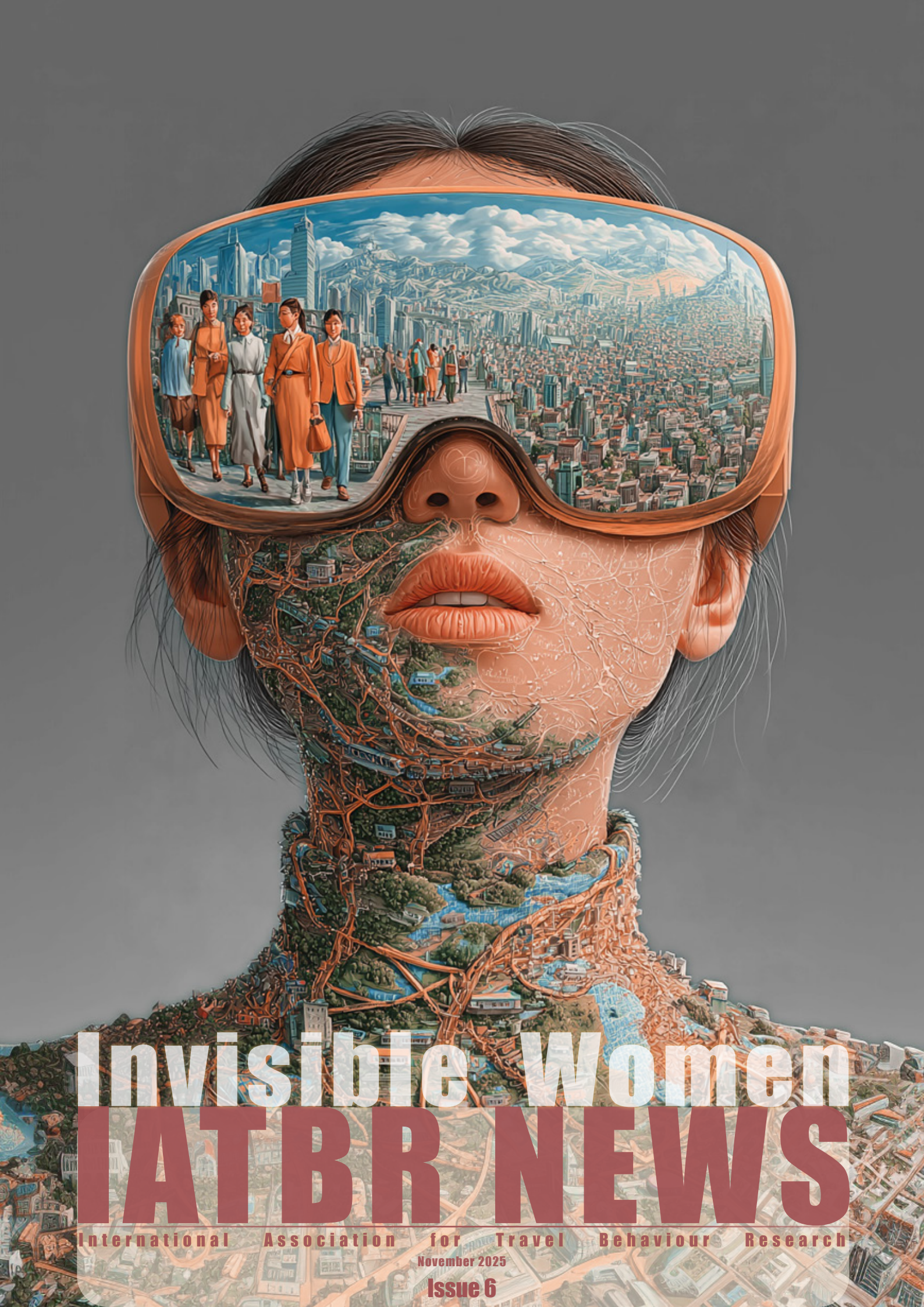

Invisible Women

IATBR NEWS

International Association for Travel Behaviour Research

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CONTENTS

Message from the Chair of IATBR

Prof Charisma Choudhury

Charisma Choudhury is a Professor of Behaviour Modelling at the Institute for Transport Studies and School of Civil Engineering at the University of Leeds (UoL) where she leads the Choice Modelling Research Group. Charisma's current research focuses on leveraging emerging data sources for travel behaviour modelling, especially in the context of the Global South and Green Transport. These datasets range from passively generated data sources (e.g. mobile phone records, smart cards, video images, etc.) to physiological sensor data (e.g. skin conductance, EEG recordings, etc.). Research excellence in this area has enabled her to win the Alan Turing Fellowship (2018 -2022), Faculty for Future Award 2011 and the UKRI Future Leader Fellowship 2020. She is the current Chair of IATBR.

Description: Group photo of female IATBR chairs (L–R): Patricia Mokhtarian, Liz Ampt, Elisabetta Cherchi, Charisma Choudhury

It is my pleasure to invite you all to read yet another exciting issue of IATBR NEWS led and edited by Taha Rashidi and adorned with the wonderful design and illustrations by Maryam Bostanara.

You might ask:

Why call this issue 'Invisible Women' when our field boasts remarkable female pioneers and leaders? Let's look at some numbers first.

Over the years, IATBR has had 4 female Chairs (but that's out of 20), 5 Eric Pas Best Dissertation Prize Winners (but that's out of 26) and 1 IATBR Lifetime Achievement Award Winner (but that's out of 12). These figures speak volumes!

The inspiration for this special issue specifically comes from Caroline Criado Perez's pioneering book Invisible Women: Exposing Data Bias in a World Designed for Men. The book touches upon how gender differences in travel behaviour—heterogeneity in trip frequency, patterns, access to mobility tools, and safety concerns—are often overlooked. But the problem runs deeper: **gender gaps persist not only because of missing data, but very often because women remain underrepresented in transport leadership roles.** This underrepresentation often leads to a significant bias in considering and integrating the needs of women in transport plans and policies.

How can we make things better?

Bringing more women into our field, inspiring them to deliver their best and encouraging them to pursue leadership roles can make a real difference to close the gender disparity. Also, **underrepresentation can amplify feelings of not belonging, often leading to lower confidence levels and 'imposter syndrome' among female researchers.** These challenges deserve attention in addition to direct focus on addressing the unique travel needs of female travellers.

This issue aims to celebrate women's contributions to IATBR and the field of travel behaviour research — both in terms of leadership and research excellence. Inside, you'll find reflections from me, the four female past Chairs of IATBR, and the five female Eric Pas Prize recipients. Due to space constraints, we couldn't include many other female luminaries in the field of travel behaviour, such as the eleven female Honourable Mention recipients—but their contributions have been also crucial in the field in many different ways .

A heartfelt thank you to Taha Rashidi for conceiving the ides of this special issue. It stands as a testament to IATBR's commitment to gender equity, diversity, and excellence. Together, we can build transport networks that move not just people, but progress.

My Journey in Transport Research

As the current Chair of IATBR, I wanted to share a few snippets from my career journey.

I was born and raised in Bangladesh, where engineering is not typically considered a popular career choice for girls. Yet, I grew up in a family affectionately known in our neighbourhood as Engineer Barri—the Bengali phrase for House of Engineers. My grandfather, father, and all my uncles were engineers. My father was a Professor of Civil Engineering and from as far back as I can remember, I aspired to follow in his footsteps and pursue an academic career - though I was clueless about in what field I wanted to focus. My earliest toys were building blocks, Lego sets, jigsaw puzzles, and Meccano kits – so in a way I was nudged to study in a STEM discipline. Initially, I was drawn to Physics (like my mother) or Medicine (like one of my aunts). But when I was in high school, during a family holiday in India, we visited the stunning Dawki suspension bridge over the River Umgat. I learned that my grandfather had served as Chief Engineer on that project back in 1932. The realisation that his work continued to serve people decades after his passing deeply inspired me—and that day, I decided to study civil engineering.

During my undergraduate years, I majored in structural engineering, but it didn't excite me as much as I had hoped. Transport seemed more fascinating as the solution to the problems were very context specific and had a human element. A few months before graduation, I met a family friend who was a graduate student at MIT's Intelligent Transportation Systems (ITS) Lab. **He introduced me to MITSIMLab, a microscopic traffic simulation tool developed at MIT**. Despite the limitations of dial-up internet in Bangladesh at the time, I was fascinated by what little I could see.

Without fully understanding the details, **I applied to MIT and opted to work with Professor Moshe Ben-Akiva**. My master's thesis focused on lane-changing behaviour—my first step into the world of travel behaviour research, and I was hooked.

After completing my PhD, I worked briefly at RAND Europe in the UK and as a Postdoctoral Research Associate at MIT before returning to Bangladesh to teach at my alma mater, BUET. While teaching some of the brightest students in the country was rewarding, research opportunities were limited due to heavy teaching loads—often around 20 contact hours per week. Further, reliable data for modelling travel behaviour was very limited. This challenge sparked my interest in leveraging emerging data sources such as GPS traces, mobile phone records, and smart card data for public transport in modelling travel behaviour.

To pursue this research direction, I applied for the Faculty for the Future fellowship funded by the Schlumberger Foundation for female STEM academics from developing countries. This enabled me to spend time at MIT again in 2011, this time as a Visiting Professor and collaborate with Marta González on integrating mobile phone data into mainstream travel behaviour research.

