

# DIALOGUES AND TRANSLATIONS: STORIES OF GREAT WOMEN AROUND THE WORLD

## DIÁLOGOS E TRADUÇÕES: AS HISTÓRIAS DAS GRANDES MULHERES PELO MUNDO


**AUTORAS**

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Fernanda Belarmino de Santana Scaini
Lívia de Almeida Cristaldo
Maísa da Silva Siqueira
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Marini EDITORA

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A **MARINI EDITORA** publica esta obra como uma celebração do conhecimento, da educação e do protagonismo feminino. Ao reunir histórias de mulheres que romperam barreiras na ciência, tecnologia, administração e engenharia, o livro aproxima suas trajetórias do ambiente escolar por meio da língua inglesa.
Reafirmamos nosso compromisso com obras que valorizam a educação, ampliam horizontes e inspiram novas gerações a reconhecer o talento, a criatividade e a contribuição das mulheres para a sociedade.

***MARINI EDITORA** publishes this work as a celebration of knowledge, education, and women's empowerment. By bringing together stories of women who broke barriers in science, technology, administration, and engineering, this book connects their journeys to the classroom through the English language.*
*We reaffirm our commitment to works that value education, broaden horizons, and inspire new generations to recognize women's talent, creativity, and contributions to society.*

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# Our dialogue and our story of creation

## NOSSO DIÁLOGO E NOSSA HISTÓRIA DE CRIAÇÃO

# INTRODUCTION

## INTRODUÇÃO

### Our dialogue and our story of creation

Translating texts and words leads us to a place of discoveries and helps us understand the world from another window. That said, it is possible to open our universe to translate stories and create narratives that dialogue with our daily life, as well as to transform the classroom into a dialogue setting. This book is a result of our research project approved at Edital 031/2025, which selects proposals that include the participation of girls and women in scientific research. This project was built by six girls/women who were split into writing/rewriting, translation, review and illustrations. In this book, we translated into the English language the story of women who played or yet play an important role in the areas of Administration, Electrotechnics, Informatics and Mechanics.

As a result, as soon as the main idea was proposed for the book, narratives were selected by the students of CTRL+FEMME from the books 'Heroínas Ocultas' and 'Histórias nunca Contadas da Ciência' (2021) and the book *'Empreender: uma arte dominada por ela'* (2026) from ADMelle. The rewriting process and the update of some texts were

### Nosso diálogo e nossa história de criação

Quando traduzimos textos e palavras, nos projetamos para um lugar de descobertas e passamos a entender o mundo a partir de uma outra janela. Assim, muitas vezes, abrimos nosso universo para traduzir histórias e criar as narrativas que se aproximam do nosso cotidiano, para transformar o espaço da sala de aula em diálogo. Este livro é o resultado do nosso projeto de pesquisa aprovado no Edital 031/2025 que seleciona propostas para a participação de meninas e mulheres em pesquisas científicas e foi constituído por 6 meninas/mulheres que se dividiram entre a escrita/reescrita, a tradução, a revisão e as ilustrações. Neste livro, traduzimos, em língua inglesa, as histórias dessas mulheres que atuaram e ainda atuam nas áreas de Administração, Eletrotécnica, Informática e Mecânica.

Assim, quando a ideia principal foi lançada, selecionamos as narrativas escritas nos livros Heroínas Ocultas e as Histórias nunca Contadas da Ciência escritos em 2021 pelas estudantes do grupo CTRL+FEMME

developed to be translated to the English language and, simultaneously, new illustrations of the scientists were included.

Given that, as the translations of the narratives and the creation of new illustrations were developed, it was noticed that each of those women and their singularities built together a new meaning of overcoming, friendship, conflict, finance and family. Thus, the research approached the school environment, as it made the groups English Club and NuAR get together, which resulted in a book which translated, not only the expectations of students and teachers, but also, of a society.

To complement the written work, the distinctive features of the illustrations gave each woman a colorful touch, highlighting their distinctiveness and creations. Accordingly, the semiotic production in the writing and illustration composed a book which translates not only the words themselves, but also admiration, respect, acknowledgement and loveliness to each of these women.

Before going into this universe of translations and words, it is our duty to express our deep gratitude to the ones who helped us along this journey:

To the Federal Institute of Mato Grosso do Sul (IFMS) for the financial aid, which was essential to the development of this work, provided through the Institutional Program for the Promotion of Teaching, Extension, Research and Innovation of IFMS (PIEPI) and the Institutional Scholarship Program for Junior Research Initiation (ICJ)

e do livro *Empreender: uma arte dominada por elas*, escrito pelo grupo ADMelle em 2026, para compor o livro. Iniciamos com a reescrita e a atualização de alguns textos para as traduções em língua inglesa e, simultaneamente, com as novas ilustrações das cientistas. Nesse pensamento, foi criado um livro que pudéssemos usar em sala de aula e que estivesse próximo aos nossos cursos no Ensino Médio Integrado do IFMS Campus Campo Grande.

Nesse sentido, com a tradução dessas narrativas e a criação das novas ilustrações, percebemos que cada uma dessas mulheres e suas singularidades construíram juntas ressignificados para a superação, as amizades, os conflitos, as finanças e a própria família. Nesse viés, foi possível aproximar a pesquisa científica ao contexto escolar, pois a parceria entre os grupos do English Club (Clube de Inglês) e o do NuAR (Núcleo de Animação e Roteiro) resultou em um livro que traduz, não só as expectativas de estudantes e professoras, mas de uma sociedade.

Para complementar a escrita, os traços marcantes das ilustrações deram o tom colorido em cada uma dessas mulheres, ressaltando suas particularidades e suas criações. Dessa forma, a escrita e as ilustrações, em uma elaboração semiótica, compuseram um livro que traduz, muito mais que palavras, admira-

and Research Initiation (IC), and to the Call for Proposal 031/2025 which supports initiatives to promote the participation of girls and women in scientific research, affiliated with the Vice-Rectory for Research - PROPI-IFMS.

To the group of students involved in the project NuAR and English Club, incredible girls who created UPRISE and accepted the challenge of translating to the English language the narratives of these women who, in different times, paved the way for all of us.

We are thrilled to present this written and illustrated work developed through ongoing dialogue between teachers and students in this universe called IFMS.

We wish you all a great reading time filled with great discoveries!

**The authors**

ção, respeito, reconhecimento e amabilidade à todas essas mulheres.

Antes de adentrarmos neste universo de traduções e palavras, cabe a nós agradecermos com imensa satisfação àqueles que nos ajudaram nessa conquista:

Ao Instituto Federal de Mato Grosso do Sul (IFMS) pelo incentivo, essencial para o andamento deste trabalho, dado por meio do auxílio financeiro, via Programa Institucional de Incentivo ao Ensino, Extensão, Pesquisa e Inovação do IFMS (PIEPI) e do Programa de Bolsas internas nas modalidades Iniciação Científica Júnior (ICJ) e Iniciação Científica (IC) e ao edital 031/2025 que contempla propostas para a participação de meninas e mulheres em pesquisas científicas vinculado à pró reitoria de pesquisa – PROPI-IFMS.

Ao grupo de estudantes que fazem parte do NuAR e do English Club, meninas incríveis que criaram o UPRISE e aceitaram o desafio de traduzir para a língua inglesa as histórias dessas mulheres que, em épocas diferentes, construíram espaços importantes para todas.

