



Women move transportation forward

Women's Issues in Transportation

5th International Conference on Women's Issues in Transportation: *Bridging the Gap*

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Deutsches Zentrum
für Luft- und Raumfahrt
German Aerospace Center



the mind of movement



U.S. Department
of Transportation
Federal Highway
Administration



Thea Foss

1858-1927

In 1889, Thea Foss, a recent immigrant from Norway, purchased a rowboat that marked the beginning of the Foss Launch Company. She purchased the rowboat hoping to rent it out and contribute to the family's finances. She continued to buy and sell rowboats while her husband began building them. In a short period of time, Thea and her husband had had a fleet of 200 boats. Thea expanded the business by transporting logs with towboats under the name Foss Launch and Tug Company.

By 1904, the company had 10 launches, a shipyard, a 60-passenger oil powered boat, and a small rescue craft to help disabled vessels. When Thea died in 1927, a day before her 70th birthday, members of her family, including her three sons, continued to operate the business which is still in operation today. In 1990, Thea and her husband were inducted into the National Maritime Hall of Fame.



*Sources: Washington State History Society and
Foss Maritime*

Nellie Bly

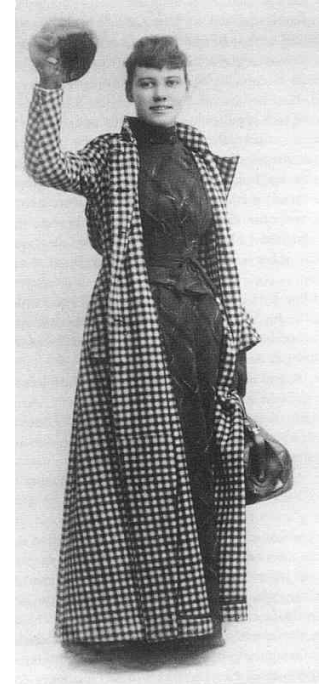
“Never having failed, I could not picture what failure meant...”

-Nellie Bly, “From Jersey Back to Jersey”,
The New York World, January 26, 1890

1864-1922

Nellie Bly, born Elizabeth Cochrane Seaman, was a journalist who wrote social commentary on the conditions poor women faced in their workplaces. Following her father’s death in 1887, she began writing for the Pittsburgh Dispatch to support herself. She eventually moved to New York where she worked for the New York World and is credited with pioneering the concept of investigative reporting.

One of her greatest achievements came in 1889, when at the age of 24, she raced around the world in an attempt to beat the record of Phileas Fogg, the fictional hero of *Around the World in 80 Days*. Traveling alone, with only what she could fit in one piece of luggage, she set sail from Jersey City in November 1889 and completed her trip in 72 days. The World promoted Bly as a front-page heroine “personifying the independent American girl, the fascination of travel, and the excitement of journalism.”



Sources: FHWA Women in Transportation: Changing America's History and nellieblyonline.com.

Mary Walton

Mary Walton was an inventor who began her work in pollution control working on combating smoke pollution from factories, especially in large cities. She received a patent for the system she developed to deflect emissions into water tanks where the pollutants could be flushed into the city sewage system.

She later focused her efforts on addressing noise pollution produced by elevated trains being installed in larger cities in the 1880s. She built a model railroad in her basement and using that, she invented a sound dampening apparatus, for which she also received a patent. She eventually sold the system to New York City's Metropolitan Railroad. She was hailed as a hero for her work.



Sources: FHWA Women in Transportation:
Changing America's History and Massachusetts
Institute of Technology.

“The most noted machinists and inventors of the century had given their attention to the subject without being able to provide a solution, when, lo, a woman's brain did the work...”

-*Woman's Journal*

Zarghona Walizada

Zarghona Walizada is an Afghan business woman who owns Afghanistan's largest transport company. Her company, TAC TAZ International, was established in 1990 and employs several hundred people. Headquartered in Kabul, her business had an annual turnover of \$35 million in 2012. Her business offers air and land transportation, port formalities, escort service for truck convoys and other services for transportation, logistics and freight forwarding.