A unique aspect of my career journey has been sharing it with my husband, who is also a transport academic. This has both pluses and minuses. While this meant never having to explain the demands of academia, it also made securing positions in the same university or city difficult, leading to periods of long-distance relationships. It also meant, we had to take turns in attending the major transport conferences like TRB due to childcare issues. Eventually, we both got job offers from the University of Leeds and joined the Institute for Transport Studies in 2013.

Looking back, my career did not follow a straight path – my plans and career goals kept on changing. In a sense this illustrates how plans evolve with time and not all plans lead to observed actions due to external

constraints. The plans also change with life stages and are often deeply interconnected with the plans of others. **As a behaviour modeller, the challenge of capturing these complexities mathematically lies in the fact that we only observe final actions, while the plans remain latent. Interestingly, this was the central theme of my PhD dissertation, which focused on Modelling Driving Decisions with Latent Plans (and received an Honourable Mention from IATBR in 2007).**

My IATBR journey

My first IATBR conference was the 12th one, held in Jaipur in 2009. That experience had a profound impact on my career. It was, without doubt, the most welcoming conference I had attended as an early career researcher. I met many luminaries in the field who not only offered constructive feedback on my work but also shared invaluable advice about navigating an academic career.

As I continued attending the IATBR conferences, I realized this community is more than a forum for ideas—it's a family. The camaraderie, the openness, and the genuine support inspired me to give back. This year marks my 10th year serving on the IATBR Board—first as a general board member, then as Secretary and Treasurer, and eventually as Vice Chair and now Chair.

To all early career researchers reading this (especially women, who often tend to be more shy in raising their hands):

Get involved in the IATBR activities and volunteer for other leadership opportunities! IATBR conferences are not only melting pots of ideas; they are gateways to lifelong friendships and mentorship. The people you meet here will become your collaborators, your advisors, and your biggest cheerleaders. These connections will be among the most valuable assets in your career.

Invisible Women

DR Maryam Bostanara

Maryam Bostanara is a Postdoctoral Research Associate at the City Futures Research Centre, UNSW. She specialises in transport modelling and human behaviour analysis, focusing on the who, when, where and why of decision-making at the intersection of transport and land use. Her work involves developing econometric and machine learning models to understand complex mobility and planning challenges.

Her doctoral research introduced a novel framework for modelling household decision-making within transport and urban planning. This work earned her the 2024 ITE-ANZ SIDRA Solutions Postgraduate Award and the Best Research Demonstration Award at TRANSW 2021.

Maryam also brings a creative lens to research, with a strong interest in integrating art and science. This commitment has been recognised through the 2025 UNSW ADA Early Career Award for Non-Traditional Research Output for her contributions to the IATBR newsletter, including this issue and the fifth issue.

The truth is, it is never easy to be the different one.

Some might embrace it, depending on the situation, but for many, being the minority is deeply challenging. Being "the only one", whether the only woman in a meeting, the only person of colour in a room, or the only young professional in a team, can make you feel invisible.

Have you ever been in a conversation where you shared a brilliant idea, only to have it brushed aside until person X repeated it out loud, and suddenly it became the best idea in the world? Have you had your suggestions ignored simply because they did not fit the usual mould; because you proposed that technical presentations could be more visual and engaging, or that reports might need more creativity and clarity instead of endless text-heavy slides? Have you ever been told your ideas were "too childish" or "not serious enough" when, in reality, they were innovative and forward-thinking?

Having been part of minority groups in many settings, being a woman in engineering, being an international student in engineering school, during my PhD, at conferences, and in government meetings, I have been fortunate to witness many amazing people navigating the difficulties of being a minority. What I have described are experiences that repeat themselves for this people, minority groups, time and again. Sometimes people say being a minority is like being part of a small team competing against a much larger one. But as I have grown in my research career, I have come to see things differently.

Now, I feel the privilege and the power of being different.

I do not think it is random that **I have met more women who are less obsessed with publication counts and more focused on making their research genuinely useful.** It is not random that **I have seen more women driven to *do something* rather than simply *become something*.** It is not random that **many women want to change the game instead of playing by the old rules**. Being a force for change, wanting change, and aspiring for change. **This is powerful**. And it is how we, as women, can bring lasting impact to the world through creativity, insight, and action.

Through my interactions with many women in minority groups, I have come to understanding that being a woman has traditionally meant carrying certain responsibilities at home, often without question. Building a family can mean being the powerhouse of the household, automatically tasked with holding it all together or pausing your career as circumstances arise. Sometimes this means being treated as secondary. Although that may be fair to some extent in certain contexts, my point here is not to debate fairness but to highlight the reality. But

even in this context, I have encountered powerful women who found their way to think differently. These difficulties taught them to manage their time with precision and creativity. And that, I believe, is a privilege: to succeed in multiple arenas, often with limited resources, by optimizing across multiple objectives, and to bring fresh, out-of-the-box thinking into every space we occupy.

Of course, minorities often find their contributions overlooked, their perspectives undervalued, and even their presence questioned. In transport engineering, a sector historically dominated by men, the barriers are not just about numbers. They are about voice, influence, and recognition.

And yet, the industry needs diversity now more than ever. Have we not already tested the same solutions repeatedly? As I recently heard from the one and only Prof. Eric Miller: how many more mode choice models do we need published in journal papers?

Transport systems are for everyone, and designing them without considering the insights of all users leaves dangerous gaps in safety, accessibility, and usability. Women engineers bring unique perspectives, from improving safety for pedestrians and cyclists at night, to designing inclusive public transport that accommodates a woman with multiple children, to analysing data in ways that reflect diverse realities. In doing so, we may finally achieve behaviour change toward more sustainable transport, a question that has lingered in the field for decades.

Let us challenge the stereotypes about what ***"serious" transport*** research looks like. Because when women in transport engineering are invisible, the solutions we design risk being incomplete. It is time to make the invisible visible, for the benefit of our industry and for the communities we serve.

I have not always felt this way about my own work. Something in me always felt different. As much as I loved creativity, art, and colour, I also loved analytical thinking, learning, reading, and contributing to my community. But for years, studying and academia made me feel as though I had to choose one side — the "serious" analytical side — because if one wanted to make a change in the world, that was the side to choose. So I decided to suppress the creative one.

I have always tried my best to create the impact I wanted to see in academia, by exploring new methodologies that brought greater realism to our modelling of human behaviour, within the framework I introduced in my PhD on household decision-making in housing and employment. I continued this effort in my Postdoctoral work, where we aim to better understand cycling needs through behavioural models, and to explore how cities can be designed in ways that inspire people to change. This has been pursued through our large Australia-wide and international academic projects, as well as collaborations with government agencies on active transport modelling.

But it was not until my PhD, working at my own pace and navigating my own challenges, that I rediscovered the power of creativity. I started making presentations my way, no longer confined to the rigid, text-heavy university templates. I began drawing my feelings, often intertwined with my research journey. I remember sketching a "lost soul" (myself) at a conference, surrounded by rigid boundaries and minimal openness to change. I started bringing colour into my figures and tables in publications, and even into theoretical frameworks.

Eventually, I found strength in merging both sides of myself, the analytical and the creative. I remember the day I made a comment to my amazing supervisor, Prof. Taha Hossein Rashidi, with whom I never felt I was treated differently than his other (male) students. I said, "Why does the IATBR News design not look right?" To which he responded, ***"Why don't you design the next issue?"***

And that brings me here, to this sixth issue of the IATBR News, where I have combined my passion for transport research, my commitment to empowering women in engineering, and my love of art, designing this edition using prompt engineering in AI tools like Midjourney, alongside explorations of different design styles. It is a small act of bringing my whole self into my work, ***but one I hope will inspire others to do the same.***

Here is to making the invisible visible!

PS: This is by far my most favourite IATBR News, reading all these powerful articles from powerful women whose strength, I believe, lies not only in the fields they are proudly leading but also in managing everything else, and still emerging as leaders. Reading and preparing this issue has filled me with joy and pride in the strong women of our community. I hope you enjoy it as much as I did!

From Dolls to Discrete Choice

Patricia Mokhtarian's Journey through Math, Models, and Meaning

Interviewee: Prof Patricia Mokhtarian

Patricia Mokhtarian is a Regents Professor and the Clifford and William Greene, Jr. Professor in the School of Civil and Environmental Engineering at the Georgia Institute of Technology. She joined Georgia Tech in 2013, after 23 years on the faculty of the University of California, Davis. Dr. Mokhtarian has specialized in the study of travel behavior for more than 45 years, and has authored or co-authored nearly 200 peer-reviewed journal articles. Key research interests include the impact of telecommunications technology on travel behavior (particularly teleworking adoption and impacts), the influence of the built environment on travel behavior (after accounting for self-selection), attitudes toward travel itself, time use and multitasking, and subjective well-being. She is a past Chair of the International Association for Travel Behaviour Research, and received its Lifetime Achievement Award in 2021. Dr. Mokhtarian was elected to the US National Academy of Engineering in 2024, and serves on the editorial boards of nine journals. Her Google Scholar profile appears at https://scholar.google.com/citations?user=n6JU-CcAAAAJ&hl=en.

This is a photo of Pat's international doll collection. It began in childhood, when her father would fly helicopters in Korea, Vietnam, and all over Central and South America, bringing back dolls and currency for his daughters from each country he visited. Pat added to it over the years, with her own travels and gifts from others.

