**PRESS RELEASE**

**Portuguese computer engineer Filipa de Sousa Rocha (27) comes second in Young Inventors Prize 2023 for work making digital learning more accessible**

* **Filipa de Sousa Rocha has come in second place in the Young Inventors Prize at the European Inventor Award 2023**
* **The European Patent Office (EPO) honours the young inventor for developing a system to teach digital literacy and eliminate educational barriers**
* **Using block-based programming, children with visual impairment can control a robot, similar to playing a drag-and-drop computer game**

**Munich, 4 July 2023 –** The European Patent Office (EPO) announced today that **Filipa de Sousa Rocha has come in second place in the Young Inventors Prize at the European Inventor Award 2023.** ThePortuguese computer engineer invented **a block-based coding system and programming language to tackle the issue while facilitating access to digital education.**

“*It's an honour and privilege to be among the Young Inventors finalists. It truly drove me to continue with my research, to seek out new opportunities and collaborations*,” said Filipa de Sousa Rocha.

Approximately 90 million children and teenagers worldwide live with some form of sight loss, according to the [International Agency for the Prevention of Blindness (IAPB](https://www.iapb.org/learn/vision-atlas/magnitude-and-projections/child-eye-health/)). Teachers and parents of children with visual impairments have difficulties finding mainstream educational tools and toys which they do not have to adapt – an issue de Sousa Rocha’s invention seeks to address.

**De Sousa Rocha came in second out of three in the second edition of the Young Inventors Prize**, which the European Patent Office (EPO) established to inspire the next generation of inventors. The prize recognises young innovators aged 30 or under who have developed technological solutions to tackle global problems and help reach the United Nations Sustainable Development Goals (SDGs). De Sousa Rocha’s work in improving access to education contributes to UN SDG 4: Quality Education and UN SDG 10: Reduced Inequalities.

**Like a drag-and-drop computer game**

Block-based coding is a programming language where the developer builds sequences of instructions by dragging and dropping blocks on a monitor. The blocks are decorated with 3D foam icons. These icons represent directional movement or speaking functions used to command a robot’s behaviour. Using these blocks, children with visual impairment can control the robot, as if they were playing a drag-and-drop computer game. De Sousa Rocha calls this invention ‘Block-based Accessible Tangible Programming Systems’ or BATS.

The prototype of the BATS learning tool took less than a year to create. It was tested remotely with five families of visually impaired children between 6 and 12 years old during the Covid-19 pandemic. Rocha's work has made significant strides in making computational thinking accessible to all, particularly visually impaired and blind children.

“*Even if children don't want to follow a technological career, even if they want to go into finance, or business, or management, or something else, their future is going to be using technology and it’s important to understand it,*” explains de Sousa Rocha.

**The Young Inventors Prize winners were announced today at the European Inventor Award 2023 hybrid ceremony in Valencia (Spain). You can stream the ceremony on** [**this page**](https://inventoraward.epo.org/?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press)**.**

Find more information about the invention’s impact, the technology and the inventor’s story on [this page](https://new.epo.org/en/news-events/european-inventor-award/meet-the-finalists/filipa-de-sousa-rocha?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press&mtm_group=press).

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**About the inventor**

Filipa de Sousa Rocha holds a Bachelor of Science degree in Computer Engineering and a master's degree in computer and information Systems from Instituto Superior Técnico in Lisbon. Her master's thesis focused on her BATS project, an accessible programming system that uses tangible objects to teach programming concepts to visually impaired children. Rocha's research is primarily focused on Accessible Human-Computer Interaction (HCI). She has developed an educational environment that uses physical and tangible objects to teach digital skills such as computer programming. She is currently pursuing her PhD in Informatics at the University of Lisbon, with an FCT scholarship and integrated at LASIGE, a research and development (R&D) unit at the Faculty of Sciences of the University of Lisbon, in the field of Computer Science and Engineering.

Rocha is a teaching assistant at the Instituto Superior Técnico at the University of Lisbon. She has four papers published on accessible programming, including her findings on a programming approach focused on accessibility called "ACCembly.” When she is not studying or refining her educational tools, de Sousa Rocha volunteers at “Cova do Mar” and “Just A Change”, two non-governmental organisations in Portugal that focus on human rights and housing poverty.

**About the Young Inventors Prize**

The European Patent Office established the Young Inventors Prize in 2021 to inspire the next generation of inventors. Aimed at innovators aged 30 or below from all around the world, it recognises initiatives that use technology to contribute toward the United Nation's Sustainable Development Goals. The winner will receive EUR 20 000, the second and third placed finalists will receive EUR 10 000 and EUR 5 000, respectively. An independent jury comprising former finalists of the European Inventor Award selects the finalists and winner. The EPO will confer the prize at the European Inventor Award 2023 hybrid ceremony on 4 July. Unlike the traditional Award categories, the Young Inventors Prize finalists do not need a granted European patent to be considered for the prize. Read more on the Young Inventors Prize eligibility and selection criteria at [this page](https://new.epo.org/en/news-events/european-inventor-award/categories-and-prizes).

**About the EPO**

With 6 300 staff members, the [European Patent Office (EPO)](https://www.epo.org?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press&mtm_group=press) is one of the largest public service institutions in Europe. Headquartered in Munich with offices in Berlin, Brussels, The Hague and Vienna, the EPO was founded with the aim of strengthening co-operation on patents in Europe. Through the EPO's centralised patent granting procedure, inventors are able to obtain high-quality patent protection in up to 44 countries, covering a market of some 700 million people. The EPO is also the world's leading authority in patent information and patent searching.