Sources: "We don't want our burqas back: women in Afghanistan on the Taliban's return", *The Guardian*, and *tactaz-group.com*.

"They threatened me and demanded why I was not at home. For a long time we argued. They said it was not right for a woman to run a company. I thought they might shoot me but finally they left. They'll be back."

-*Woman's Journal*

Bessie Coleman

1893-1926

Bessie Coleman was the first African-American pilot. Her first attempts at formal aviation education were rejected by aviation schools in the United States because she was an African-American woman. She traveled to France, which was also a leader in aviation but had more liberal attitudes about women and people of color. In 1920, she registered at the Ecole d'Aviation des Frères Caudron, the most famous flight school in France. She walked 9 miles to school each day and earned her license, becoming the only licensed black female pilot. She was unable to find a position in commercial aviation in the US so she returned to France in 1921 and specialized in parachuting and stunt flying. She returned to the US to perform and lectured in black schools and churches, hoping to open an aviation training school for African-Americans. She died in a flying accident in 1926, never having realized that dream.



“The air is the only place free from prejudice.”

-Bessie Coleman

Sources: FHWA Women in Transportation: Changing America's History and biography.com.

Emily Warren Roebling

1843-1903

Emily Warren Roebling traveled with her husband in the late 1860s to Europe to research technical issues related to a bridge her father-in-law was planning over New York's East River connecting Brooklyn and Manhattan. Before construction of the Brooklyn Bridge could begin in earnest, her father-in-law died of tetanus. Her husband, then responsible for the project, contracted decompression sickness from working in the caissons for the bridge piers, well below the surface of the river. Confined to his sick room, Emily Roebling grew concerned that her husband would never be able to finish the construction project. She took notes on what he said needed to be completed, and studied technical issues such as strength of materials, stress analysis, and bridge construction. She went to the site every day to answer questions and convey information. She was so good at this work, that many speculated she was actually the great mind behind the bridge.



Sources: American Society
of Civil Engineers

“By and by it was common gossip that hers was the great mind behind the great work and that this, the most monumental engineering triumph of the age, was actually the doing of a woman...”

—David McCullough *The Great Bridge: The Epic Story of the Building of the Brooklyn Bridge*

Amelia Earhart

1897-1939

After serving as a nurse's aide in a Canadian military hospital during WWI, Amelia Earhart attended college and began work as a social worker in Boston. She took her first flying lesson in January 1921, and in six months had saved enough money to buy her first plane. The second-hand biplane was painted bright yellow and Earhart named it Canary. She used it to set her first women's record by rising to an altitude of 14,000 feet. She became the first woman to cross the Atlantic in 1928 as part of team with a pilot and co-pilot. Three women had died in the year prior to her successful voyage attempting to be that first woman.

In 1932, she took off from Newfoundland with plans to become the first woman, and second person, to cross the Atlantic solo. She intended to land in Paris but weather forced her to land in a farm field in Ireland. She continued to set records for altitude and was the first person to cross the Pacific solo flying from Honolulu to Oakland, CA.

In 1937, Earhart attempted to fly around the world. She disappeared during the final leg of the voyage over the Pacific Ocean. Rescue attempts were called off 17 days later.

"Never interrupt someone doing something you said couldn't be done."
-Amelia Earhart

Source: ameliaearheart.com



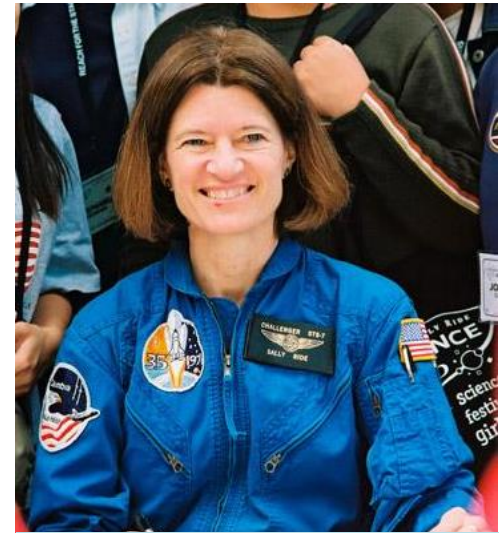
Sally Ride

1951-2012

Sally Ride was the first American woman in space. Her 1983 flight aboard the space shuttle Challenge marked multiple milestones – she was the first American woman and the youngest American in space.