It was a crisp morning on May 1st, 2025, Sydney time, when I met Professor Patricia Mokhtarian via video call. She appeared on the screen framed by shelves of meticulously organised lecture notes and textbooks, a visual testimony to part of her legacy. The Georgia Tech office she beamed in from radiated warmth and intellect, and I recall thinking, "So this is where the magic of modern travel behaviour modelling happens." As we spoke, her grace, humility, and humour unfolded layer by layer, painting a portrait not just of a leading academic but of a deeply human soul with a remarkable story.

Professor Mokhtarian (henceforth, Pat) is known worldwide for her pioneering work on travel behaviour, particularly in the domains of telecommuting and other ICT impacts on transportation, self-selection effects on travel choices, and the positive utility of travel. But behind these academic contributions lies a tapestry woven from early intellectual passions, strong family foundations, and a quiet, persistent defiance of the expected.

Florida, Algebra, and the Wonder Years

The trajectory of Pat's academic journey can be traced back to a household in Alabama and later Tallahassee, Florida, where love for learning wasn't just encouraged, it was exemplified. Her mother, who would eventually earn a PhD in marriage and family therapy, instilled in her daughters a reverence for education. Mokhtarian's academic acceleration began early. She started school in second grade, skipped another grade later, and graduated from high school and college in three years each. By age 24, she held a PhD. Her love of learning wasn't externally imposed, it was nurtured. Her mother read to her, taught her math, and created a home without a television but full of encyclopedias and children's literature, "We didn't have a TV for much of our childhood," she recounts, "but we read. A lot". As a young girl, Pat wasn't subjected to lectures about discipline or drilled with equations. Instead, she was read to until she could read for herself

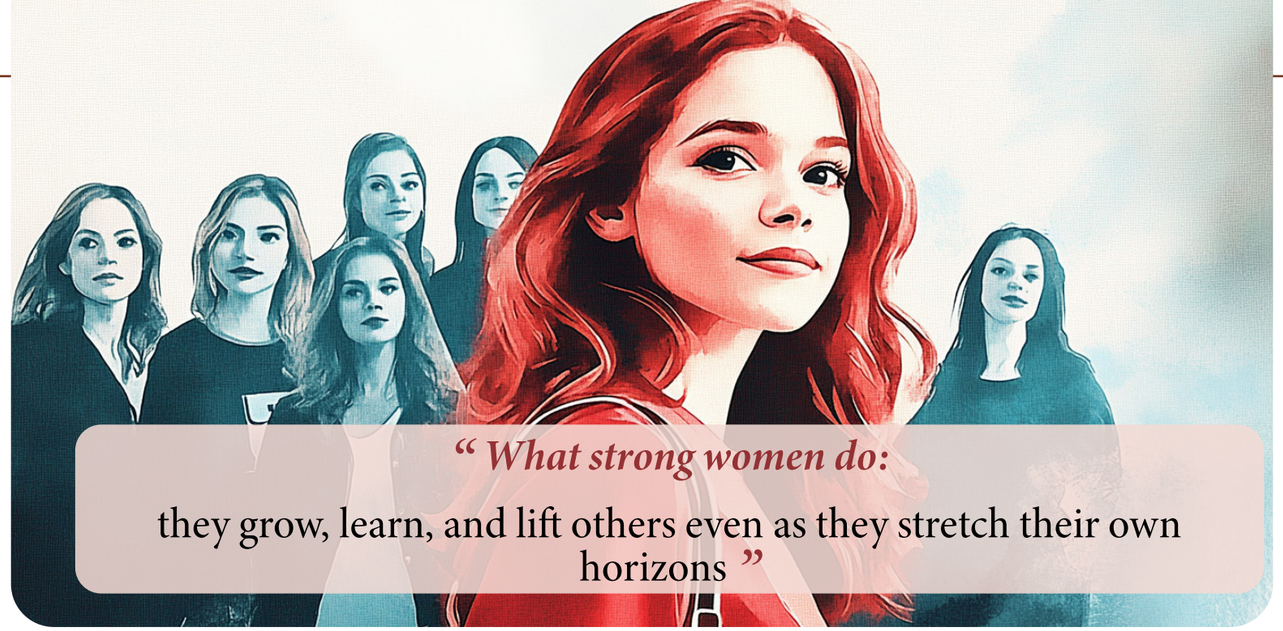
at an early age, invited to a feast of ideas from which she was encouraged to choose those that excited her, and surrounded by a culture of inquiry and shared chores.

Her father, a U.S. Army helicopter pilot, introduced her to the world as something to be navigated, setting the entire household in motion through the duty station reassignments every 18 months or so that were common at the time. These took the family to multiple stays in Virginia and Alabama, a year in Mississippi, and three years in the Panama Canal Zone. As mentioned, her mother – with the approval of the family – eventually obtained a doctorate in marriage and family therapy, a choice that Pat believes stimulated her own interest in human behavior. During her mother's doctoral studies at Florida State University (FSU), Pat and her two sisters lived with their mother in Tallahassee, while their father remained at his job in Alabama – with lots of weekend trips back and forth. Pat started college at FSU in her mother's last year of study, and remained at FSU after the family reunited in Alabama. "I didn't leave home," she jokes, "home left me" – at the tender age of 16!

Her mother's example was a critical lesson in what strong women do: they grow, learn, and lift others even as they stretch their own horizons. From that point on, Pat always assumed that she, too, would obtain a PhD.

From Math to Movement: The Birth of a Research Identity

Mathematics was an early and natural love. Influenced by a stellar eighth-grade algebra teacher and convinced by someone she does not remember, who pointed out that **"from math you can go anywhere"**, Pat had decided to major in math. But while math offered beauty and structure, its abstract ends didn't fully satisfy her. "My uncle is a pure mathematician, still writing papers in his 80s. But unlike him, I suspected I wasn't cut out to prove theorems for a living. I loved mathy stuff, I just wanted to apply it."



Here enters one of the delightful ironies of her path: while contemplating the prospect of graduate school, it was her father, a military man, who pointed her to operations research (OR), a discipline once described as math's nerdier, more practical cousin. After researching OR programs, Pat chose Northwestern University for her MS and PhD, partly for the program, and partly, she confesses with a smile, "to finally experience winter."

And experience winter she did. "Six Chicago winters later," she laughs, "California started looking pretty good."

But it was during those freezing Northwestern years that something clicked. Living without a car in a big city, navigating a real public transportation system for the first time, **Pat grew curious: how did cities plan for this? How did people choose when and how to travel? What made someone take the bus, or choose to work from home?**

She tiptoed from OR into civil engineering, taking a transportation course with cautious curiosity. The first class was rough, transport policy being an alien world to a small-town Alabama kid, **but then came the modelling classes: linear programming, discrete choice, and demand models. "And that was it," she recalls. "I was hooked. This was math, but applied to something endlessly fascinating – human behaviour."**

Travel Behaviour, From the Heart Outward

Over the decades that followed, Pat Mokhtarian helped shape the landscape of travel behaviour modelling. Her work explored not just how people travel, but why they travel, a distinction that, for her, has always mattered. It wasn't just about traffic flows and route optimisations, but about values, emotions, self-selection, and the often overlooked joys of movement.

She was among the earliest scholars to explore the positive utility of travel, the idea that people don't just travel to get somewhere, but sometimes travel because they enjoy it, and/or at some level need it for its own sake. It sounds obvious now, but it was groundbreaking at the time. Both earlier and later, her influential work on teleworking helped explain how working from home wasn't simply a logistical choice, but a lifestyle one, embedded in attitudes and identities. Her specialties also echo something more personal: a childhood in motion, a household that prized emotional intelligence, and a mother who was both counsellor and scholar.

Mokhtarian's dissertation and her career focused on embedding attitudinal data into choice models. Long before it was fashionable, she asked: **What if people like to travel? What role do values,**

identity, and emotion play in mode choice and other travel-related decisions? Her work on the "positive utility of travel" transformed an unexamined assumption into a new research frontier.

She was similarly early in exploring teleworking as a lifestyle choice and behavioural phenomenon. Decades before the COVID-19 pandemic made it mainstream, Mokhtarian was modelling why people opt to work from home and how this influences residential location and commuting patterns. Her framing of residential self-selection challenged urban planners to account for underlying preferences, not just observable behaviours.

Near the end of her PhD studies, Mokhtarian interviewed for several academic positions, but received no offers. In retrospect, she believes that was for the best, as her inexperience and timidity at the time would probably not have led to success . After a one-year postdoctoral position at the University of California, Irvine (which she accepted sight unseen), what followed were, in her own words, her "eight lost years", a period she spent in regional planning and industry, largely out of the research world she had long loved. But calling them "lost" is perhaps too harsh. During this time, she honed skills in writing, collaboration, and real-world application that would later enrich her scholarship. When she finally re-entered academia, she did so with a matured perspective and a renewed clarity of purpose, merging her conceptual prowess with the grounded pragmatism she had developed outside the ivory tower.

Among her greatest strengths is conceptual integration, transforming scattered observations into structured insights. **Her most cited papers often don't offer new data, but new ways to think.** For Mokhtarian, theory is not a luxury; it's a form of care. It gives meaning to measurement and coherence to complexity. These are not just technical breakthroughs; **they reflect a scholar trained to see the individual behind the data.** What distinguishes Mokhtarian's contributions is not just what she studied, but how she saw. In a field often consumed by metrics, she consistently asked: **What matters to people? Why do they choose as they do? And how can models reflect the full spectrum of human experience?**

Much like her mother's trust in her daughters' potential, Mokhtarian's advisor, Frank Koppelman, offered space and seriousness. His mentorship was rigorous but never gendered. She felt recognised not as a promising female student, but as a promising scholar, full stop.