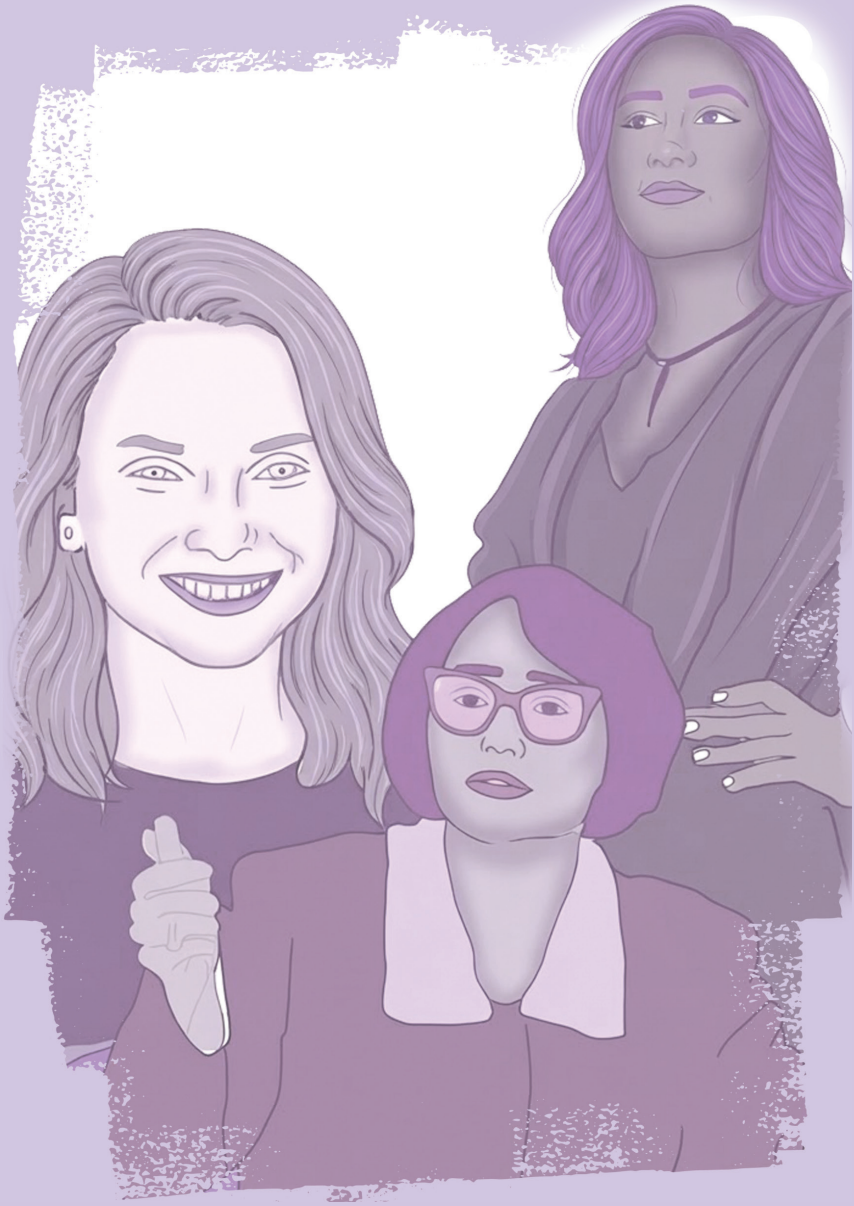
É com grande entusiasmo que apresentamos este trabalho escrito, traduzido e ilustrado em um diálogo constante entre professoras e estudantes, neste universo que é o IFMS.

Desejamos uma ótima leitura e grandes descobertas!

**As autoras**

# ADMINISTRATION

## ADMINISTRAÇÃO




Cristina
Junqueira

# THE WOMAN WHO RUPTURED WITH THE TRADITIONAL BANK MODEL



orn in Ribeirão Preto and a Carioca at heart, Cristina Junqueira was always an academic weapon, since student, driven by her passion for technology and business. She took her education seriously, completing both her bachelor's degree and her master's degree in Engineering Production at Poli-USP, without taking a break between them. After working very hard at Unibanco, BCG and LuizaCred, she went to Itaucard, which was the turning point in her career. Cristina tried to bring innovative ideas to the bank, but as the traditional system didn't want to listen, she decided it was time to make it happen and create her own technological, innovative bank.

In the year of 2013, alongside David Vélez and Edward Wible, Cris Junqueira founded Nubank with the objective of disrupting the traditional banking system. The idea came from David's dissatisfaction with the high fees and the bureaucratic customer service. Cristina, with all her knowledge in the Brazilian financial world, saw the big opportunity to create a financial system that was accessible, transparent and in a way that put the client in the center of everything. Since the beginning, she played a key role in building the company culture, in the brand development and the strategy relationship definition with customers. In this way, she projected Nubank to differentiate, not only by technology, but also by the way it treated its users.

The innovative proposal and the user's experience without complications, quickly attracted plenty of users, turning Nubank into a phenomenon in Brazil. Given the success in our country, the enterprise initiated its internationalization. In 2019, the company began operating in Mexico and Colombia, and also set up a structure aimed at exploring new markets in Europe. Furthermore, in the same year, Nubank collected important titles: the Fast Company elected it as the Most Innovative Enterprise of Latin America and ranked it in 36$^{th}$ place between the most 50 of the world.

In her personal life, Cristina is married to a financial executive and is the mother of four children. Balancing motherhood and executive leadership is a topic she frequently discusses in public appearances, serving as an example of how to combine a successful career with family life. In addition to her work at Nubank, Cristina is committed to social impact initiatives, supporting startups founded by women and mentoring entrepreneurs through high-impact development programs, such as those organized by Endeavor Brazil. Her leadership has been closely linked to the company's success, the pursuit of excellence, and the promotion of financial inclusion. Today, she is more than just an executive; she is an influential speaker at international forums, where she discusses key topics such as digital transformation and women's leadership.


Maria da Glória
Guimarães dos Santos

# THE WOMAN BEYOND THE LIMITS



On a sunny day, a little girl was born. She received the name of Maria da Glória Guimarães dos Santos. She grew up surrounded by the love and kindness of her family. Her father was a Military and her mother was a government employee. They always encouraged her ideas about being a great woman. She was always around other kids and stood out because of her effort and intelligence. From a very young age, she was interested in informatics, seeing her passion in machines and programming, despite a field overwhelmingly dominated by boys.

When she reached adulthood, she decided to pursue a degree in Information Technology so she could work with what had always fascinated her: machines. She soon realized that this would be the beginning of her greatest adventure. After graduating from university and receiving her degree in the field she had always dreamed of, the sweet young woman felt invincible. Little did she know that many battles were still to come.

Maria had the opportunity to work in her profession at an extremely important company, Serpro, founded in 1964 in Brazil's capital, Brasília. The company's main objective was to bring innovation and technology to the entire country.

At the company, she started from scratch. Many times, simply because she was a woman, her abilities were questioned. Despite these doubts and challenges, Maria da Glória was not discouraged. She continued doing what she loved with determination and dedication. Little by little, she earned her rightful place within the company, eventually reaching a highly respected position as its first female president and CEO.

To get where she did, Glória Guimarães dreamed, observed, studied, seized opportunities, and worked tirelessly.

Until then, Serpro had been led exclusively by men, who made all the decisions concerning the company. Because men held the positions of power, women often did not have the opportunity to occupy positions as important as theirs. But the remarkable Maria da Glória changed this scenario. Throughout her years of service, after all her hard work, she managed to prove her worth and show that the company needed her in order to continue evolving and moving forward in the best possible way.

As a result, in 2016, Maria was invited to take on one of the most important positions within the company: the presidency. This position was reserved for those entrusted with the greatest responsibilities, overseeing everything related to Serpro. Armed with courage and her sharp tongue, the young woman decided to face this new battle, drawing on the knowledge and lessons she

had gained throughout her life. She emerged victoriously, leaving her name marked in the history of the company forever.

