



WOMEN IN DATA SCIENCE
@PARIS-SACLAY



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#WiDS2020



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NEW DIGITAL FORMAT

	<p>Ambassadors</p> <p>ELVIRA SHISHENINA <i>Researcher, Total, WiDS 2020 ambassador</i></p> <p>MARIE-ANNE LOTZ <i>Data scientist, Total, WiDS 2020 ambassador</i></p> <p>Moderator</p> <p>MARIANA KOBAYASHI <i>WiDS 2020 Paris-Saclay Project Leader</i></p>
<p>MINI WEB SERIE</p> <p>TECH TALKS</p>	<p>Learning to predict in complex data spaces</p> <p>FLORENCE D'ALCHÉ-BUC <i>Professor, Télécom Paris - Institut Polytechnique de Paris</i></p> <p>Data Science and Artificial Intelligence for healthcare: Covid-19 use case</p> <p>ÉMILIE CHOUZENOUX <i>Researcher, Inria Saclay - Île-de-France</i></p> <p>How to do Data Science when you are not a Data Scientist</p> <p>ANNE-LAURE BULLIÈRE <i>Functional Architect, Total</i></p> <p>Data Science and AI for Journalism and Digital Democracy</p> <p>IOANA MANOLESCU <i>Research director, Inria - Ecole polytechnique</i></p>
<p>WEBINAR PANEL DISCUSSION</p> <p>14 SEPT</p>	<p>Speakers</p> <p>NATHALIE BRUNELLE <i>Project Director Total @Saclay, President of TWICE</i></p> <p>ASSIA MOULOUDI <i>User eXperience Manager, SAP</i></p> <p>CÉLINE JULLIEN <i>Head of Citizen Engagement, InnoEnergy S.E</i></p> <p>AMÉLIE CLAUS <i>Student, Télécom Paris - Institut Polytechnique de Paris</i></p>

BIOGRAPHIES

In chronological order of the conference

ELVIRA SHISHENINA

Quantum Computing research scientist at Total, president and co-founder of QuantX, WIDS 2020 ambassador



Elvira Shishenina joined the Total's Quantum Computing team as a research scientist in July 2019. An Ecole Polytechnique engineer, she has an Applied Mathematics and Computational Physics background with a double master's degree from Ecole Polytechnique and Novosibirsk State University.

In 2018 after a successful defense, she acquired a Ph.D. degree in Mathematics from Inria. Her work resulted in a novel approach that reduces the numerical costs of simulations for Seismic Depth Imaging. The study was further pursued in the context of Depth Imaging Partnership between Inria and Total.

Besides her Ph.D., she has more than 9 years of scientific experience working for Oil & Gas industry, including the Institute of Petroleum - Gas Geology and Geophysics of the Siberian Branch of the Russian Academy of Science, Baker Hughes, and Total. In the Total's Quantum Computing Project, she is in charge of the development of applications in the fields of Quantum Chemistry, Combinatorial Optimization, and Linear Algebra. In this context, she contributed to the development of Total's first in-house quantum computing codes, which will address the Total's problematics.

MARIE-ANNE LOTZ

*Data scientist @ Total Data
Analytics Competence Center &
WiDS 2020 ambassador*



Early 2018, backed by 10 years of experience in Data Science applied to various sectors (Energy, Industry, Banking, Telecommunications, Insurance, Retail), I joined Total group, within the Data Analytics Competence Center of the Exploration Production branch.

As background information, in 2015, after 5 years as Data Scientist in a Specialized Data Science Consulting firm, I joined EDF Research & Development department where, as Data Science Research Engineer, I analyzed, processed and valued Data.

From 2018 onwards, for Total group, my current mission contributes to several operational projects where I develop supervised and unsupervised learning models based on structured / unstructured Big Data. Especially, I develop and integrate Machine Learning algorithms that tackle predictive and prescriptive use cases. Aim is real-time optimization of Total Exploration & Production worldwide operations.