His mantra, "Let's try both and compare," reflected not only intellectual openness but a refusal to settle. Under his guidance, Mokhtarian developed tools to quantify attitudes, shape surveys, and link discrete choice with real-world nuance. Together with Kellogg School of Management collaborators, she helped bring marketing insight into transportation—a synthesis that now underpins much of the field's attitudinal research.

Mentorship and Memory

Meeting Pat, even virtually, felt like entering a sanctuary of scholarship. The walls behind her weren't just decoration; they were legacies. Each course notebook, each thesis represented the students she has guided, many of whom have become leaders in their own right. She is a model not just of academic achievement, but of mentorship.

For young researchers, especially women, Pat's story offers several lessons. First, that intellectual life can begin anywhere, even in small towns without snow. Second, that it's possible to pivot, explore, and fall in love with new disciplines, even in graduate school. And third, that caring deeply for people, for ideas, and one's students is not just compatible with academic rigour; it's its most enduring foundation.

Indeed, her caring nature isn't performative; it's rooted in the family ethic she grew up with: contributing to the household maintenance, helping to raise each other, and always taking the time to read. When Pat says, "I'm the perfect product of these two people, one who loves to travel, and one who loves understanding human beings," it isn't just a clever tagline. It's a deeply accurate summary of her life's work.

A Gentle Subversion of Stereotypes

While Pat's resume includes titles, awards, and high-profile roles, her demeanour remains delightfully unassuming. She defies the stereotype of the isolated academic. She's a traveller, a reader, a conversationalist. And she brings humour into serious spaces.

She once joked that while her father thought he was getting his wife back after her PhD, he instead got a more liberated version, fresh from years of feminist theory and social research. "I think he expected a better-educated wife. What he got was... a woman who expected to be treated equally with men." She went on to say, though, that while reunification of the household

afterwards was not without its challenges, her parents' steadfast faith in God was the bedrock of the family and of their love for each other – a love that lasted beyond 63 years of marriage.

And while her uncle's mathematician mind "floats among the clouds," Pat chose the grounded route, discrete choice models over abstract theorems, conversations with students over solitary proofs. Even the way she entered transportation, as a pedestrian, a small-town Southern girl absorbing Chicago with wonder, suggests a researcher grounded in lived experience.

Championing Community: Patricia Mokhtarian and IATBR

Pat holds the International Association for Travel Behaviour Research (IATBR) close to her heart, not just as a scholarly community, but as a professional home. Over the years, she has played numerous roles within the association, including serving on its board, chairing it (preceded by the vice chair/chair-elect role), and contributing to conference planning. She values IATBR for its deep-rooted collegiality and intellectual openness, describing it as a rare space where methodological rigour meets genuine warmth. For Pat, the triennial conference is not just an academic event, but a family reunion of sorts, where emerging researchers are welcomed and long-time colleagues reunite to share ideas, laughter, and the occasional debate over model specification. Her commitment to IATBR reflects her broader academic ethos: community matters as much as contribution.

Pat's story is more than inspiration, it's a roadmap.

Follow your curiosities, don't fear a pivot, be rigorous but remain human, and surround yourself with people who uplift you, whether it's family, mentors, or students.

Because sometimes, the most profound journeys begin not with a map, but with a simple question:

Why do we go where we go?

For the Next Generation in the Age of AI

In recent years, Pat has experimented with generative models, acknowledging their power and convenience, but raises important concerns about their implications for intellectual independence. **She worries about a future in which ideas are pre-packaged, and researchers become curators rather than creators.** Her emphasis remains on cultivating the skills that AI cannot easily replicate: deep thinking, conceptual integration, and ethical discernment. She warns of over-reliance on generative tools, fearing the erosion of "mental muscle" and critical thinking. Instead, she champions **"reading widely, thinking deeply"**, a motto she shares with her students, echoing the spirit of intellectual discipline she inherited from her mother.

For her, true scholarship lies not just in computing results but in composing meaning.

For young women contemplating a career in academia or transportation modelling, Pat's story is more than inspiration, it's a roadmap. Follow your curiosities, don't fear a pivot, be rigorous but remain human, and surround yourself with people who uplift you, whether it's family, mentors, or students. Because sometimes, the most profound journeys begin not with a map, but with a simple question: Why do we go where we go?

And if you're lucky, you might just end up modelling that question for a living, in an office filled with books, memories, and a bit of Georgia Tech sunlight .

An Interview with Professor Elisabetta Cherchi

How Serendipity, Stubbornness, and Science Shaped a Global Transport Leader

Not all academic journeys begin with grand dreams or a master plan. Sometimes, they start with a bit of chance, a dash of courage, and a whole lot of heart. Professor Elisabetta Cherchi, or Beba to her friends and colleagues, didn't plan to become a leading voice in transport behavior. But with each opportunity she seized, Beba carved out a trailblazing path that now inspires researchers worldwide.

In an illuminating and heartfelt interview in April 2025, Beba opened up about growing up in Cagliari, navigating academic systems in Italy, Denmark, and the UK, and her steady climb from a local engineer to a central figure in the International Association for Travel Behavior Research (IATBR). Her story, marked by resilience, humor, and an infectious curiosity, serves as a masterclass for aspiring researchers, especially young women, on building a meaningful and international academic life.

It Wasn't Love at First Sight

Beba's path into transport was anything but linear. Growing up in a non-academic family but highly educated family, with a doctor father and a lawyer mother, and two sisters in Sardinia, education was valued and almost taken for granted; however, a university career was not considered. No one around her was an engineer, and no one in her circle was in academia. But Beba had one clear idea: she wanted independence. Engineering, she reasoned, would give her the tools to stand on her own.

Still, transport engineering didn't exactly ignite early passion. "It wasn't love at first sight," she laughs. "It was a love that grew." Her entry into transport was serendipitous: Professor Italo Meloni proposed her to do a final dissertation in the field. From that invitation, a new world opened—and she never looked back.

Interviewee: Prof Elisabetta Cherchi

Elisabetta Cherchi is Professor of Civil and Urban Engineering at New York University Abu Dhabi and Associate Faculty of Civil and Urban Engineering at the New York University Tandon School of Engineering. Prior to joining NYUAD, she was Professor of Transport at Newcastle University in the UK (2016-2024), Associate Professor at the Technical University of Denmark (DTU) (2010-2016), and Assistant Professor at the University of Cagliari, Italy (2004-2010). She has also been an Adjunct Professor at the School of Economics and Management, Beijing Jiaotong University, China (2018-2024) and Contract Professor at the Department of Transport, Polytechnic University of Madrid, Spain (2010).

Elisabetta Cherchi is the past Editor-in-Chief of Transportation Research Part A: Policy and Practice (2019-2024), past Associate Editor of Transportation (2013-2018), and member of the editorial boards of several journals. She is the Chair of the Steering Committee of the European Association for Research in Transportation (hEART), past Chair of the International Association for Travel Behaviour Research (IATBR), as well as past Secretary and Treasurer of the IATBR. She is also a member of the Board of Advice at the Institute of Transport and Logistics Studies (ITLS), University of Sydney Business School, Australia, and a member of the Advisory Board at the Department of Electronics, Information and Bioengineering, Polytechnic University of Milan. Italy.

Cherchi's research and teaching interests are in modelling transport consumers' behaviour and decision process, with particular reference to discrete choice analysis. Her interests includes data collection (including the use of immersive virtual reality environments), demand modelling, demand forecasting, and user benefit evaluation. Applications span from the typical problem of mode choice, with the goal of promoting sustainable mobility, to transport innovations such as the adoption of electric mobility and automated vehicles.

Seizing Opportunities, Saying Yes

If there's a recurring theme in Beba's story, it's her incredible instinct for recognizing opportunity and embracing chances. She does not look for challenges but never walked away from them. When Professor Meloni encouraged her to pursue a PhD, she agreed, despite Italy's lack of a strong doctoral culture at the time. When she was offered the chance to study in Chile under Professor Juan de Dios Ortúzar, she accepted, despite not knowing a word of Spanish.

In fact, language was one of Beba's early hurdles. "When I started my PhD, I knew maybe three words in English," she recalls with a smile. Armed with a vocabulary list and determination, she dove into English and Spanish simultaneously, even taking courses in English while doing her PhD research in Spanish and Italian. **Her willingness to embrace discomfort became her superpower.**

The Quiet Power of Mentors

Throughout her career, Beba credits incredibly generous mentors with much of her growth. Professors like Italo Meloni in Cagliari pushed her to think bigger and go international. Juan de Dios Ortúzar in Chile helped shape her thinking not only technically (in behavioral modeling) but as a human being and a young scholar navigating life that, as Juan de Dios own PhD supervisor used to say, 'is not linear'. Later, interactions with global figures like Hani Mahmassani continued to shape her research and leadership approach.

But perhaps most impressively, Beba never idolized these mentors from afar, she built relationships, asked questions, listened deeply, remember the advices and try to put them into practice and made making herself visible in global forums. She emphasizes to young scholars: **"Choose your community, be present, show up with your best work, and keep showing up."**

Women in Academia: The Cultural Challenge

Beba's reflections on gender in academia are honest and nuanced. In Italy, she saw many brilliant female students drop out of academic tracks, not for lack of talent, but due to cultural expectations and family obligations. "The issue isn't ability," she notes. "It's mobility—and often, whether families, in a broad sense, are willing to support that mobility."

