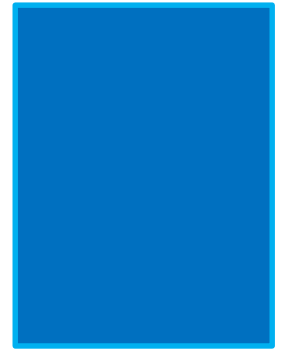
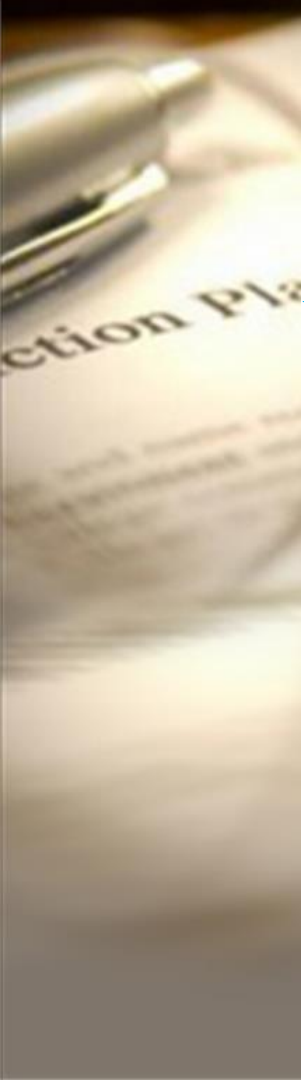


# **GENDER EQUALITY IN ENGINEERING**

**Ms. Diana María Espinosa Bula, P.Eng.  
General Manager and CEO of Ambiotec - Colombia  
Former President of the Colombian Society of  
Engineers**





★ Women and girls make up more than half of the world's population.

★ They are on the front line and are usually the most affected people, compared to men and boys, by poverty, climate change, lack of food and healthcare and global economic crises.

★ Their contributions and leadership are essential to find a solution in nowadays concerns and issues



## ETHICS IN THE PROFESSIONAL (EXERCISE) FIELD..... A MORAL COMMITMENT

It is common for women who work on construction sites to not feel comfortable when reporting an inappropriate behavior. Therefore, a free working environment must be promoted to make easier the reporting of such situations.



***A commitment to society and the  
common good***

**¿How to  
achieve it?**





- Exercise the profession in accordance with ethical values, which ensure their work for the development and welfare of the country.
- Encourage future engineers in undergraduate and postgraduate, according to the needs demanded by the works to be executed.
- Be an active part in the formulation of public policies in which engineering has its scope of action.
- In our guild, there is a clear awareness for developing quality works, designed for sustainability, but technical and regulatory development is required.



# UNIVERSITY/ COLLEGE

## EDUCATION AND TRAINING

- ETHIC
- LEADERSHIP AND ENTREPRENEURSHIP
- RESPECT TO THE ENVIRONMENT
- RESPECT TO COMMUNITIES
- GOOD ENGINEERING PRACTICE



Looking for the efficiency, safety and functionality of the engineering projects that you will face throughout your professional life.

# ENGINEERS OF THE FUTURE

Faced with such vertiginous evolution the world needs for the next decades

- ✓ Engineers who dedicate time and efforts to applied research.
- ✓ Engineers capable of undertaking business.
- ✓ Engineers who implement ideas and develop interdisciplinary work.

# **GENDER AND INFRASTRUCTURE: MORE WOMEN IN THE ENGINEERING SECTOR**





*Worldwide the need for infrastructure is huge. In a sector traditionally dominated by men, how can female representation be ensured?*

**Acting  
with  
Professionalism**

**Breaking  
Paradigms**

**Ethics**

**Leadership**

**Challenges**

# Successful Cases

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**Ing. Daniela Moreno**

**Design and construction of a bridge in New Jersey, USA.**

Young Colombian civil engineer, who worked on the design and construction of a bridge in New Jersey, USA. His first task, was to make a model of one of the existing pieces on the bridge. She developed a special plaque to which she has dedicated herself since she arrived to the country, and was a fundamental key in the project implementation. The port authority liked her work because they managed to carry out the construction of the bridge without affecting the community, this, because the new bridge was designed on an existing one, and they managed to improve the mobility of the place without affecting residents.



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**Ing. Kathrine Hopper.**  
Responsible for the construction of  
high level sports facilities



Master in Civil Engineering at the Central University of Madrid, and responsible for the construction of high-level sports facilities, such as Safeco Field, an impressive baseball stadium with a retractable roof located in Seattle, Washington State, United States.