Passionate about mathematics and Machine Learning, I hold the Data Science Certificate of Paris Dauphine University (2017).

As background education, I am double graduated: on the one hand from Lyon II University (SISE) with a "Master" in "Statistics and Informatics" for Data Science and on the other hand from Toulouse I & III with a "Master" in "Statistics and Econometrics".

FLORENCE D'ALCHÉ-BUC

*Professor, Télécom Paris - Institut
Polytechnique de Paris*

Florence d'Alché-Buc is full professor in the Department of Image, Data and Signal at Télécom Paris (IP Paris). She initiated the Challenges program of the PASCAL European Network (2004-08). She has led Digicosme, an excellence laboratory in Science and Technology of Information centered on Saclay Campus during 3 years (2017-19). She was Program co-chair of NeurIPS 2019, a major conference in Machine Learning. She is currently holding the research and teaching chair Data Science and Artificial Intelligence in Digitalized Industry and Services. Her research spans several topics in machine learning, from structured prediction to dynamical system modeling with a renewed interest for reliability, explainability and trust in AI. She has authored more than 100 articles in international journals and conference proceedings.



ÉMILIE CHOUZENOUX

Researcher, Inria Saclay - Île-de-France

Emilie Chouzenoux received the engineering degree from Ecole Centrale, Nantes, France, in 2007, and the Ph.D. degree in signal processing from the Institut de Recherche en Communications et Cybernétique (IRCCyN, UMR CNRS 6597), Nantes, in 2010. Between 2011 and 2019, she was a Maître de conférences at the University of Paris-Est Marne-la-Vallée, Champs-sur-Marne, France (LIGM, UMR CNRS 8049). Since September 2019, she has been a Researcher at Inria Saclay, within the project team OPIS, in CVN, CentraleSupélec. She is an Associated Editor of IEEE Transactions in Signal Processing. In June 2017, she received an ANR grant of 200k€ for the call JCJC (young researchers). Since January 2020, she has been the PI of the ERC Starting Grant MAJORIS, of 1.5M€. Her research interests are in large scale optimization algorithms for inverse problems and machine learning problems of image processing.



ANNE-LAURE BULLIÈRE

Functional architect of Total's Refinery 4.0 Project

Since 2019: Functional architect of Total's Refinery 4.0 Project for the Optimization & Supply Chain area, based in Pune, India. 2016 - 2018: Business Manager during the recovery plan of SOBEGI, an affiliate of Total



located in the South-West of France, which produces utilities and provides services to manufacturers installed on its two platforms. In addition, Acting General Secretary (Finance, Purchasing and Sales, Legal). 2012 - 2015: Business Development Manager in New Technologies, in the Chemical Refining Strategy department of Total (based in Brussels, Belgium). 2011: Deputy to the Director of Biofuels of Total Refining Marketing (based in Paris, France). 2007 - 2010: Planning & Economics Manager of the Total refinery in Port Arthur, Texas, USA. 2004 - 2006: Internal Auditor within the Holding of Total. Based in Paris, France. 2001 - 2003: Project engineer within the PITAGOR team (Plan for the Integration of Technologies Assisting the management and the Optimization of Refining), in charge of the study and the implementation of optimization tools in refineries by Total (based in Paris, France). 1998 - 2000: Responsible for scheduling at the Provence Refinery (based in the South-East of France).

Education: École Polytechnique (Palaiseau, France) - General Engineering degree and IFP School (Rueil-Malmaison, France) - Engineering degree specializing in Refining, Engineering, and Gas.

IOANA MANOLESCU

Research director, Inria Saclay - Île-de-France - École polytechnique

Ioana Manolescu is a senior researcher at Inria Saclay and a part-time professor at Ecole Polytechnique, France. She is the lead of the CEDAR INRIA team focusing on rich data analytics at cloud scale. She is a member of the PVLDB Endowment Board of Trustees, and has been recently an Associate Editor for PVLDB, a president of the ACM SIGMOD PhD Award Committee, and a chair of the IEEE ICDE conference. She has co-authored more than 150 articles in international journals and conferences, and co-authored books on "RDF Data Management in the Cloud" and "Web Data Management". Her main research interests algebraic and storage optimizations for semistructured data and in particular data models for the Semantic Web, novel data models and languages for complex data management, data models and algorithms for fact-checking, and distributed architectures for complex large data.