She's also observed a pattern of hesitation among women in academic leadership: "Men put them forward. Women say no even when invited, because they feel they cannot dedicate to the task the time it requires to do it properly." Her advice? **Don't wait, you will never feel ready. Step in. Say "yes". Do your best, and this will be often more than enough.**

IATBR: From Member to Architect of Change

Beba's relationship with the IATBR began in 2003 at the Lucerne conference. "It became my family," she says. Over the years, she served as secretary, treasurer, vice-chair, and chair—each role building the infrastructure for others to succeed.

One of her proudest contributions? Solving a long-standing issue with the international banking systems to create a sustainable financial structure for future leadership. "It wasn't glamorous," she admits, "but it was necessary—and I'm proud of it." Being the first female Secretary/Treasurer of the association is also something that she values!

Research Highlights and Academic Freedom

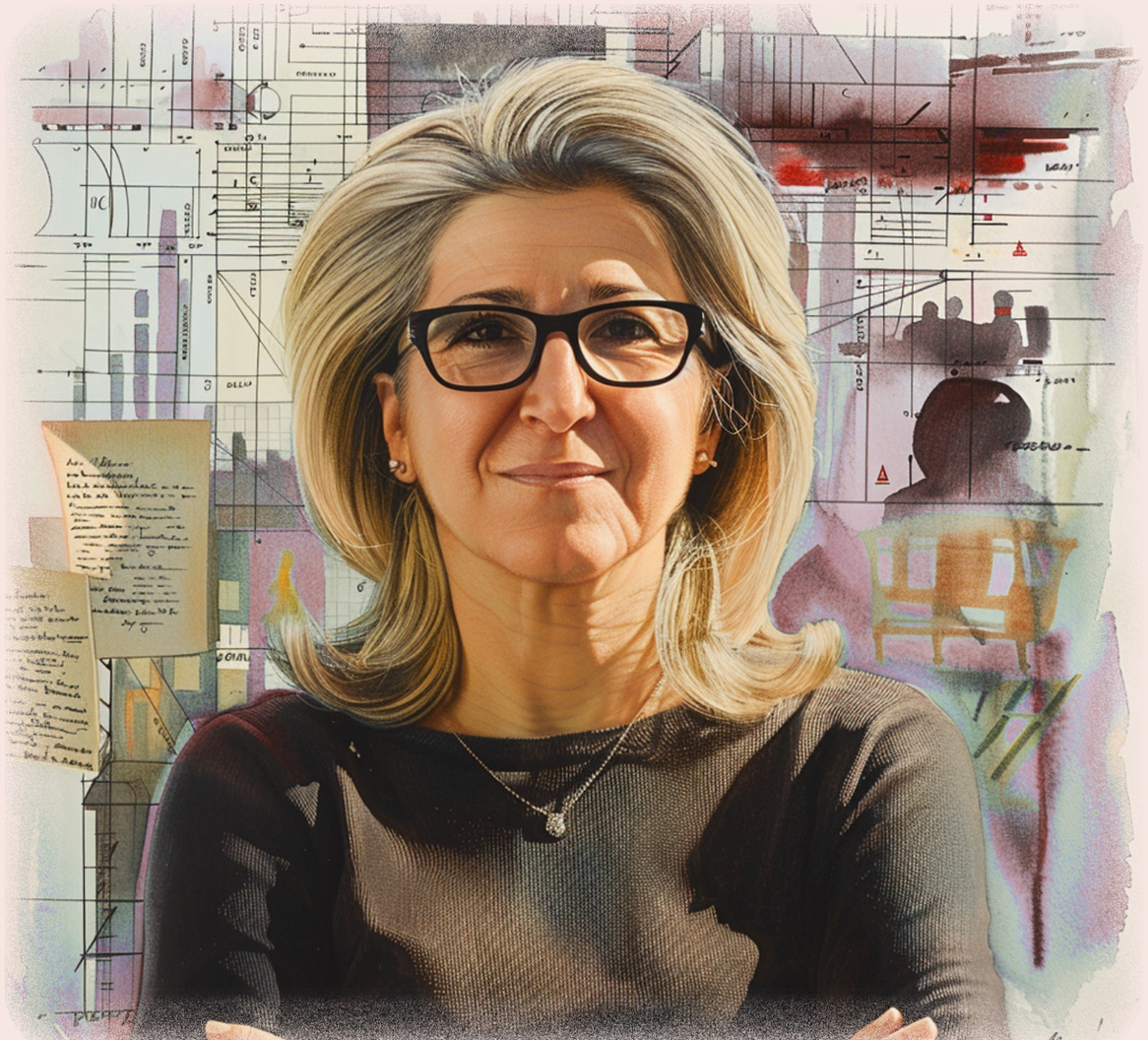
Beba's research journey has been marked by pivotal moves: from Cagliari to Santiago in Chile to Imperial College London, back to Cagliari to move again to DTU in Denmark, to Newcastle University, and now to NYU Abu Dhabi. Each transition, she says, offered new great opportunities.

She's particularly proud of her work in virtual reality and discrete choice modelling, including a paper that now boasts over 700 citations[1]. Her project on electric vehicles at DTU opened new data-driven avenues. "Sometimes the most valuable thing is simply getting access to great data—and knowing what to do with it."

Inspiration in Every Step

From a reluctant traveler to a global thought leader, Beba's story is a testament to what happens when you combine grit, humility, and an open heart. She didn't plan to become a pioneer in transport behavior. But she showed up, did the work, and inspired others along the way.

To the next generation of researchers, especially women: the door is open. You don't need to have all the answers. Just be present, say yes to chances, and let your curiosity lead the way.



On Being Present, Persistent, and Passionate

When asked what advice she would give young researchers, Beba doesn't hesitate: "Be persistent. Choose your community. Be present. Not just once but over and over. People notice when you're committed." And the second advice: "do what you are passionate about and be passionate about what you do", it makes a whole of difference!

For her, being part of a global scholarly community isn't just about publishing—it's about forming human connections. Whether it's discussing ideas in workshops or solving practical problems in association management, she believes being consistent makes all the difference.

The Future Is Now

As for the future of transport behavior research? Beba is optimistic. Collaborations with neuroscience are growing. Artificial intelligence offers exciting potential. Technology availability allows venturing in new territories. "We're not in a phase of radical discovery right now, but we're consolidating—and laying the groundwork for the next leap."

What excites her most isn't the technology—it's the people. The sense of community, the friendships that span continents, the shared passion for making the world move smarter. "We have something special," she says. "Not all academic fields are blessed by this incredible smart and friendly community or have this kind of camaraderie. Let's protect it."

An Interview with Liz Ampt:

The Accidental Transport Revolutionary Who Changed the Way We Design Surveys

Interviewee: Liz Ampt

Liz is an internationally recognised specialist in the field of behaviour change, behavioural insights, community engagement and data collection with 23 years of experience in designing and evaluating programs and strategies that bring understanding and measure travel behaviour. She is currently director of Concepts of Change, a consultancy specialising in voluntary behaviour change.

She has used her community engagement and communication skills in behaviour change programs in diverse cultural and language situations (e.g. US, UK, Chile, urban and regional Australia) to design programs that recruit and bring about change in areas as diverse as reducing car use, water use, waste diversion and pollution of waterways.

She is also a specialist in survey design and has co-authored several books on the subject.

She is the recipient of several awards including the World Technology Award for Transportation from World Technology Network and The Economist for the development of Travel Blending, the South Australian Premier's Award for Sustainability (2008) for leading a project in Adelaide which reduced kms among participants by 18% while the control group increased kms by 6% and the National Keep Australia Beautiful Award for Community and Environment (2008) - for reducing car use by 12% in 11,000 households in the Australian Capital Territory.

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It's not every day you meet someone whose career sounds like a delightful mix of serendipity, intellectual curiosity, and a touch of rebellious spirit. But Liz Ampt is no ordinary transport scholar. In fact, she'd be the first to tell you she's not an academic at all—**she never pursued a PhD, and yet, she reshaped the field of travel behaviour research in ways even the most decorated scholars can only dream of.**

Our conversation meandered through decades of transport history, wild conference adventures, and a philosophy that boils down to one core idea: "Helping people help themselves." From introducing a ground-breaking approach to travel surveys to revolutionising how we think about voluntary behaviour change, Liz's journey is as entertaining as it is inspiring.

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From Vienna Secretary to Transport Pioneer

Liz's career didn't begin in transport at all. In fact, in the 1970s, she worked as a secretary in Austria, typing reports on energy scenarios for five countries at a castle outside Vienna. And as she humorously recalls, she may have been typing, but she was also absorbing every word.

Her unexpected entry into the world of transport came upon her return to Australia in 1978, when she applied for a job at the Ministry of Transport in Sydney. "They asked if I had experience in transport," she laughs. "Well, I had done a bit of research on transport... by which I meant I once looked up transport statistics for that energy project in Vienna!" That "creative reinterpretation of experience" got her the job, and the rest, as they say, is history.

Revolutionising Travel Surveys: The Sydney Breakthrough

By 1981, Liz found herself at the helm of the Sydney Travel Survey, despite having little formal background in surveys. But she had an asset more valuable than experience: **curiosity**. Instead of pretending to know it all, she sought help from the Australian Bureau of Statistics and collaborated with Peter Jones, yes, the renowned Peter Jones.

This partnership led to a shift in how travel data was collected. Rather than simply asking people where they travelled, Liz introduced an activity-based approach, asking what they did before and after trips. The impact? A much richer dataset revealing the real motivations behind travel decisions. This change, first introduced in Sydney, has since become standard practice in travel surveys worldwide.

