

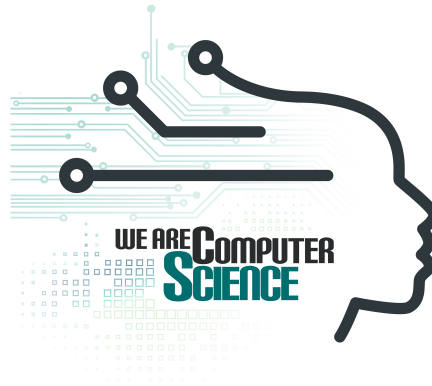
We are Computer Science
*A Student Association at the University of Basel,
Switzerland*

Abstract

“We are Computer Science” is an association initiated by students and for students to serve as a support network for encouraging female and underrepresented minority students to pursue and continue their studies in Computer Science. The goal of “We are Computer Science” is to promote an unbiased and fair future for females and underrepresented minorities in computer science and technology. To achieve this goal, we have very successfully started to invite renowned diverse speakers from universities, research institutes, and the private sector to offer insight into and discuss how they face diversity and inclusivity-related challenges in their respective communities.

We are Computer Science*

A Student Association at the University of Basel, Switzerland



1 Introduction

Diversity is an important factor in all fields in our personal and business lives which needs to be taken into consideration to provide a safe and healthy environment for all the members of the society. In academia, the scientists tackle problems ranging from mostly theoretical to mostly practical daily life problems. To have the best solution which can be useful for all members of society, a diverse perspective and approach to solve these problems are crucial.

Although in recent years, the percentage of women graduating from Swiss universities dramatically increased, this growth in numbers does not fully correspond to the figures in Computer Science and technology-related fields.

According to the statistics published by the University of Basel¹, the number of student enrollments at each degree level in the Department of Mathematics and Computer Science² follows an increasing trend over the past few years. However, the share of female students in this growth is only marginal from 9% to 19% from 2016 to 2020. According to the latest enrollments in the Fall semester 2020 at the Computer Science Department, out of 290 students at bachelor, master, and doctoral levels, 43, 10 and 4 are female, respectively. These numbers indicate a harsh underrepresentation of females in this field and a sharp drop in pursuing higher levels of education at the university.

“**We are Computer Science**” (WaCS) was founded in October 2020 as a student organization by Mahnaz Parian-Scherb³, a doctoral candidate in Databases and Information Systems group. Her experience as a student and researcher in different countries prompted her to build an organization where students can offer help to and support each other. With support from the Department of Mathematics and Computer Science, the WaCS association started various activities, ranging from

*<https://we-are-cs.unibas.ch>

¹<https://www.unibas.ch/de/Universitaet/Portraet/Zahlen-Fakten/Studierendenstatistiken.html>

²<https://dmi.unibas.ch/>

³<https://dbis.dmi.unibas.ch/team/mahnaz-parian-scherb/>

regular meetings and discussions about various topics, to invited talks and networking sessions. Beside the explicit organized programs to raise awareness and increase the knowledge of students regarding the gender imbalance in Computer Science, “We are Computer Science” created a sense of belonging to a support network which is there to empower its members.

2 Motivation and Goals

“We are Computer Science” is an association initiated by students and for students to serve as a support network to encourage female and underrepresented minority students to enroll, pursue, and continue their studies in Computer Science at the Department of Mathematics and Computer Science at the University of Basel.

This association was initiated to raise the awareness about the low number of women in Computer Science and to encourage female students to pursue an academic career. The outstanding level of commitment of female students during their studies, in group, and solo projects, and various activities in Department of Mathematics and Computer Science is a proof of how this part of the society can improve the quality of research both inside and outside academia.

Our **goal** is to promote an unbiased and fair future for females in Computer Science and technology. In addition to encouraging female students at the university to pursue higher education and retain the brilliant female talents in academia⁴, WaCS also focuses on minimizing the effect of gender stereotypes at pre-university level and encourage female high school students to enroll in computer science study programs. Beside the gender stereotypes, we believe that for the younger generation of students, it is a major encouragement to know that an association is there for them to support them throughout their studies at the university.