She thus became the first woman to hold such an important position. In light of these achievements, everyone could see that this woman had truly proven her ability to make her dreams a reality and bring about positive changes wherever she went.

Maria da Glória Guimarães dos Santos's journey, therefore, became an inspiration to other young female dreamers, encouraging them to break barriers and showing them that women are capable of achieving anything they set their minds to. Her story teaches us that everyone has immense value, regardless of gender.

"I think it is extremely important to be able to represent the strength that women possess."


Marissa Mayer

# THE WOMAN WHO IMPROVED GOOGLE



n 1972, in Wausau, United States, a lovely little girl, Marissa Mayer was born. Little did she know the bright women she would become throughout her journey.

Ever since she was a child, Marissa wanted to be in medicine school, and become a pediatric neurosurgeon. As a teenager she went to a high school that had a modular scheduling system, which allowed her to do 10 subjects per year, while in traditional high schools, you could only do 8. She also did a lot of extracurricular activities, such as a dance squad, debate, Key Club, and all kinds of volunteer work. After she finished high school, Mayer applied for several universities, including Harvard, Duke, Yale, and a lot more, and was surprisingly accepted by all of them. She also got offered a Northwestern special program, in which she would go for undergraduate and then straight into med school. However, she decided for Stanford, seeking intellectual experience and more freedom to explore different areas during college.

As she went to Stanford, she took chemistry and biology courses, in which Mayer was just an academic weapon. Yet, she noticed one thing in particular about the subjects she was good at: memorization. She finally thought: "How can I get the most out of my Stanford experience?". So, after some research, she noticed that her college was notably good in psychology and computer science, and also got a major called Symbolic Systems that mixed those two areas. Bingo!

After concluding her studies and finding herself into computer science, she joined Google as one of its first female engineers and employees. She worked on Google's search engine and helped create its simple and recognizable interface, as she got a notable design view. There, she also contributed to creating remarkable products such as Google Images, Google News, and Gmail, becoming one of the company's most important executives. In 2012, she left Google to become the CEO of Yahoo, where she simply made it rise from the ashes, focusing on user experience and mobile technology. After five years, she left Yahoo and, later that year, co-founded Lumi Labs with Enrique Muñoz Torres. In 2020, the company was renamed Sunshine and focused on developing technology and AI products designed to make people's everyday lives easier.

# ELECTROTECHNICS

## ELETROTÉCNICA




Hertha
Ayrton

# THE SCIENTIST THAT CHALLENGED THE SOCIETY AND TRANSFORMED SCIENCE



orn in the Victorian era, Phoebe Sarah Marks, from a very young age, faced poverty and many other difficulties due to the death of her father. At the age of 16, she started to work as a housekeeper to support the family, but her mind desired for more. With a vibrant and rebellious personality, she received the nickname 'Hertha', a tribute to the goddess from the poem of Algernon Swinburne, suggested by her friend Ottilie Blind. This name wasn't just a nickname, but the symbol of her new identity as a woman that would shape the future of science.

Her aunt, Marion Hartog, ran a school in London, where Hertha studied from 9 to 16 years old, with free housing and education. Besides seeing the potential of her niece, Marion provided a solid base that went beyond household chores imposed on the women of the century, allowing that she cultivated the passion for mathematics. Thanks to the financial support from Barbara Bodichon, Hertha achieved to go to the doors of Cambridge. The Madam Bodichon wasn't just a sponsor, but also a suffragist leader of the age, helping our scientist to create connections and finance the patents for her projects.

When joining the Girton College, in Cambridge, Hertha stood out quickly in an environment that is not very open to women. Besides her excellent performance in mathematics, she couldn't officially receive her diploma, since the University of Cambridge did not grant titles to women at the time. Even so, with much determination, she continued studying and working independently, supporting herself as a teacher and developing her own scientific projects.

Years later, when she got married with the electrical engineer William Edward Ayrton, Hertha found not only a partner for life, but also a partner for her inventions. It was during this period that she started her research about electricity, especially about the electric arc. At the time, the electricity systems were very precarious, because the lights blinked and also produced noise, bothering the people around. So, through her studies, the solution for the instability of these arcs were updated, consolidating her name in the scientific community.

Even after all the recognition of her contributions, Hertha had to deal with harsh obstacles just for being a woman. The Royal Society rejected her as a member, even though they accepted publishing her research. Nevertheless, in 1906, our heroine received the Hughes Medal, becoming the first woman to win it. Beyond science, Hertha Ayrton also was actively involved in the fight

for women's rights, supporting the suffragist movement and standing up for women's access to education and scientific research. Her life was shaped not only by scientific discoveries, but also by the courage to challenge the norms of a society that insisted on limiting the role of women.

Hertha Ayrton died in 1923, leaving behind a legacy that transcends her scientific contributions. Her history is of a young woman that, despite poverty and the constraints of the Victorian era, turned curiosity into knowledge, paving the way for thousands of women in science.


Maria Cecília
Calani

# THE POWER OF KNOWLEDGE



n a stormy night in the city of Campinas-SP, a little girl named Maria Cecília had a very strange dream. In it, she looked older and was in a very high place, from where she could see almost an entire city, with many lights and colors. However, she did not recognize the place and found it all very strange, since she had never left her parents' side.

Maria was sure that she was dreaming about herself in the future, as she could see her reflection through the window and was happy, until suddenly, a gloomy man approached and everything quickly became sad. He whispered a few words and all she understood was "I am going to take your powers", disappearing the very next second without a trace. She woke up startled, but soon went back to sleep. However, she started dreaming again, but now, with a robotic voice that said: "Go and recover your power. This time, he will not be able to steal it from you".

The next day, the little girl told her parents what she had dreamed, but they didn't pay much attention to it. As it turned out, that dream deeply moved Maria and, from that day on, she began to follow the advice she had been given, saying to herself: "I will recover what was taken from me, at any cost."

For years, all Maria did was to study, in the hope that her powers would be recovered. At no point did she forget the dream she had as a child, and never stopped believing in it. Perseverant, with each passing day, she became smarter and braver.

On her journey, she discovered a place where everything she dreamed of would come true; it was a university, Unicamp. This place became her home. There, she studied mathematics and computer science, earned her master's degree, and later, a doctorate in Electrical Engineering, which is the study of everything focused on light and what makes all the machines around us work.

Maria found herself increasingly enchanted by the science of informatics, which is the communication of technologies. From this passion, she decided to teach, becoming a professor at the university that provided her with all the knowledge she had: Unicamp. Currently, she coordinates a super-secret computing group and collaborates with another club that teaches people how to use technology. She advocates that computers and humans have a relationship.

Maria Cecília travels the world spreading her teachings, and every time she looks out the window of a very tall building, she notices the similarity to the dream she had in her childhood. She thinks about how much her life has changed thanks to that dream and feels happy. Now, she knows that no one can take away her powers, because knowledge is the only thing that cannot be stolen from someone.


Marie Van
Brittan Brown

# ALWAYS VIGILANT



ver the centuries, humanity has been acquiring its treasures, as if each person became a guardian of memories. From family heirlooms to personal belongings, everything is kept within one's own home. As time went by, it became more and more dangerous to keep those objects at home, since villains started breaking into houses, taking away everything that people cherished. Something had to change.

In 1960, in a neighborhood far from the center of New York, a citizen named Marie lived with her husband, a scientist named Albert. Marie dedicated her life to taking care of the sick as a nurse and, because of her job, she spent a lot of time out of her house on medical duty and sometimes, deep into the early hours of the morning. Always very dedicated, she loved what she did, being a phenomenal healer. But, something fearful began to emerge in the neighborhood.

