express themselves effectively, and you will also gain perspective as you practice reflecting on the life you have led thus far.

Poetry, Ellen Zhang

In this extracurricular, students will understand the nuances of conveying and expressing themselves through poetry. They will delve into a world of words through looking at poetic elements, such as alliterations and metaphors. Through recognizing these poetic elements, they will be able to not only better read and understand poetry, but also to write their own. Here, poetry will be explored as a new medium of expression - free from any constraints, for only by learning the rules can they be broken.

Journalism, Sam Kessler

In this extracurricular, you will learn about the art of journalism. You'll be guided through each step of the journalistic process—from finding a story and conducting research, to crafting an outline and finding your own distinct writing style. By the end of our time together, you should have a clear sense of how to analyze the world around you, and you'll be better at communicating ideas in a clear and engaging way.



January 2019

	Tue 15	Wed 16	Thu 17	Fri 18	Sat 19
all-day	SAI: Program for Scientifically Inspired Leadership (PSIL) Conference				
	Registration				
10 AM	Opening Ceremony	TED Talk #1	TED Talk #2	TED Talk #3	10 AM Teaching Staff Forum
11 AM	10:30 AM Lab #1	10:30 AM Lab #2	10:30 AM Lab #3	10:30 AM Lab #4	11 AM Project Symposium
Noon	11:30 AM Lecture #1: Two Ways to Approach Any Problem	11:30 AM Lecture #2: Public Speaking and Debate	11:30 AM Lecture #3: Living Outside of the Box	11:30 AM Presentation: Chris Li	Closing Ceremony
1 PM	12:30 PM Snack/Lunch Break	12:30 PM Snack/Lunch Break	12:30 PM Snack/Lunch Break	12:30 PM Snack/Lunch Break	
2 PM	1:30 PM Extracurricular #1	1:15 PM Extracurricular #2	1:15 PM Extracurricular #3	1:15 PM Extracurricular #4	
3 PM	2:30 PM Presentation: Dominic Mao	2 PM Career Fair	2 PM Lecture #4: Be the Change: Inciting Social Progress	2 PM Talent/Cultural Show	
		Office Hours	Office Hours		
4 PM					



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