To achieve this goal, we have started and continue to invite renowned diverse speakers from universities, research institutes, and the private sector to offer insight into and discuss how they face diversity, equity, and inclusivity-related challenges in their respective communities. This will be complemented by social networking, regular meetings, and book reading clubs for members of the “We are Computer Science” association. We will also organize workshops and coaching sessions for the association members to equip them with the knowledge and skills to feel more confident in the currently male-dominated and non-diverse field of Computer Science. Finally, we seek to create a sense of community through empowerment, knowledge, and active engagement and collaboration.

Despite its recent establishment, “We are Computer Science” already counts 29 members, who are communicating and sharing updates via a mailing-list and a Slack workspace. In contrast to the current enrolment in our department, 59% of the WaCS members are female and we are proud to have 12 male members who joined our cause in empowering female talents.

One of the **first successes** of the association is encouraging Claire Walzer⁵ to continue her studies in our master program and to apply for the best thesis award of the German-speaking countries in “Fachgruppe Frauen und Informatik” of the German Computer Science organization GI⁶ where she was listed in the 4 finalists for her splendid Bachelor’s thesis⁷.

⁴<https://www.zeit.de/2021/17/frauen-wissenschaft-forschung-gleichstellung-lise-meitner>

⁵<https://dbis.dmi.unibas.ch/team/claire-walzer/>

⁶<https://gi.de/>

⁷https://twitter.com/we_are_cs/status/1366368552157118470

Evidence Supporting the Impact of “We are Computer Science”

1 Introduction

Despite the young age of “We are Computer Science” association – est. October 2020, the association has already engaged in various activities and made impact in the information cycle and brought life in Department of Mathematics and Computer Science at the University of Basel. Below is a list of activities evidencing the impact of WaCS.

2 List of Events¹

- The “We are Computer Science” association’s kick-off event took place on the 13th of April 2021, with an invited online talk by Prof. Dr. Florina Ciorba from our department. Prof. Ciorba’s talk with the title “*To Study or Not to Study CS*” targeted important gender issues in Computer Science field. This event was very well received within the Department of Mathematics and Computer Science, with more than 30 participants via Zoom (Figure 1).
- With the aim of inviting inspiring women in science who perform research within the area of gender imbalance, the second event of the association was organized as an invited (also online) talk by Dr. Monica Landoni, from the Università della Svizzera Italiana on the 18th of May 2021. Her insightful talk “*Gender stereotypes and Gender Balance in Informatics: Time to Act?*” emphasized the impact of gender stereotypes on children and was also very well received within our department. We were asked multiple times to provide the recording of the talk (Figure 1).

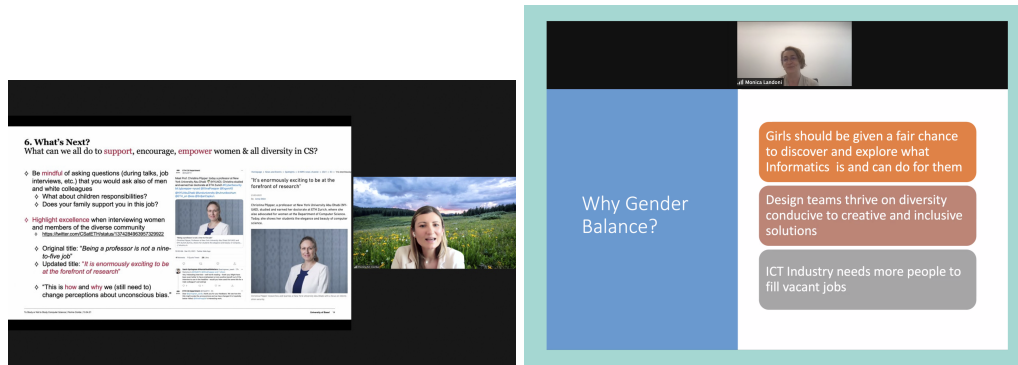


Figure 1: Screenshots of the kick-off event talk given by Prof. Dr. Florina Ciorba (left) and of the second invited talk given by Dr. Monica Landoni (right)

- We are currently organizing a third WaCS event to which we are inviting Prof. Dr. Julia Vogt from ETH Zurich. Her perspective as the responsible professor at the CSNOW, the Network of Women in Computer Science at ETH Zurich is of great interest and we expect that this event will again attract a numerous audience from our department and beyond.