Travel Blending: A Nudge Before "Nudging" Was Cool

By the 1990s, Liz's work was gaining traction, but her real breakthrough came when she and colleague Geoff Rose developed Travel Blending—**a program designed to gently encourage people to rethink their travel habits.**

Instead of forcing people to drive less, the program provided them with personalised feedback: "Hey, we noticed you're driving to the shops every day." Have you considered making a shopping list and going once a week? Simple, right? But the results were extraordinary.

When Sydney prepared for the 2000 Olympics, Travel Blending was implemented as a way to reduce congestion. The data-driven, personalised nudges were effective: participants significantly reduced their car use. The approach was later adapted in other cities, proving that small behavioural insights could lead to meaningful societal changes.

Beyond Transport: The Evolution of Behaviour Change

Liz's work didn't stop at transport. Over the years, she realised that the same behavioural principles could be applied to other areas, such as water conservation and energy use. Working in Australia's Northern Rivers, she applied the Travel Blending philosophy to help reduce potable water use . The key? Instead of lecturing people about the environmental harm of building a new dam, she simply asked: What is it about your water use that you'd like to change?

This shift—from top-down directives to user-driven solutions—became Liz's signature approach. And in a world obsessed with data and modelling, she remains refreshingly human-focused: "The trouble with modellers," she jokes, "is they always want to model."

The Power of Connection: IATBR and Lifelong Friendships

Beyond her research, Liz played a pivotal role in shaping the International Association for Travel Behaviour Research (IATBR). She was Vice-Chair and Chair in the early 2000s, but she's quick to downplay her impact. "Honestly, I don't think I did much," she insists.

Yet, her influence is evident. She helped foster a tight-knit community where young researchers could challenge each other, exchange ideas, and—most importantly—become friends. Unlike today's sprawling, impersonal academic conferences, the early IATBR gatherings were intimate affairs. People stayed together in remote locations, debated for hours, and, in true Liz fashion, ended the nights with a bit of wine and music.

"The friendships we formed back then lasted a lifetime," she says. "It wasn't just about research—it was about connecting as people."

For young researchers, her advice is simple:

- Be curious. "I didn't know anything about surveys, so I asked the Bureau of Statistics. They were thrilled to help."
- Build real connections. "The most valuable thing about conferences isn't the papers—it's the friendships."
- Challenge assumptions. "We thought people would drive less for environmental reasons. Turns out, they were more motivated by their own convenience and health."
- And most importantly? Have fun along the way.

Making Conferences Fun Again

Fast forward to today, and Liz is lending her expertise to the next IATBR conference, set to be held in Sydney in 2027. Reflecting on how conferences have evolved, she notes that they've become too structured and too rigid. "We used to sit in circles, not rows," she recalls. "We debated, we challenged, we stretched our thinking."

Her hope? That Sydney 2027 revives that spirit of collaboration and connection—perhaps even bringing back the legendary IATBR jazz sessions, where transport scholars would ditch their spreadsheets and pick up guitars instead.

Legacy and Lessons for the Next Generation

Liz Ampt may not have taken the traditional academic path, but her contributions to transport research, behaviour change, and community-driven solutions are undeniable. Her career is a testament to the power of curiosity, the courage to admit what you don't know, and the importance of listening to people rather than dictating solutions.

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After all, if Liz's journey proves anything, it's that making meaningful change doesn't have to be boring. It can be as exhilarating as a 1980s Sydney transport revolution, as spontaneous as a career built on curiosity, and as joyful as a room full of transport academics belting out songs over a bottle of wine.

Here's to more conferences with heart, research that truly matters, and a world where transport isn't just about getting from A to B—but about the stories we create along the way.

Travel Behavioral Modeling Research: Reflecting Back and Looking Forward

|| Professor Joan Walker
|| Winner of the 2001 Eric Pas Dissertation Prize

IATBR has been my academic home since my PhD days in the 1990s. Although I didn't attend the 1997 conference in Austin, one chapter of my dissertation was presented there by my advisor, Moshe Ben-Akiva, and published in the conference proceedings. My first in-person IATBR was in 2003 in Lucerne, where I was honored to give a plenary talk as an **Eric Pas Dissertation Prize recipient**—a tradition launched by Kay Axhausen that continues today. That conference was magical: the setting, the people, the exchange of ideas, and the encouragement offered to a young researcher just starting her career. [Picture on next page]

I entered this field because I was captivated by travel behavior and by the belief that improving our behavioral models could tangibly improve people's lives. Most of my research has centered on making models more behaviorally realistic: capturing the rich, messy ways people actually make decisions, rather than forcing rigid, overly simplistic mathematical frameworks.

This orientation is reflected in my PhD. My dissertation focused on advancing discrete choice models to better reflect human decision-making. One key contribution was a generalized framework for specifying and estimating the Hybrid Choice Model (HCM), aka the Integrated Choice and Latent Variable (ICLV) model. The work built on foundations laid by my advisor and his former students, and the goal was to open up the black box of decision making by explicitly incorporating latent psychological constructs like attitudes and values into choice models.

My thinking process has always started with the behavior itself—what real people do and why—before turning to the math and data needed to represent it. This mindset led to another contribution of my dissertation called the Generalized Discrete Choice model. This was a flexible, likelihood-based approach that could integrate many different behavioral specifications (random parameters, latent variables, discrete mixtures, etc.) and multiple data sources within one econometric framework—all in service of greater behavioral realism. Such methodological fusion provides greater flexibility to develop a model that reflects the behavior. In pursuing behavioral realism, I frequently encounter technical hurdles that require methodological innovation. This happened in my dissertation, which led to my third contribution of developing identification and specification rules for the (then-nascent) mixed logit model (aka random parameter model), noting that proper identification was lacking in the literature.

Prof Joan Walker

Joan Walker is the T.Y. and Margaret Lin Professor of Engineering at the University of California, Berkeley, where she currently serves as Chair of the Department of Civil and Environmental Engineering. Her research focuses on travel behavior and data analytics to understand and predict human decision-making in transportation systems, with the goal of improving efficiency, equity, and sustainability in urban mobility.

She received her Bachelor's degree in Civil Engineering from UC Berkeley and her Master's and Ph.D. degrees in Civil and Environmental Engineering from MIT. She has served as Chair of the Committee on Transportation Demand Forecasting (ADB40) for the Transportation Research Board of the National Academies, Director of Demand Modeling for Caliper Corporation, Co-Director of UC Berkeley's Center for Global Metropolitan Studies, and Acting Director of UC Berkeley's Institute of Transportation Studies (ITS). She co-founded the nonprofit Zephyr Foundation working to advance travel analysis to improve society.

Over the years, working with brilliant and fun students and collaborators, I've continued to push for greater behavioral realism and policy relevance. My work has formulated behavioral constructs like value of green, modality styles, and residential lifestyles. I've explored how behavior is influenced by others and evolves through habit, experience, adoption, and disruption.

I've applied these ideas to diverse contexts: mode choice (of course!), residential location, equity metrics, telecommuting, evacuation, freight, and autonomous vehicles (the chauffeur experiment remains a personal favorite). As in my early work, working on the behavior often leads to fun technical challenges, e.g. endogeneity, causal inference, feedback in latent class models, and identification. I've also sought out new data sources (quantified traveler and the San Francisco transit quality study are other personal favorites), methods, and modeling frontiers (LLM anyone?), all driven by the same core mission: to build models that reflect real behavior, so that our work can help make better transportation planning decisions.

As I reflect on my career, I see my own trajectory as a mirror of the field's. We excel at deep behavioral inquiry, methodological rigor, and cross-disciplinary innovation. But we also have blind spots. The same

curiosity about behavior and desire for societal impact that led me into this field now prompt me to question some of our longstanding practices. Why do many of our research questions remain strikingly similar to those posed when I was a PhD student? Why aren't we better at codifying knowledge? Why is our work so bespoke, rather than coordinated to build collective understanding?

In my view, the problem lies in our culture.

Why do many of our research questions remain strikingly similar to those posed when I was a PhD student? Why aren't we better at codifying knowledge? Why is our work so bespoke, rather than coordinated to build collective understanding?

Description: Group photo taken during the 10th IATBR Conference in Lucerne, Switzerland (August 2003), on Mount Pilatus
Front row (L–R): Ryuichi Kitamura, Maren Outwater, Amelia Regan, Srinivas Peeta, Erel Avineri, Ilan Salomon
Back row (L–R): Kostas Goulias, Joan Walker, Hani Mahmassani, Yoram Shiftan, Ram Pendyala
Photo by Patricia Mokhtarian

We reward novelty, individuality, and publication counts, but often undervalue practices that support cumulative progress and societal impact—like open science and benchmarking. These practices, long adopted in fields we draw from, have accelerated innovation and rigor elsewhere. Reproducibility, open data, shared code, direct method comparisons, and benchmark datasets are vital for meaningful progress in travel behavior modeling. This challenge isn't unique to travel behavior. Psychology had its reproducibility crisis and questionable practices have discredited prominent economists and scientists. These fields have embraced approaches to improve their scientific process, which has not only enhanced their scientific rigor but have also increased public trust in their findings.