A gang of villains dedicated themselves to breaking houses of the surroundings, and the frequency of it just got bigger. Little by little, the whole neighborhood was scared, because, in the blink of an eye, any one of them could suffer from this terrible curse and be visited by these thieves, losing their precious treasures.

Just like her neighbors, Marie wanted that all to stop from happening. That's when, with Albert, she went searching for an alternative solution for this problem.

In 1966, they both started to develop a residential security system, something similar to a surveillance camera, which would allow them to know who was near the door of their homes. So, if danger were sighted, the rest of the neighborhood could be quickly alerted to expel the criminal. Marie saw in this small device a source of autonomy for women, who could now protect themselves and fight against the evil forces.

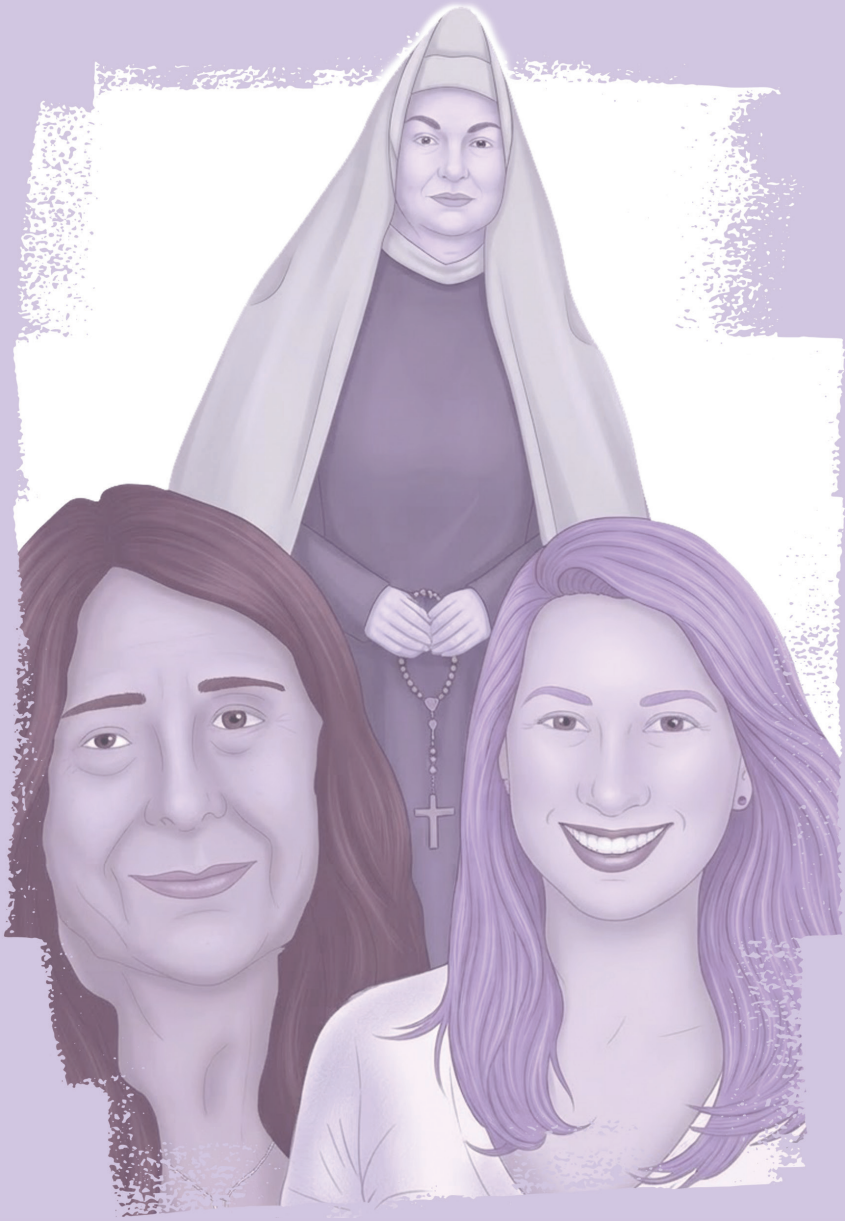
It’s uncertain how successful this system was at the time, as it was a project developed by Marie, a Black woman. But one thing is certain: she revolutionized not only the security world and technology world, but also the scenario for women, at a time when only men were heroes. There's no doubt that this project inspired new equipment, and because of that, we can say that Marie saved many lives.

In real life, superpowers and magic don't appear overnight. That’s why real people need to work hard to achieve their objectives. Intelligence is a priceless weapon for achievements, as it transforms knowledge into action and dreams into reality.

This is the story of New York's most fearless superheroine, the eternal heroine of Queens, the Vigilante of the Future, who revolutionized security by fighting the forces of crime: Marie Van Brittan Brown.

# INFORMATICS

## INFORMÁTICA




Katherine Louise
Bouman

# THE DISCOVERER OF THE BLACK HOLES



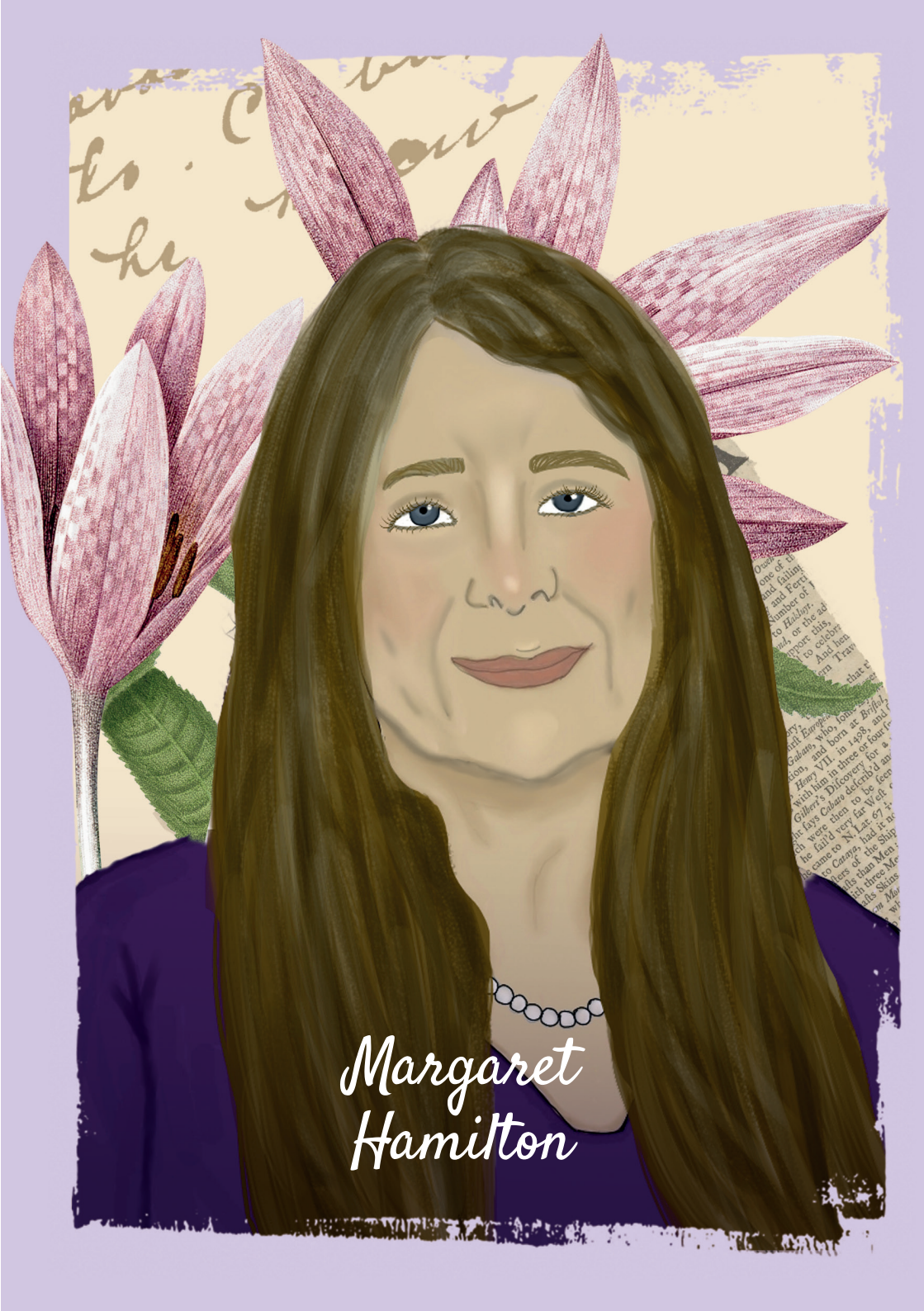
uring school time we learn a lot about Albert Einstein and an infinity of theories by Isaac Newton, but we rarely see or hear anything about feminine scientists and researchers. Katie Bouman's story is atypical, a landmark in history, a young, feminine, brilliant mind that was recognized for its accomplishments.