¹Due to the current situation with Covid-19, the majority of the events are held virtually. This will change as soon as the safety of the participants can be ensured according to the health authorities. We strongly believe personal interaction among the members will help even more in better implementing the association’s objectives.

3 Meetings and Discussions

We are Computer Science holds weekly meetings, on Tuesdays, with the aim of exchanging experiences and insights into the events each individual student participated at. These meetings often open very inspiring discussions about personal experiences. The weekly get-together started with two students but with the cause being known to other members of the department, we often have at least 4 or 5 members participating every week.

Another **impact** of the association on the diversity culture of the Department of Mathematics and Computer Science is the number of men who voluntarily joined the association offering support in various areas, from organization of events, to graphic design and discussions, because, as they say,

The road to a more gender inclusive computer science field should be paved by both men and women.

To promote the culture of deep thinking about current problems and trigger the discussion among students, *We are Computer Science* organized the public screening of the documentary “**Picture a Scientist**” on the 28th, 29th and 30th of May, 2021 followed by a discussion round table on 1st June 2021. This screening offer became so popular that students and professors from different disciplines in our university, including the Diversity representative of the Faculty of Science² (where our department belongs to) and other associations requested to join. In total 80% of the registrations were from our Departments of Mathematics and Computer Science, while 20% from other units.

4 Sharing stories

One of the main goals of the “We are Computer science” team is to **encourage female students** to openly discuss about their achievements and success, to share their opinions, and be self-confident. To pursue this goal, we started a blog on our website³, and are inviting female students to “share their stories”. We already received several outstanding blog posts and texts from our students.

5 Social media

We are Computer Science is also present on popular social media channels, such as Instagram, Twitter and LinkedIn, to spread and amplify its mission and vision and to reach the younger generation who are actively using digital social media networks as a source of information. WaCS attracted 66 followers on Instagram⁴ with our channel reaching 135 accounts in total (Figure 2) in just a few months. Our posts and updates made over 650 impressions on Instagram in May 2021, showing the breadth of the audience that read our content. On Twitter⁵ we have 31 followers and our updates on this channel made 1700 impressions in May 2021 alone (Figure 3).

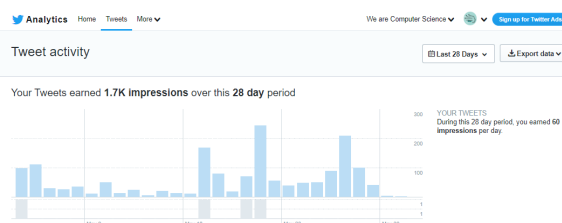
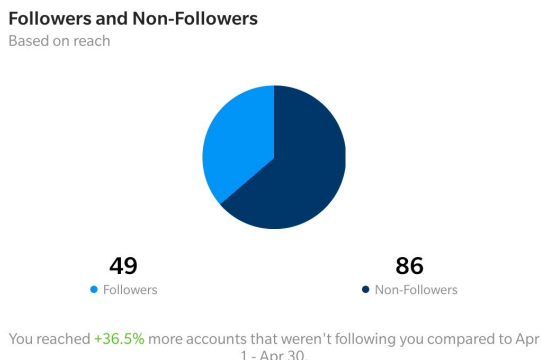


Figure 2: WaCS Instagram followers in May 2021 Figure 3: WaCS Twitter activity in May 2021

²<https://philnat.unibas.ch/de/>
³<https://we-are-cs.unibas.ch/en/blog-en/>
⁴<https://instagram.com/we.are.cs/>
⁵https://twitter.com/we_are_cs