Interestingly, the IATBR Constitution doesn't mention societal impact as part of our mission. Yet, at a 2024 IATBR Workshop in Vienna, attendees identified **"informing policy and decision-making"** as the primary goal of our field. Fewer than 30% (n=52) felt we were even moderately achieving this. Perhaps it's time to revisit IATBR's mission—and, from there, reflect on the norms, expectations, infrastructures, and processes we've built. What would our impact look like today if we had prioritized transparency, reproducibility, and validation? If we had addressed data privacy and ensured developer credit for shared data and code? Our culture has not emphasized these practices, and it limits our innovation and impact. The public's trust in transportation research (and their willingness to support policies based on our findings) requires that our work be open to scrutiny, replication, and validation.

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IATBR can—and should—serve as a catalyst for a more open, impactful, and rigorous era of travel behavior research, one that truly serves society. I remain committed to advancing this vision—by challenging my own practices and encouraging change within our community. The question isn't whether we can afford to make these changes; it's whether we can afford not to. I look forward to continuing these conversations and making tangible progress together when we gather in Sydney in 2027.

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We reward novelty, individuality, and publication counts, but often undervalue practices that support cumulative progress and societal impact—like open science and benchmarking.

From Travel Behavior Modeling to Discrete Optimization and Back

|| Professor Emma Frejinger
|| Winner of the 2008 Eric Pas Dissertation Prize

Prof Emma Frejinger

Emma Frejinger is a Professor in the Department of Computer Science and Operations Research at Université de Montréal, where she holds the Canada Research Chair in Data-driven Optimization for Transportation and the CN Chair in Optimization of Railway Operations. She earned her Ph.D. in Mathematics from the École Polytechnique Fédérale de Lausanne, Switzerland. Her expertise lies in data-driven methods for solving large-scale decision-making problems under uncertainty. Situated within the broad field of AI, her research focuses on developing mathematical models and algorithms that integrate techniques from econometrics, machine learning, and operations research. Her work has practical applications in transportation and supply chain management, addressing challenges such as demand forecasting, pricing, service design, and scheduling. She serves as an Associate Editor for Transportation Science and the INFORMS Journal on Computing.

A very early memory:
I am sitting at the table when my uncle tells my mother, "You should not give that fragile glass to Emma. If she bites it, it could break in her mouth." My mother insists that I can handle it. My uncle's comment sparks my curiosity: How hard would I need to bite to break the glass?

Now, almost two decades after receiving the Eric Pas Dissertation Prize, you may wonder what that story has to do with this piece intended to describe my path as a researcher. More than strategic planning, I believe what got me here is following my curiosity, enriching my perspective through people I meet, and pushing myself out of my comfort zone. Below, I highlight a few of the many people who have shaped my career and the research topics I have explored. Much of my professional trajectory—and the way I supervise my own students—were influenced by experiences right before and during my PhD.

In the early 2000s, I was an undergraduate exchange student at EPFL in Switzerland with my eyes set on a career in industry. I had never even considered academia until my boyfriend—now my husband—Prof. Etienne Robert, told me he was thinking about doing a PhD. I continued my master's studies. Convinced a PhD was not for me, I even secured a job in industry. But Prof. Michel Bierlaire, who supervised my master's thesis in the Operations Research group ROSO, and Prof. Thomas Liebling, head of ROSO, both gave compelling reasons to pursue a PhD. Liebling's words about how much he loves academia stayed with me: "I get to choose the topics I work on and with whom I work. And I feel young because I constantly interact with younger generations." Convinced, I began my PhD under Michel's supervision, loving every minute of it and wishing even now I could live that experience again. My topic was modeling route choice behavior in transport networks using revealed preference data.

Michel challenged and guided me, introducing me at conferences to his vast network. During my PhD, I began questioning why and how we restricted choice sets when estimating route choice models. I observed that the choice set impacted the interpretation of the models. It led me to work on importance sampling of path alternatives in collaboration with Prof. Moshe Ben-Akiva, who hosted me for a few months at MIT (Frejinger, Bierlaire and Ben-Akiva, 2009). I learned a lot from Moshe who provided an extremely stimulating environment. I had the pleasure of sharing office with several of Moshe's students, some of whom are now Professors Charisma Choudhury, Maya Abou Zeid, and Vikrant Vaze. Social life was rich and discussions blended research with culture, politics, and life choices. I still recall a postdoc telling me, **"Emma, you have to choose. You can't have both an academic career and a family."** Walking home over the Harvard Bridge that night, **I decided it should be possible, and that I would pursue an academic career my own way.**

The IATBR conference in Kyoto in 2006 remains one of the best conferences I have attended. I recall walking the streets in hot and humid August weather while having discussions about research, food and

cultural experiences. One of those strolls was with Prof. Mogens Fosgerau who was aware of our work on the sampling of path alternatives. He questioned why it was even necessary to sample paths. I did not know then, but that discussion was the beginning of a series of works that would be important for my career (Fosgerau, Frejinger and Karlström, 2013).

We began that collaborative research when I worked as a researcher at the KTH Royal Institute of Technology in Stockholm after I completed my PhD. (I did my private defense late 2007 with a huge belly, our first son was born a couple of months later, and in April 2008, I did my public defense, which officially ended my PhD studies.)

As I continued the work on developing prediction models, I was curious to learn more about decision-making. I wondered how we can go beyond policy analysis and use the estimated models to optimize decisions. When Prof. Patrice Marcotte, an expert on bilevel optimization, emailed me about an open position in his department, I applied. I did my interview six months pregnant with our third son. In that state, I thought my chances were extremely thin. Imagine my surprise when they offered me the position.

Although I did not know it at that time, joining the Department of Computer Science and Operations Research (DIRO) at Université de Montréal in 2013 was one of my best professional decisions. The position was associated with a five-year research chair funded by the Canadian National Railway (CN), a major freight railway. I started a research program on railway optimization, which meant a new research area and a different community. I recall that some of my initial attempts were naïve and I feel deeply grateful to my collaborators for engaging in co-supervisions and interdisciplinary work. A special thought goes to my friend and mentor Prof. Bernard Gendron who passed away far too young.

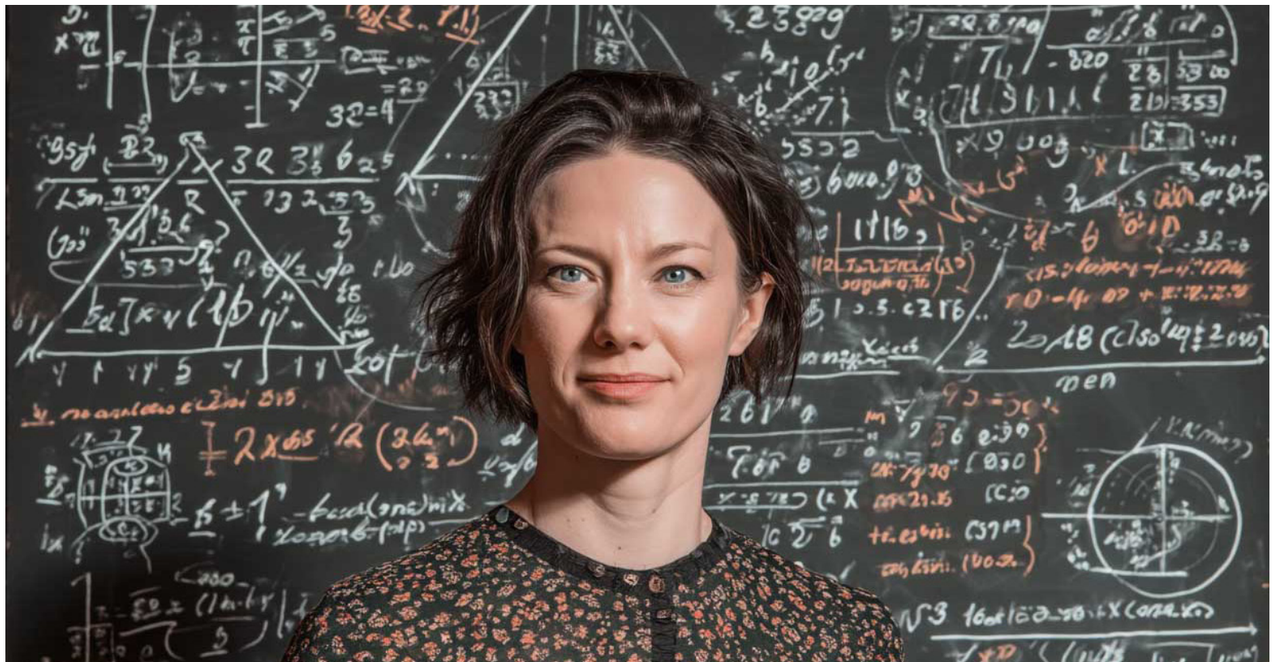
Whereas railway optimization at that time appeared orthogonal to my work on demand modeling, I know now that at the nexus lies an exciting area that can be viewed through the lens of contextual stochastic optimization (Sadana, Chenreddy, Delage, Forel, Frejinger and Vidal, 2025). This is the research topic that I am passionate about today, where we combine methodologies from econometrics, machine learning, and mathematical programming to solve hard decision-making problems subject to uncertainty. Demand models are strongly interconnected with such problems (consider pricing, transport service network design, and facility location). The fact that demand distributions depend on the decisions makes the problems particularly challenging to solve (Frejinger and Hewitt, 2025).

Montreal is a great place to pursue this line of research. Thanks to two well-established and large communities in Montreal —machine learning and operations research—a dynamic ecosystem has developed at the intersection between these disciplines. The machine learning group in DIRO led by Prof. Yoshua Bengio has evolved into an institute—Mila—one of the top machine learning institutes in the world. Another institute, IVADO, that brings together researchers in operations research and machine learning, provides generous funding and connections with industry.