While completing a PhD in physics at Stanford, Sally responded to a NASA ad in the student newspaper calling for astronauts. 8,000 people applied, and 35 were chosen, 6 of whom were women (including Sally). Sally flew 2 missions aboard the Challenger and was training for a third, but training was halted after the Challenger explosion. She then went to work at NASA Headquarters in several leadership positions.

In 2001, she started Sally Ride Science to inspire young people – especially girls – to explore their interest in science and engineering. She died in 2012 of pancreatic cancer, but Sally Ride Science carries on her vision.



“She inspired generations of young girls to reach for the stars and later fought tirelessly to help them get there by advocating for a greater focus on science and math in our schools.”

-US President Barack Obama

Maria Segui Gomez

Maria Segui Gomez is the current Directorate-General of Traffic in Spain. The Directorate-General of Traffic is the government department responsible for the Spanish road traffic network. Dr. Segui-Gomez holds an MD and MPH from the University of Barcelona and MSc and ScD degrees from Harvard University.

Her career has been largely focused on academic endeavors, currently a university full professor on leave for public service. Her research interests have been in injury control and prevention. She has worked at the Harvard Center for Injury Prevention, the Harvard Center for Risk Analysis, the Johns Hopkins Center for Injury Research and Prevention and the European Center for Injury Prevention. She has served in a variety of leadership positions for professional organizations, including the Advancement of Automotive Medicine, World Bank, and World Health Organization trying to breach the gap between medicine, public health and engineering and engaging younger students to pursue rigorous research in these areas.



*Sources: website of the Spanish Government,
Minister of the Interior and informacion.es.*

Aida De Acosta

1884-1962

Aida De Acosta, a New York born woman of Cuban descent, became the first woman to pilot a motorized airship. This was before the Wright Brothers historic flight in 1903. Fascinated by a flying dirigible she had seen in Paris, she sought lessons and after three, was declared ready to fly. Her instructor rode below her on a bicycle, using handkerchiefs to guide her. De Acosta landed on a polo field in the middle of a match. Press gathered were both fascinated and horrified that a woman would be driving such a machine and her parents were not pleased. They threatened to ruin her instructor if he leaked her name to the press and to disinherit her if she continued flying. She stopped flying but continued her interest in aviation, becoming friends with Charles Lindbergh. The story of her flight was revealed 30 years later at a dinner party in New York when a young US Navy officer told the hostess, De Acosta, why he wanted to fly. She replied with her own story, shocking everyone.



Sources: City University of New York and Telling Herstories: Fascinating Women History Forgot.

Alice Huyler Ramsey

1893-1926

Alice Huyler Ramsey became the first woman to drive across the United States in 1909, from New York to San Francisco in 59 days. She and three female companions marked the first all-female, cross-country road trip. The four had to learn the basics of car safety, wearing hats and goggles and covering long dresses with dusters to protect themselves from the dust.

Though the auto manufacturer published an ad upon their arrival noting they traveled “without a particle of car trouble”, they actually had to fix a tire blowout, call a mechanic for another repair, and fill the transmission with water. And because America’s roads were not yet designed for long distance driving, they slept beside a creek until the roads were less muddy and the car could continue to travel. Ramsey and her crew received a great deal of public support.

Between 1909 and 1975, Ramsey drove across the country more than 30 times.