Katherine Louise Bouman was born in West Lafayette, Indiana, on May 9th, 1989. Her passion for the universe began when she was just a high schooler. Since then, she graduated in electrical engineering at the University of Michigan, got her master's degree and PhD at MIT (Massachusetts Institute of Technology), where she worked on computational methods to get astronomic images, that was a slight sight of what she would do in the future. She also participated in the image team of EHT (Event Horizon Telescope), where she started to search about ways of taking pictures of a black hole.

A black hole is very far from the earth, small, and doesn't produce any light, to take a picture of it they would need a telescope the size of the whole earth, and that's impossible. So, the team came up with a solution: use eight telescopes from the EHT distributed around the world to work together as one giant telescope. That way, they combined all the data collected from these machines to create the final image of the black hole. The problem this time was the missing data to complete the photograph.

And that's when our heroine comes in, Katherine Bouman. She coordinated the team responsible for creating an algorithm called CHIRP. This algorithm analyzed the collected data from the telescopes, and using a pattern learned in millions of photos and plenty of mathematical calculations, reconstructed the missing parts of the image. By doing this, it became possible to get a more precise representation of the black hole.

The achievement was a major breakthrough for science, because it confirmed the general relativity theory by Albert Einstein, and it created new possibilities regarding the universe. Nevertheless, Katie's journey wasn't free of difficulties. After the image disclosure, she began to suffer misogyny assaults on the internet. Millions of people alleged that the Heroine had worked less than her male colleagues and received extra credit for the discovery. Despite the critics, the scientific community recognized her work as a great contribution for science, turning Katherine Louise Bouman into an inspiration for all the women and girls who have interest in the areas of technology, engineering and mathematics.


Margaret
Hamilton

# HEROINE OF APOLLO 11 MISSION



s the years went by, the world became increasingly competitive, transforming people into a kind of unfeeling machine. When Margaret was born in 1936, many things were still different between men and women. Because of this, she didn't have the same opportunities as her schoolmates, simply because she was a girl. Yet, she wanted to be recognized in some way. She just didn't know that she would become a great scientist.

For many years, society demanded that women be nothing more than housewives, but Margaret Hamilton always thought differently. She always aimed to conquer the world, even without her parents' support.

Graduated in three colleges, Margaret is certainly one of the smartest women the world has ever seen. For being a genius, she was always highly requested by major organizations and companies. She worked for some time at MIT (Massachusetts Institute of Technology), where she developed weather forecasting software. NASA, a United States government agency dedicated to the development of cutting-edge technology, hired her as a programmer and software developer.

When Margaret Heafield joined NASA, the United States and the Soviet Union were fighting for the leadership of the space race: whoever reached the moon first would be the champion. This period was known as the Cold War. Despite the war, Margaret wasn't content in staying at home like all the women were forced to do at the time. Actually, she went to the frontline of that fearful war, helping to combat the enemy with her cleverness. During the Apollo space missions, Hamilton led the team that created the on-board flight software for NASA's command and lunar modules. As Director of the Software Engineering Division at MIT's Instrumentation Laboratory, she was fully in charge of this pioneering software effort.

Margaret was a strong willed woman, and throughout her journey, she never allowed herself to be shaken, not even during the Cold War. She left behind a valuable lesson: you don't have to hide when you're afraid, instead, you must take a stand and face the enemy NO MATTER WHAT.

It was because of her that the United States managed to lead the charge and land on the moon. That's right, if it weren't for her and her team, today's world could be very different from what it is! Years after developing her code, Margaret received her well deserved recognition: to be awarded the Presidential Medal of Freedom by Barack Obama.

Margaret didn't just conquer the world, she went beyond. Margaret Hamilton conquered the moon.

*Looking back, we were the luckiest people in the world. There was no choice but to be pioneers; no time to be beginners.*

**Margaret Elaine Heafield Hamilton**


Mary
Kenneth
Keller

# CAN LETTERS AND NUMBERS BE COMBINED?



It was late 1913 when Mary Kenneth Keller was born in North America. She would grow up to become a visionary, a woman whose destiny was deeply intertwined with the dawn of computing.

As the years went by, Mary discovered her precious gift: her extraordinary ability to empathize with the people around her.

In 1932, she joined a group of women called "Irmãs de Caridade da Abençoada Virgem Maria" and in 1940, Mary Kenneth Keller became a nun. She was known as the dear Sister Mary, thus beginning her greatest challenge.

At the time, the scientific and academic fields were deeply male-dominated, presenting severe barriers toward women pursuing advanced scientific careers. Despite these systemic obstacles and the natural fears of breaking ground in an exclusive field, Mary persevered. She graduated in Mathematics and Physics, mastering the foundational principles of how the physical and digital worlds operate. She dedicated herself to understanding emerging technologies, firmly believing that these new tools should not be feared, but rather democratized and shared with everyone.

In 1965, she made history by becoming the first woman in the United States to receive a Ph.D. in Computer Science. Her groundbreaking doctoral thesis focused on developing computer languages capable of processing words and text, effectively "giving a voice" to machines that previously only handled raw mathematical data. Her research demonstrated that computers were not just calculators, but intelligent systems capable of assisting in complex decision-making and solving everyday human problems, ranging from predicting forest wildfires to improving mobility for people with disabilities.

Recognizing the transformative potential of technology, Sister Mary became a fierce advocate for digital inclusion. She fought to ensure that all people, especially women and children, had access to computer education and literacy. Her visionary work laid the foundational bricks that allow society today to navigate the internet freely from schools, homes, and workplaces.

Throughout her career, she also contributed to making computer programming more accessible. She worked on the development of early computer codes and programming languages (such as BASIC), simplifying complex structures so that the broader community could learn the language of machines with greater ease.

Sister Mary firmly believed that fostering curiosity and imagination in younger generations, combined with technological tools, would allow children to invent unimaginable solutions for the future. Even while dedicated to her religious community, her commitment to scientific progress and educa-

tion proved that faith and technology could coexist to uplift humanity. Mary Kenneth Keller remains a lasting proof that determination can unite completely different worlds to create a better future.

# MECHANICS

## MECÂNICA




Dorothy Elizabeth
Levitt

# FAR BEYOND THE STEERING WHEEL: BETWEEN RACING AND VANITY



he story of the World's Fastest Woman begins between the male universe and automobiles. Dorothy Levitt was a Jewish woman of the rural upper class, and as a child, she was always curious and clever. Her hobbies were quite unusual, because she liked cycling and horseback riding, things that were challenging for women at that time.