Prior to joining Inria as a researcher in 2002, Ioana has been a post-doctoral researcher at Politecnico di Milano, Italy. She holds a PhD from Université de Versailles Saint-Quentin and studied as an undergraduate at Ecole Normale Supérieure in Paris and at Universitatea Politehnica in Bucharest, Romania.



NATHALIE BRUNELLE

*Project Director Total@Saclay,
President of TWICE (Total Women
Network)*



Nathalie Brunelle began her career in 1995 and took her first operational responsibilities as head of a polymer plant at the Normandy site. After the mergers between Total, Fina and Elf, Ms. Brunelle moved to Belgium, where she was successively Operations Manager at the Antwerp Olefins plant, VP Strategic Planning Petrochemicals and VP Marketing & Sales for Base Chemicals. In 2012, she has been appointed on the Management Committee of the Refining & Chemicals Division as SVP Strategy, Development & Research and then SVP Corporate Affairs.

Mrs Brunelle is now Project Director, in charge of implementing a new Innovation and Research Center for the Group in Paris-Saclay.

Nathalie Brunelle has graduated from Ecole Polytechnique, engineering school in Paris- Saclay, and a joint post graduate program between the French Petroleum institute (IFP) and McGill University in Montreal, Canada.

She has 3 children.

ASSIA MOULOUDI

User eXperience Manager, SAP

Assia Mouloudi is currently managing a UX design team in charge of Analytics and Machine Learning solutions at SAP.

She's PhD in Human Machine Interaction and Engineer in Robotics.

Assia is passionate about AI and innovation management.

As a strong believer that diversity is a booster for creativity and problem solving, Assia is engaged as mentor for startups, NGOs and young people.



CÉLINE JULLIEN

*Head of Citizen Engagement, InnoEnergy
S.E. Founder of BE "Better Energy By
Europeans™".*

For the past four years I've been designing InnoEnergy's Societal strategy and services to engage citizens at a massive scale and faster pace in the energy transition. It led to the creation of BE, Better Energy By Europeans™ Change to better, Change together as a brand and series of creative assets (1kWhat?), engagement campaign offering (for cities) and disruptive events (as part of Corporate Social Responsibility) to engage citizens of all age, gender and role in society and across Europe. The focus is one key issue: "sharing the experience of using, consuming, investing and living energy" to help us all understand and choose how to improve our energy lifestyle.



I manage since 2013 InnoEnergy's Innovation Investment committee for recommendation to the board (250 M€ invested in mobility, grid, storage, renewables, alternative gas, energy for circular economy). I also supervise InnoEnergy's Global Top 10 Innovators reports, focused in 2018 on Clean Air investment priorities.

I have 10-year experience as Assistant Professor in Behavioral Economics prior to joining InnoEnergy in 2010.

AMÉLIE CLAUS

*Student, Télécom Paris - Institut
Polytechnique de Paris*

Amélie Claus, a second-year student, joined Télécom Paris after two years in preparatory classes and is currently specializing in "Data Sciences" and "Mathematics, Theoretical Computer Science and

Operational Research". She is also very involved in the associative life of Télécom Paris, as former President of the association Forum Télécom Paris, member of the Junior Entreprise, Telecom Etude, and of Make A Difference, Télécom Paris' sustainable development association.



MARIANA KOBAYASHI

*Digital Projects Coordinator,
WiDS 2020 @Paris-Saclay Project
Leader*



Mariana is a Brazilian engineer graduated from Polytechnique School of São Paulo with a Master degree in Refining Processes obtained at the French Petroleum Institute (IFP).