Source: Smithsonian Museum of American History

Sophie Blanchard

1778-1819

Sophie Blanchard married the world's first professional balloonist, Jean-Pierre Blanchard, and eventually took up ballooning herself. This was somewhat surprising as she was known to be a nervous type. Deeply in debt, Jean-Pierre figured people would pay more to see a woman fly in a balloon, and they flew on their first joint flight in 1804. She enjoyed the adventure, and continued to make several flights a year. In 1811, on a joint flight, the balloon crashed and her husband suffered a head injury. The shock of the crash rendered her mute for a time but she eventually recovered and returned to ballooning and became the first women solo balloon pilot, making a professional career of it, selling tickets to balloon ascent shows.

Her husband died two years after her first flight, suffering a heart attack in flight. She died in a ballooning accident in 1819 when pyrotechnics she used during her show ignited the hydrogen within the balloon.



Sources: historicwings.com and forgottennewsmakers.com

Barbara Castle

1910-2002

Barbara Castle is well known as a British politician from the Labour Party, serving as a Member of Parliament from 1945 to 1979. Her first cabinet position was in 1964 with the Department of Overseas Development.

In 1966, Castle, a non-driver and, potentially more surprising, a woman, was moved to head the Department of Transport. During her tenure, which lasted until 1968, she introduced the breathalyser to address the issue of driving under the influence and also instituted the permanent 70mph speed limit. One of her most noteworthy achievements was also in safety when she passed legislation requiring all new cars to be fitted with seat belts. She was also responsible for several rail initiatives, including closing more than 2,000 miles of railroads and introducing government subsidies for socially necessary but unprofitable railroads.



Source: BBC

Jeanne Baret

1740-1807

Jeanne Baret was the first woman to circumnavigate the globe. She was a French botanist who disguised herself as a man to join a journey around the world, helping to classify hundreds of species of plants. A royal ordinance of the time forbade women from traveling on French Navy vessels so she appeared at the dock dressed as a man, “Jean”, and offering her help on the journey.

There are varying stories about how her true identity was exposed. It is generally believed, though, that her gender was discovered and that as a result, she may have been the victim of sexual assault. She and her traveling partner, who pretended to have been surprised by her true identity, disembarked in Mauritius and continued their botany research until his death in 1773. Penniless and stranded, she married a French officer, returned to France, and in 1785 received a government pension for her work.



Sources: History Channel and National Public Radio

Olive Dennis

1885-1927

Olive Dennis was the first female member of the American Railway Engineering Association. Educated at Goucher College and Columbia University, she later taught math in the Baltimore City Schools for 10 years. She became the second woman to graduate from Cornell University with a degree in civil engineering, along with her master's degree in math and astronomy from Columbia University. In September 1920, she was finally able to find work as a draftsman with the Baltimore and Ohio (B & O) Railroad.

In 1921, she was designated as the engineer of service in an effort to encourage women to continue to support the railroad as cars and intercity buses became more common. She spent the next 30 years improving passenger comfort inventing the Dennis ventilator and playing major roles in air-conditioning the coaches, dimming overhead lights, reclining individual seats, and creating stain-resistant upholstery.



“No matter how successful a business may seem to be, it can gain even greater success if it gives consideration to the woman’s viewpoint.”

-Olive Dennis

Candy Lightner

Candy Lightner is an American activist who formed Mothers Against Drunk Driving (MADD) after her daughter, Cari, was killed by a drunk driver in 1980, in an effort to raise awareness and seek tougher penalties for offenders. In 1984, she was appointed by President Ronald Reagan to a national commission on drunk driving and she left MADD the following year.

Lightner is known as a tireless advocate, having visited then California Governor Jerry Brown's office every day until he launched a state commission on drunk driving. MADD's accomplishments, under her leadership, include passing new anti-drunk driving legislation in individual states and at the national level. MADD also successfully focused their efforts on a law that would raise the legal drinking age to 21. Lightner's activism inspired her other daughter, Cari's twin sister Serena, to start Students Against Drunk Driving.