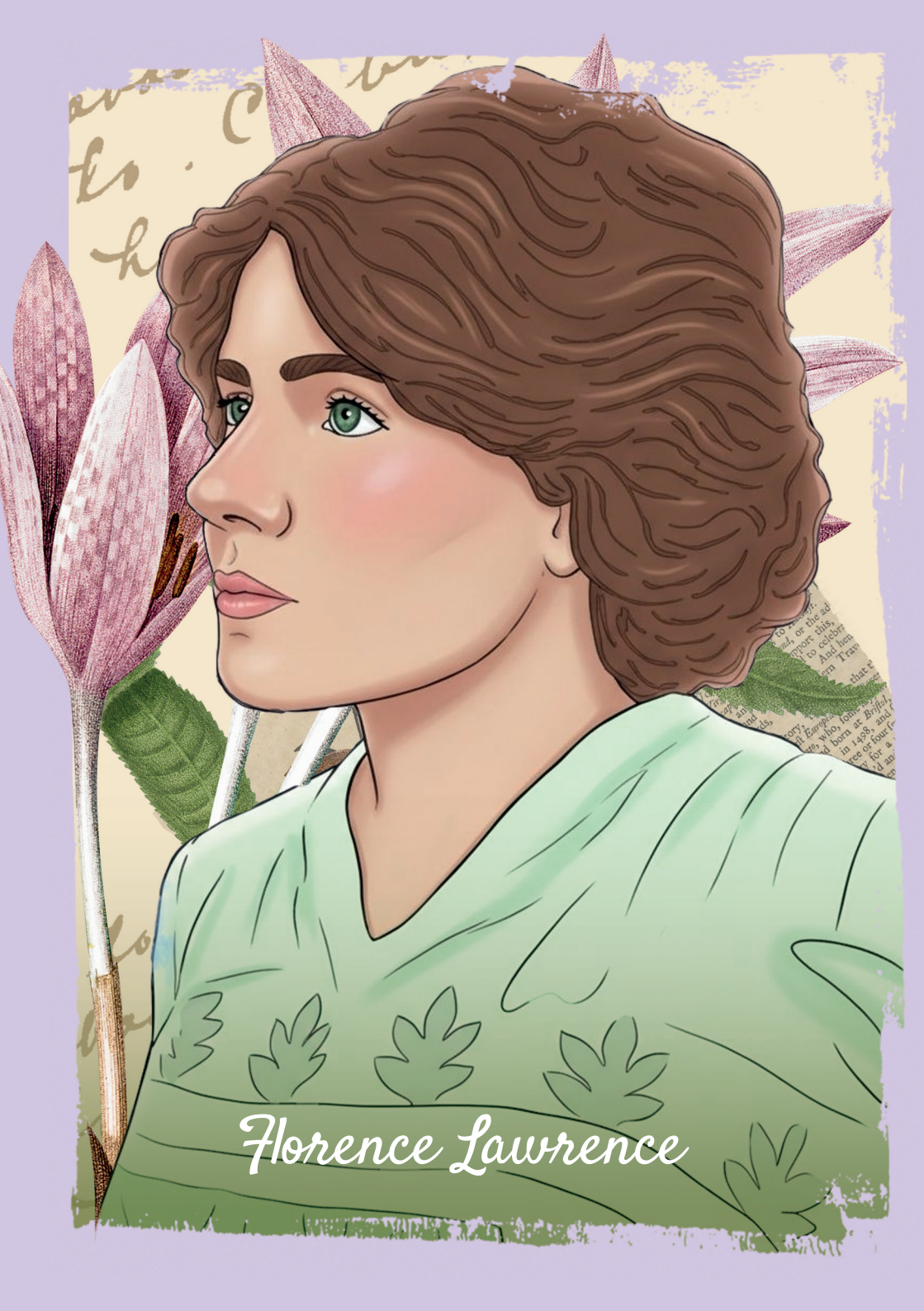
Dorothy's passion for cars started in her twenties at the Napier Car Company, where she worked as a secretary, but stood out in the eyes of her manager, Selwyn Edge. As part of a publicity campaign, Edge asked his trainee Leslie Callingham to teach Dorothy how to drive a car to compete. This task was accomplished easily, given her natural talent. Her first race was a success: she got first place in 1903 on Southport Speed Trials, competing aboard a 12-horsepower Gladiator. Dorothy attracted so much attention that she was eventually hired by De Dion-Bouton, a renowned French automobile manufacturer of the time.

From that moment on, Dorothy intensified her passion for cars, and, surprisingly, she performed the maintenance on her own automobiles. In 1905, during the Brighton Speed Trials, Dorothy introduced an innovative idea that is commonly known as rearview mirrors. Her suggestion was to use a hand-mirror so drivers could see competitors behind them. Thus, it became the first recorded instance of the use of a rearview mirror.

Dorothy continued to compete diligently and every race was a new achievement. One of them was the Blackpool Speed Trial of 1906, which established a new record for the longest distance traveled by a woman behind the wheel. This achievement gave her the title of "The World's Fastest Woman" in the press.

Our racer was always very beloved by the media, sharing her adventures, which included a lot of traffic violations and trips accompanied by her black Pomeranian, Dodo. She had unique features, such as the long overcoat always present in her races, made by herself, which reached her ankles and her eccentric suggestion of carrying a pistol next to the hand mirror for safety.

However, after so many years being the focus of the media, she completely disappeared from public life, until her death in 1922. Dorothy Levitt left her book "The Woman and The Car" that, besides helping as a car manual for women drivers, opened up space in areas that were traditionally male-dominated. She remains an important figure in feminist history and an inspiration for so many generations. Although women continue to face challenges in motorsport today, we can recognize competitors such as Hellé Nice, Lella Lombardi, Maria Teresa de Filippis, and many other heroines who had the courage to challenge gender stereotypes and venture behind the wheel.


Florence Lawrence

# BETWEEN SPOTLIGHTS AND GEARS



orn in 1886 as Florence Annie Bridgwood, in Hamilton, Ontario, Canada, Florence Lawrence had contact with art from a very early age. Her mother, Charlotte, was an actress known as Lotta Lawrence, and was the leader and director of the Lawrence Dramatic Company. From a very young age, Florence began performing in theaters alongside her mother, initiating her artistic trajectory.

With the rise of cinema at the beginning of the 20th century, she dived into this new universe, starting to work at the Biograph Company, one of the first cinematographic studios in the United States. At the time, actors did not receive credits at the end of productions. Even so, her talent and striking presence caught the public's attention, who began to recognize her easily, giving her the nickname "The Biograph Girl". The turning point happened when she was hired by another studio, where the owner had a bold idea: he publicized in various communication media that "The Biograph Girl" had died. Days later, he revealed that the news was false and presented her true name to the public, Florence Lawrence, officially transforming her into one of the first movie stars.

However, the actress had to step away from the cinema screens due to an accident during filming, making room for Florence Lawrence to concentrate on her passion for technology and mechanics, especially for automobiles. She was one of the first women of the era to own a car. During this period, something began to catch her attention: the frequent accidents caused by the lack of communication between drivers. In a time when standardized signaling systems did not exist, each driver had to improvise his own gestures, which made traffic even more dangerous. It was from this observation that Florence idealized a mechanism capable of indicating the direction in which the vehicle would go: a mechanical signaling system activated by the driver, considered one of the precursors to the turn signal used in modern automobiles. Furthermore, she also developed a device that indicated when the car was braking, anticipating the concept of brake lights.