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## **Ing. Concepción Mendizábal**

**Project of an elevated tower of reinforced concrete  
for 300 cubic meters of water**



First woman civil engineer of Mexico, in 1930, who presented her professional exam with the thesis “Project of an elevated tower of reinforced concrete for 300 cubic meters of water, 20 meters high with a viewpoint at the top; developing the main details of the construction ”, according to information from the Digital Gazette.

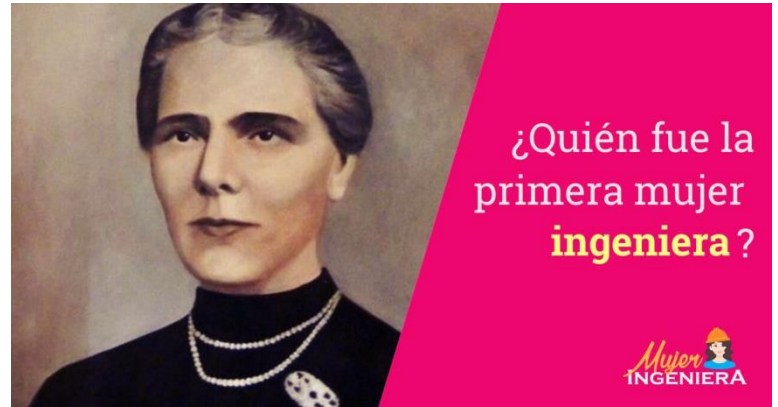
# Women / Engineers

A woman with dark hair, wearing a bright yellow hard hat and a dark blazer over a light blue collared shirt, is smiling and looking down at a large set of blueprints she is holding. The background shows a construction site with yellow scaffolding and a clear blue sky.

Although women have managed to stand out in this 'profession of men', there is still ground to win.

Born in Galati -Romania- in 1887. The story tells that many of her classmates ignored her and that some professors were opposed with comments such as "the kitchen is the place of women, not the Polytechnic." She graduated, with honors, in 1912 from the University of Berlin as a Chemical Engineer, becoming the first female engineer in the world. Her career was a breakthrough for the introduction of women in engineering. She was the first female member of the Romanian Association of Engineers (AGIR) and a member of the International Association of University Women.

## Elisa Leonida Zamfirescu



¿Quién fue la  
primera mujer  
**ingeniera** ?

Mujer  
INGENIERA

She exercised until 1963, when retired at 75 years old, and died on November 25, 1973.

## Elisa Beatriz Bachofen

In 1917, Argentine Elisa Beatriz Bachofen received the degree in Civil Engineering from the University of Buenos Aires, thus becoming the first woman graduated in engineering in Latin America. Later, she became the president of the Technical Commission of the Circle of Inventors of Argentina and worked for the National Directorate of Roads in her native country.



First woman Civil Engineer in Latin America

## Sonny Jiménez de Tejada

She finished her studies at the Faculty of Engineering of the School of Mines in Medellín. She was the first Colombian woman who get a Civil Engineering degree in 1947 and to attended a postgraduate study program in 1948, at Carnegie Institute of Technology of Pittsburgh.

Sonny Jiménez de Tejada  
Primera ingeniera civil  
y de minas de Colombia  
(1922 - 2014)







**INSPIRING PHRASES OF BIG  
FAMOUS WOMEN**



“90 percent of leadership is the ability to communicate something that people want”.

–Dianne Feinstein, American Senator



"Never doubt that a small group of committed citizens can change the world. In fact, only that can do it".

–Margaret Mead, cultural Anthropologist.



" Do not expect a leader to arrive; Do it yourself, person to person. Be faithful to small things, for in them lies your strength".

–Mother Teresa, Catholic nun and saint.



"Many women live as if they were in a general trial. Ladies, the curtain is up and you are on stage".

–Mikki Taylor, Essence magazine editor.



"I have learned to risk doing new things. Growth and comfort cannot coexist".

–Virginia Rometty, current chair, president and CEO of IBM



“To become powerful I only need one thing: education”.

Malala Yousafzai, Pakistani activist and Nobel Peace Prize in 2014.



Society still believes that women have to do the usual jobs, such as teaching. On the contrary, the police are perceived as a masculine community, which represents power and strength, where a woman will have to renounce her femininity to adapt to that body.

Khaleel Ayyad Muammar, woman Official with the highest range at the Civil Police in Palestine.



# ***REFLECTION***







**The greatness of a man is not measured by his physical size, but by his actions, by the impact it has on human history.**

*Soichiro Honda*

## Francisco José de Caldas



"None can be great in a profession without loving it. Love yours and make her love your fellow citizens for a noble, sweet and virtuous conduct".

04th October 1814



# THANKS

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