Sources: biography.com and Mothers Against Drunk Driving

Catherine Coutelle

Formerly a History and Geography teacher, then an educator at the Institut Universitaire de Formation des Maîtres which is responsible for training primary and secondary teachers, Catherine Coutelle, currently serves as the Socialist MP of the 2nd constituency of the Vienne department of France. She is also President of the French National Assembly's Parliamentary Delegation for the Rights of Women and Equal Opportunities between Men and Women.

She founded the association *Femmes en mouvement, transports au féminin* (1995) and earned herself a seat on the board of directors of the male dominated *Groupe des autorités responsables de transport (GART)*, a French association of transport authorities such as conurbation or urban communities, general councils and regional councils. And she was local elected politician during 4 municipal mandates in Poitiers, two of them as official in charge of the urban transport.

When elected to her current role in 2007, she joined the Economic Affairs committee. She also joined the Delegation for the Rights of Women, being designated President of the group after her reelection in 2012. In this position, she contributes, as she says, to "tint of parity" all government bills on which she collaborates.



Crédit Alain Montaufier

“Nothing is ever given to women. They must always prove that they do better than men...”
-Catherine Coutelle

Jane Garvey

Jane Garvey's transportation career began in Massachusetts where she served as Commissioner of the Department of Public Works and director of Boston's Logan International Airport. She then served as Acting Administrator and Deputy Administrator of the Federal Highway Administration. During her time there she developed the Innovative Financing Initiative, enabling states to use federal funds more effectively. In 1997, she became the 14th Administrator of the Federal Aviation Administration. She was the first Administrator appointed to a five year term, the first female Administrator and the first Administrator who was not a licensed pilot. She was also the Administrator responsible for guiding the industry through the aftermath of September 11th. In 2008, she was part of President Obama's transition team, advising the new administration on transportation policy.

She now works in the private sector, serves as a lecturer with the Massachusetts Institute of Technology's Center for Transportation and Logistics, and serves on numerous boards. She has received many awards, including the Association of Road and Transportation Builders list of The 100 Leaders in Transportation in the 20th Century.



*Sources: bipartisanpolicycenter.org
and Bloomberg Businessweek.*

Anjlee Agarwal

Anjlee Agarwal is Co-founder and Executive Director of Samarthyam, National Centre for Accessible Environments, an organization that increases accessibility awareness focusing on the inclusion of persons with disabilities to access education, tourism, transportation, and environment.

Since 1998, she has promoted inclusive design in public spaces and transportation systems. Confined permanently to a wheelchair at age 28, she realized that most public places lack accessibility for disabled and older people. She has been highly involved in the redesign of Universities, public spaces, and mass transit systems to make them more universally accessible.

She works as an access consultant with the government of India, bringing about policy level changes to make India more inclusive. She has been involved with research projects on right of way, inclusive pedestrian facilities, and transit systems. She is also a master trainer, working with the public and stakeholders to educate them on issues of accessibility.



*Sources: Choice International UK,
samarthayamindia.blogspot.com, and
thehindu.com.*

Solange Olszewska

Solange Olszewska was originally trained as a dentist in Warsaw, Poland, eventually moving with her husband and children to West Berlin. She returned to Poland in 1995 and became heavily involved in the family business.

She and her husband founded Solaris Bus and Coach company. Solaris is a major European producer of city, intercity, and special-purpose buses as well as low-floor trams.

She has been involved in a variety of civic and charitable organizations and engaged in efforts to encourage Polish-German cooperation in economic and cultural issues.

She is a member of the Program Congress of Women. In 2005, she was named Bus Builder of the Year at the European bus industry meeting Busworld. In 2011, the German magazine Handelsblat named her one of the most influential women in the business world.



“I pay attention to the needs of users, especially children, women, and persons with reduced mobility.”

-Solange Olszewska

Sources: solarisbus.com and money.pl.

Janett Jimenez

Janett Jimenez is an accessibility expert and advocate from Mexico. She has a graduate degree in architecture and post graduate studies with design projects for both focusing on wheelchair accessibility. Her publications include national accessibility standards and design guidelines for accessibility in Mexico and Malaysia.