Despite the brilliance of her ideas, none of these inventions were patented, which caused her contribution to remain without the due recognition for a long time.

The legacy of Florence Lawrence is, undoubtedly, a milestone for society. In addition to contributing to the consolidation of actors as figures recognized by the public, she was also a precursor of automotive signaling systems that, to this day, play an essential role in traffic safety, saving lives daily.


Mary Anderson

# COLD AND SNOW ARE THE INSPIRATIONS FOR A BRILLIANT IDEA



ot all the inventions are born in laboratories, some of them are born in a long and cold trip. It was under these circumstances that Mary's imagination expanded and gave rise to the invention of the windshield. Her story begins in 1866, in Greene County, Alabama, where she grew up on her family's farm. Her dad, John C., passed away when she was just 4, but, still, her family managed to sustain themselves with the income from his inheritance. In 1889, Anderson, her mom and sister moved to Birmingham, where they built the Fairmont building, located in the Highland Park region, one of the most harbored neighborhoods. Four years later, at 27 years old, she left home to manage a cattle and vineyard farm in Fresno, California, but a short time after that she came back to her mother's house, to help take care of her aunt, who was sick. After the death of Anderson's aunt, her family found several chests, full of jewels and gold that were in her ownership. This treasure gave Mary's family a comfortable life.

Anderson took part of the riches that she received from her deceased aunt, to go on an exciting trip to New York during the 1903 winter. It was in this adventure, in a tram bond, that our heroine perceived that the driver had to stop and step out the bond repeatedly to clean the windows manually. The conductor's effort was noticeable because it made the trip uncomfortable and dangerous. From that moment, she idealized a blade model for the windshield, that connected with the vehicle interior, allowing the surface to be cleaned manually, but without interrupting or offering risks for the route.

Despite the dispositive utility, Anderson looked for investors for her invention and got rejected by all the companies she contacted, because they claimed lack of demand. Discouraged, our heroine eventually gave up on her creation. Her patent expired in 1920, precisely when the popularity of automobiles escalated and, consequently, the search for wind-shield wipers as well. Mary's departure from the market allowed other companies to use her idea, which was defunded immediately.

Mary Anderson was a woman ahead of her time and her idea was a landmark in automotive history, incredibly used until these days. The windshield wiper is almost invisible to our eyes, in contrast, it is impossible to imagine a car without this tool today. It is essential for a safe trip, and for us, the most notable: the initial concept was from a revolutionary heroine, and today we remember her invention as necessary in our daily life.

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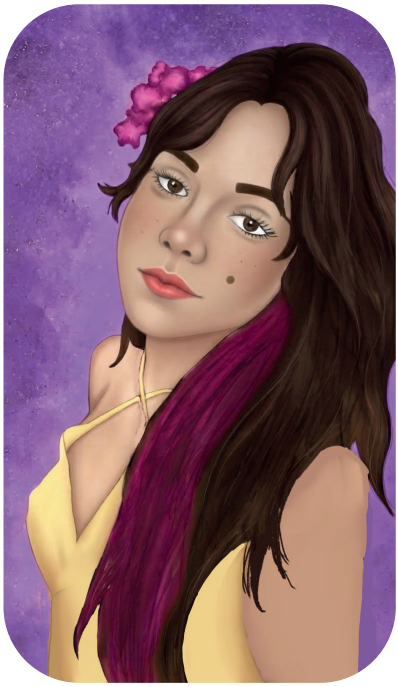
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# ABOUT THE AUTHORS

## Ana Carla Lopes Dias Ramos

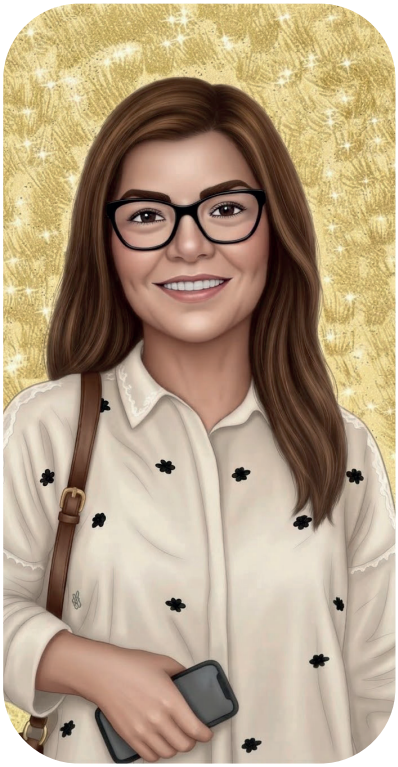
From a very young age, I've always been interested in the English language. Movies, series, and books showed me how fun and enriching it can be to discover other cultures and understand the everyday lives of people across the world. The UPRISE project rescues the stories of women from different parts of the world who innovated science in their eras and whose contributions continue to impact society to this day. Being part of this project allowed me to combine my interest in English with the desire to share these stories with an even broader audience.

Desde muito nova, sempre tive interesse pela língua inglesa. Filmes, séries e livros me mostraram o quão divertido e enriquecedor pode ser conhecer outras culturas e compreender o dia a dia de pessoas que vivem do outro lado do mundo. O projeto Uprise resgata as histórias de mulheres de diferentes partes do mundo que inovaram a ciência em suas épocas e cujas contribuições continuam impactando a sociedade até os dias de hoje. Fazer parte desse projeto permitiu unir meu interesse pelo inglês ao desejo de compartilhar essas trajetórias com um público ainda maior.



## Cláudia Santos Fernandes

I believe that education transforms lives when it expands horizons and connects people to the world. Throughout my career, one of the projects I am most proud of is the creation of the Núcleo de Animação e Roteiro (NuAR) at IFMS—a space designed for students to develop their ideas, express their creativity and talents, and discover new possibilities for learning and social transformation through technology, art, and literature. As the Vice-Rector for Undergraduate Studies at IFMS, Computer Science professor, and holder of a degree in Literature, I advocate for an innovative and inclusive public education that prepares students for the challenges of a global society. I believe that learning languages, especially English, goes far beyond mastering a language: it is about opening doors to science, technology, research, and opportunities that cross borders.



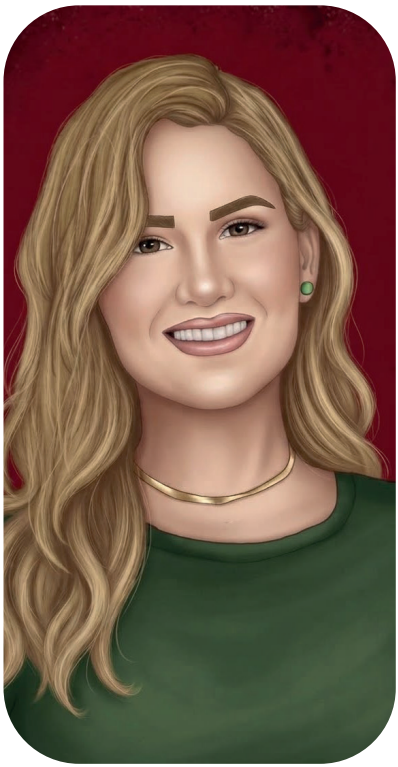
Acredito que a educação transforma vidas quando amplia horizontes e conecta pessoas ao mundo. Ao longo da minha trajetória, um dos projetos que mais me orgulha é a criação do Núcleo de Animação e Roteiro (NuAR) do IFMS, um espaço concebido para que os estudantes desenvolvam suas ideias, expressem sua criatividade e talentos e descubram, por meio da tecnologia, da arte e das letras, novas possibilidades de aprendizagem e de transformação social. Como Pró-Reitora de Ensino do IFMS, professora de Informática e formada também em Letras, defendo uma educação pública inovadora, inclusiva e capaz de preparar os estudantes para os desafios de uma sociedade global. Acredito que aprender idiomas, especialmente o inglês, vai muito além do domínio de uma língua: é abrir portas para a ciência, para a tecnologia, para a pesquisa e para oportunidades que ultrapassam fronteiras.