She moved to France in 2014 at the age of 20. In 2015, she has won Honeywell's UniSim Design Student Challenge, in which she has proposed an innovative solution to treat produced water in oil extraction. Since then modeling became a passion and a way to implement new ideas.

Mariana has joined Total in 2016 as a Process Engineer in La Mède Refinery, site that has been transformed into a Bio-Refinery. Later she had worked in Process Modeling department, helping to implement machine learning models in Refining & Chemical Branch. Now she works as a Digital Projects Coordinator, contributing to projects as "Refinery 4.0", also acting as a Digital Transformation Facilitator, helping to enable data integration, data analysis and business intelligence projects for Total refineries.

She was a finalist of 2018 ERTC (European Refining Technical Conference) Rising Stars' Challenge, in which the candidates should propose new strategies to attract young talents to the Oil & Gas sector.

She is engaged in Total's internal women network in order to promote gender diversity in the scientific domain. She loves table tennis and plays guitar and piano.



Télécom Paris is one of the top four engineering schools in France for training general engineers. Recognized for its close ties with businesses, this public graduate school ensures excellent employment prospects in all industries and is considered the number-one engineering school for digital technology. With its top-level innovative teaching, Télécom Paris is at the center of a unique innovation ecosystem, drawing on the interaction and cross-disciplinary nature of the school's academic programs, interdisciplinary research, two business incubators and its campuses (Palaiseau and Sophia Antipolis – EURECOM). Its LTCI laboratory has been recognized by HCERES as an outstanding unit in the field of digital sciences for its international reputation and exceptional number of initiatives supporting the socio-economic world and industry, as well as for its great contribution to teaching.

A founding member of Institut Polytechnique de Paris and an IMT (Institut Mines-Télécom) school, Télécom Paris is positioned as the college for digital innovation on the Paris-Saclay Campus.



About Total

Total is a major energy player that produces and markets fuels, natural gas and low-carbon electricity. Our 100,000 employees are committed to better energy that is safer, more affordable, cleaner and accessible to as many people as possible. Active in more than 130 countries, our ambition is to become the responsible energy major.

About Total Research and Development

Total is deploying an ambitious R&D program, worth nearly \$1 billion a year. Total R&D relies on a network of more than 4,300 employees in 18 research centers around the world, as well as on numerous partnerships with universities, start-ups and industrial companies. Its investments are mainly devoted to a low-carbon energy mix (40%) as well as to digital, safety and environment, operational efficiency and new products. It files more than 200 patents every year.



Inria is the French national research institute for digital science and technology. World-leading research and technological innovation are an integral part of its DNA. Inria's 3,500 researchers and engineers put their passion for digital technology to work in nearly 200 project teams, most of which are joint teams with our academic partners, including major research universities and the CNRS. They explore new fields, often in collaboration with different disciplines and industrial partners, with the aim of meeting ambitious challenges.

As a technology institute, Inria supports the development of numerous software products, sometimes making a global impact via the opensource model. Because technology start-ups are powerful channels for research outcomes, Inria also supports entrepreneurial risk-taking and start-up creation (Deeptech). Firmly established on major university campuses and in industrial ecosystems, the Institute is at the heart of the digital revolution.



EIT InnoEnergy is the largest accelerator of sustainable energies in Europe.

From mobility to construction - from renewable energy sources to smarter storage - our commercially attractive technologies are the product of a trusted ecosystem for sustainable energy.

To become the leading engine for innovation and entrepreneurship in energy we have:

- **Invested** in 500+ assets with a forecasted revenue of €16 billion. Our 8 Master's programs deliver talents for companies such as Tesla, Siemens, Total, Procter & Gamble...
- **Brought** together 500+ key players of the energy value chain, from 18 different countries, who have indirect access to 150 million energy consumers.
- **Created** an operational network that integrates Education with Industry-driven Research and Entrepreneurship. We master every stage of the energy transition process and help Energy companies improve the flow of knowledge between academia and business by our increased understanding of the industrial innovation logic: talent- technology- consumer market.

THEY SUPPORT US





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