She is responsible for organizing a variety of accessibility events including seminars in Malaysia, Mexico, and with the support of the United Nations. She also serves as the country representative for Mexico with the Global Alliance on Accessible Technologies and Environments which is an international organization dedicated to the promotion of accessibility of the built and virtual environments with a presence in six regions: Asia Pacific, Arab, North America, South America, European, and African regions.



Sources: Jimenez curriculum vitae, International Institute for Sustainable Development, GAATES

Adriana Lobo

Adriana Lobo is a director at EMBARQ, an organization whose mission is to “catalyze and help implement sustainable transport solutions to improve quality of life in cities”. The EMBARQ network reaches Mexico, Brazil, China, India, Turkey, and the Andean region.

Adriana’s expertise lies in urban and regional transport planning with a focus on transport modeling in Mexico. She works on bus, bicycle path, and pedestrian safety projects in Mexico along with clean vehicles projects. She has also directed projects in Brazil, Mexico, Panama, Colombia, Peru, Venezuela and Chile.

She is also involved with the World Resources Institute, a global research organizations that reaches more than 50 countries. Working to sustain natural resources. WRI focuses on the intersection of environment and development six key focus areas including transport.



Sources: EMBARQ, World Resources Institute.

Tineke Netelenbos

Tineke Netelenbos is a Dutch politician. First a teacher, she became a leader in Labour Party. She was a House spokeswoman for disability policy and education. In the first Cook government (1994-1998), she served as Secretary of State for Education. In the second Cook government (1998-2002), she served as Minister of Transport. During this tenure, she was responsible for the ban on non-handsfree calls while driving, construction of a new runway at Schiphol Airport, and the introduction of demerit points for young drivers.

She also sought to introduce tolls to reduce traffic congestion, an effort that was ultimately unsuccessful. She also had difficulty with the Dutch Railways during her tenure. She subsequently served as acting Mayor of the Municipality of Miramichi and in leadership positions with national road organizations and the Royal Association of Dutch Shipowners. She is also active with the European Commission's Digital Agenda for Europe.



Source: parlement.com, European Commission.

Phoebe Fairgrave Omlie

1902-1975

Drawn in by the popularity of air shows featuring stunt pilots and wingwalkers, and parachutists, Phoebe Fairgrave Omlie decided to become a parachutist. Preparing for her first jump, she could not lift the parachute pack and was sent home. After a rigorous weight-training program to build her strength, she returned for lessons and began appearing in air shows nationwide, setting altitude records.

In the 1920s, she became the first woman licensed as a transport pilot and was a charter member of the Ninety-nines, the international organization of women pilots.

During the Presidential campaign of 1932, Omlie was responsible for transporting Franklin D. Roosevelt from town to town. Upon his election, he invited her to become Special Assistant for Air Intelligence of the National Advisory Committee for Aeronautics (forerunner of NASA). She also established a training program for female pilots in Tennessee.



“...if women can teach men to walk, they can them to fly.”

-Phoebe Fairgrave Omlie

Sources: FHWA Women in Transportation: Changing America's History and Tennessee Aviation Network.

Dominique Savoie

Dominique Savoie became the first female Deputy Minister of Transport in Quebec in 2011. She also sits on the board of directors of Infrastructure of Quebec.

Prior to that, she spent much of her career in labor serving with the Commission of professional training of the Montreal-Metro, the Quebec Society of the Development of the Labour Force, and Emploi-Quebec at the Ministry of the Employment and Social Solidarity (MESS). At MESS, she served in a variety of senior management posts including regional director (2000-2005), Assistant Deputy Minister (2005-2006) and Associate Deputy Minister (2006-2009) – and has notably participated in the establishment of employment public services. From 2006 to 2009, she has also served as general secretary at the Commission of the partners of the labour market. In 2009, she became Deputy Minister at the Ministry of the Employment and of the Social Solidarity (MESS).



Sources: Site du Ministère des transports du Québec
and Site de la première Ministre du Québec