## ernanda Belarmino de Santana Scaini

Since the beginning of my academic journey, projects focused on classroom practices have always been of my greatest interest. The invitation to develop a partnership with the English Club project, which I coordinate, was received with great enthusiasm. In particular, the idea of combining different forms of language—words, drawings, traces, colors, written, visual, and social translations—with a pedagogical approach was crucial in accepting this challenge. The scope of this book allows for the discussion of several themes that engage with the role of women in society and with the girls and women who will read their stories. Furthermore, the highlight of these stories is the connection that our young researchers established between each technical course offered by our campus, conveying a message that, from their own realities, they can also make history.

Desde o início da minha trajetória acadêmica, projetos que contemplam as práticas de sala de aula sempre foram do meu maior interesse. O convite para desenvolver uma parceria com o projeto English Club, do qual sou coordenadora, foi recebido com muito entusiasmo. Particularmente, a ideia de unir várias modalidades de linguagens – línguas, desenhos, traços, cores, traduções escritas, visuais e sociais – com uma proposta didática foi crucial para aceitar este desafio. A dimensão deste livro permite a discussão de várias temáticas que dialogam com a figura da mulher na sociedade e com as meninas e mulheres que lerem suas histórias. Além disso, o ponto alto dessas histórias é a relação que nossas meninas pesquisadoras estabeleceram entre cada curso técnico oferecido por nosso campus, levando uma mensagem de que, a partir de suas realidades, elas podem fazer sua própria história.





## Lívia de Almeida Cristaldo

Reading and writing have been my favorite hobbies ever since I was a child. I was fascinated by the way books could transport me to so many universes through simple combinations of words, and even more, by the power to shape my own universe with my own words. English has also been a big part of my life, and the UPRISE project allowed me to bring my favorite fields together to rescue the stories of women who innovated in science, while teaching a foreign language and inspiring the love for reading. Participating in this project was a unique experience. As I learned about and studied each woman's story, my appreciation for science and for them only grew. I hope everyone who reads this book becomes inspired by the courage of these girls, just as I was.

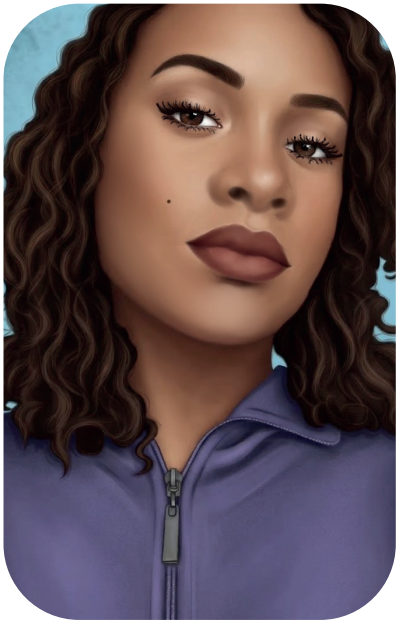


A leitura e escrita sempre foram meus hobbies favoritos desde criança, eu era apaixonada pela capacidade que os livros tinham de me levar para tantos universos apenas com combinações de palavras e, mais ainda, de poder moldar o meu universo com minhas próprias palavras. O inglês também esteve muito presente na minha vida, e o projeto UPRISE proporcionou a combinação das minhas áreas favoritas com o propósito de resgatar histórias de mulheres que inovaram na ciência, além de ensinar a língua estrangeira e instigar o gosto pela leitura. Participar deste projeto de inovação foi uma experiência única. Ao conhecer e estudar as histórias de cada mulher, meu apreço pela ciência e por elas crescia! Eu espero que cada pessoa que leia este livro seja inspirada pela coragem dessas garotas assim como eu fui.

## Maísa da Silva Siqueira

During my childhood, I was always very creative and passionate about drawing. In 2021, I decided to dive deeper into this field, and upon joining the Instituto Federal de Mato Grosso do Sul (IFMS) – Campus Campo Grande in 2025, I had the amazing opportunity to create a book at the Núcleo de Animação e Roteiro (NuAR). The UPRISE project highlights important women for each technical course, where I was able to illustrate and convey the essence of each one of them. Beyond giving visibility to these journeys, the project represented a major step in my academic career. Through this work, I hope to inspire many other girls to continue being the heroines of their own stories, just as these journeys inspired me.

Na minha infância, sempre fui muito criativa e apaixonada por desenho. Em 2021, decidi me aprofundar mais nessa área e, ao ingressar no Instituto Federal de Mato Grosso do Sul (IFMS) – Campus Campo Grande) em 2025, tive a oportunidade incrível de criar um livro no Núcleo de Animação e Roteiro (NuAR). O projeto Uprise destaca mulheres importantes para cada curso técnico, onde pude ilustrar e transmitir a essência de cada uma delas. Além de dar visibilidade a essas trajetórias, o projeto representou um grande passo para a minha carreira acadêmica. Espero que, através desta obra, eu possa inspirar tantas outras meninas a continuarem sendo as heroínas de suas próprias histórias, assim como essas trajetórias me inspiraram.



## Marta Luzzi

Participating in a research group with high school students has always been a great challenge, but over these past few years, the work developed by young female researchers has served as a powerful boost for education. I believe that change is always an expanding pathway for all of us involved in Basic Education and research projects. For this reason, the Núcleo de Animação e Roteiro (NuAR) at IFMS aims to bring students closer to their full potential as they bring their ideas and projects to life, such as UPRISE and its involvement with English translations. Thus, as a Portuguese teacher at IFMS and a researcher in Education, I have shaped my identity through this continuous dialogue between the student experience and teaching as a responsible practice.



Participar de um grupo de pesquisa com estudantes do Ensino Médio sempre foi um grande desafio, mas, nesses últimos anos, com o trabalho desenvolvido por meninas que são pesquisadoras é um grande impulso para a educação. Acredito que as mudanças são sempre o canal em expansão para todos nós que vivemos a Educação Básica e os projetos de pesquisa. Por isso, o Núcleo de Animação e Roteiro (NuAR) do IFMS tem esse objetivo de aproximar os estudantes e suas potencialidades na realização de suas ideias e projetos, como o UPRISE e o envolvimento com as traduções em língua inglesa. Assim, como professora no IFMS com a disciplina de Língua Portuguesa e pesquisadora na área da Educação, me constituí nesse diálogo constante entre o universo estudantil e o fazer docente como uma prática responsável.

# GLOSSARY

## This page is for the reader to fill in
## Make your own creative and illustrated glossary

Dear reader,

Making your own glossary while reading a book in English is one of the most efficient strategies to expand your vocabulary and consolidate learning.

**Step 1**

- Highlight the unknown word;
- Try to guess the meaning from the context of the story;
- Keep reading until the end of the chapter or until you reach your reading goal for the day.

*Golden Tip*: Do not interrupt your reading at each unknown word. You do not want to lose track of the story.

**Step 2**

- Now, keep record of the information you collected for the first step.
- Make your own sentence: use the word by creating a meaningful sentence.

*Golden Tip*: Take notes of the original sentences from the book. This helps you remember the meanings faster than memorizing isolated words.







**Step 3**

**Make your own illustration**

• Choose one of the narratives you liked best and use your creativity to make a new illustrated version;
• Give color to your favorite scientist.

*Golden Tip*: Create new elements to include in the illustration.



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