Today, I am a full professor in DIRO, holding the CN Chair in Optimization of Railway Operations and the Canada Research Chair in Data-driven Optimization for Transportation. I am also an Associate Member of Mila. Since 2018, I have worked part-time as a Scientific Advisor for the nonprofit organization IVADO Labs, which develops AI solutions for the supply chain industry. It is exciting to see how working with professional teams helps bridge the gap between state-of-the-art methods and solutions deployed in practice. More recently, thanks to a friend, I was introduced to the legal world through expert work as an Academic Affiliate of Analysis Group. This role challenges my ability to explain technical content to people without STEM backgrounds.

Meeting people with diverse perspectives, learning from colleagues and students, following my curiosity, and embracing unexpected opportunities have made for an exciting path—though luck has certainly played a role. For over a decade, I have been part of DIRO's recruitment committee. As such, I have met many young researchers on the job market. Some feel stressed and want to find the right strategy to get a position. While there is strategy in career building, based on my own experience, I believe in creating your own path, nurturing genuine networks, and following your passion. As time goes by, I have come to appreciate Liebling's words about his love for academia and I feel privileged to work with younger faculty, like my colleague Associate Prof. Margarida Carvalho, who is simply exceptional. As I reflect on what comes next for me, I keep in mind the title of one of Marshall Goldsmith's books, **What Got You Here Won't Take You There**. For sure, I will continue to step outside of my comfort zone.

And the glass? My uncle's comment made it irresistible to test. I remember being surprised at how hard I had to bite to finally break it.



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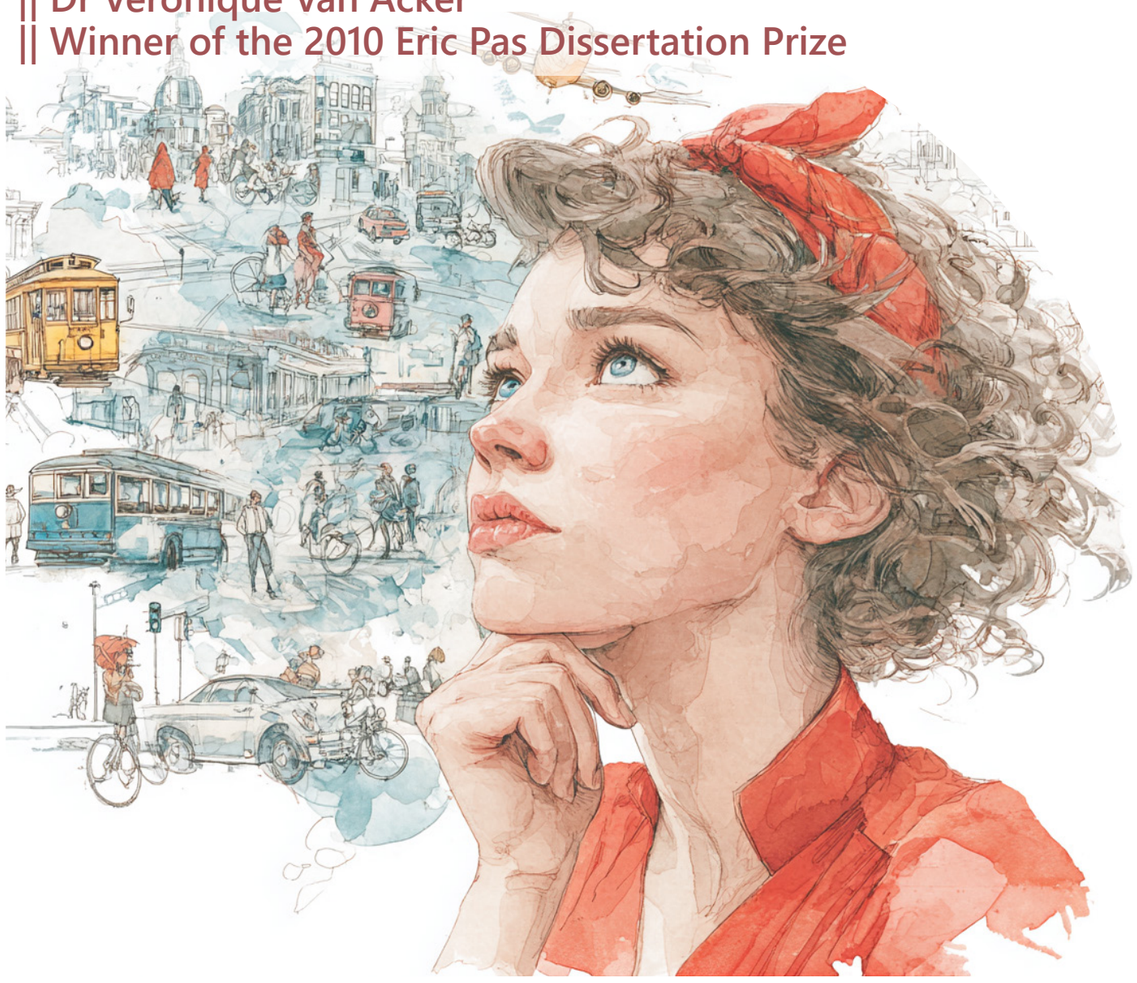
Time, Values, and Travel:

A Personal Perspective on Mobility Behaviour

|| Dr Veronique Van Acker

|| Winner of the 2010 Eric Pas Dissertation Prize



In 2010, I was honoured to receive the Eric Pas Dissertation Award from IATBR for my PhD titled "Spatial and Social Variations in Travel Behaviour: Incorporating Lifestyles and Attitudes into Travel Behaviour-Land Use Interaction Research". That early work established the foundation of my ongoing interest: how space, society, and subjective outlook shape travel behaviour.

1. PhD & Early Foundations

My dissertation combined large-scale travel survey data with social variables—not just income, gender and household structure but also personal attitudes and lifestyles—to analyse how urban form and social position jointly influence mobility patterns. It advanced the argument that travel may be quantified, but is socially embedded: mobility reflects underlying norms, desires, values, constraints, and capabilities.

Dr Veronique Van Acker

Veronique Van Acker is a Research Scientist at the Luxembourg Institute of Socio-Economic Research (LISER, since 2016) where she formerly headed the research theme 'Living with urban dynamics' of the Urban Development and Mobility department. She is also a Guest Professor at the Department of Geography of Ghent University (since 2017) where she teaches courses on Spatial Analysis. Before joining LISER, she has worked as an Assistant Professor in Urban Studies at the University of Amsterdam (2013-2016) and as a postdoctoral researcher at Ghent University (2010-2016). She obtained her PhD in Geography from Ghent University in 2010. Her PhD has been awarded the Eric Pas Dissertation Prize 2010 by the International Association for Travel Behaviour Research (IATBR), the BIVEC-GIBET PhD Award 2011 by BIVEC-GIBET, and the Mercator-Ortelius Prize 2014 by the University of Antwerp. She also received the Fred Burggraf Award 2015 by the Transportation Research Board for her conference paper on lifestyles and travel behaviour, as well as the PSLUT Best Paper Award on Sustainable Land-Use/Transport Solutions 2010 by the European Transport Conference for her conference paper on objective and spatial influences of modal choice.

Veronique has been a visiting research fellow at the University of Sydney (with Prof. Dr. Corinne Mulley, 2015), University of California at Davis (with Prof. Dr. Patricia Mokhtarian, 2008), and Delft University of Technology (with Prof. Dr. Bert van Wee, 2006). Her research interests include the interaction between the built environment and travel behaviour, lifestyles and attitudes across generations, how early experiences affect travel habits, travel satisfaction and subjective well-being, "hybrid" accessibility, and the role of digital activities like telework and e-shopping. Her research has been published in leading academic journals such as the International Journal of Sustainable Transportation, Journal of Transport Geography, Transportation, and Transport Reviews. She is currently coordinator of the Horizon Europe project WinWin4WorkLife (2024-2027), a consortium of 15 partners studying the social, economic, and spatial effects of remote work arrangements in urban, rural, and cross-border regions.

A key milestone in my PhD work was the conceptual paper published in Transport Reviews, **"When transport geography meets social psychology: toward a conceptual model of travel behaviour."** This paper continues to resonate: even today, researchers reach out to discuss its framework. It placed daily travel behaviour within a hierarchy of choices, ranging from long-term lifestyles to decisions about daily activities. It bridged spatial analysis with attitudinal and psychological constructs, introducing a more nuanced explanatory model of mobility that moves beyond merely objective factors. Important in writhing this paper was not only the guidance of my two supervisors (Prof. Frank Witlox, Ghent University; Prof. Bert van Wee, TU Delft), but also the conversations I had with Prof. Patricia Mokhtarian (then affiliated with UC Davis). I still remember how, as a young PhD researcher working at the Department of Geography at Ghent University (Belgium), I decided to reach out to "the great professor from the U.S.A." with this tremendous expertise in travel behaviour. No one from our department attended conferences like TRB or IATBR (as geographers we were more likely to go to the AAG), and our research group was practically unknown to the transportation world at that time. To my great surprise, Prof. Mokhtarian replied to my email and even made time to discuss my paper during TRB, which I attended for the first time in 2007. This conversation at TRB even led to a short research stay with her at UC Davis later during my PhD.

2. Subjectivity and Lifestyles

Building on my PhD research, I broadened the focus in my early postdoc years to include mismatch between objective characteristics of the built environment (e.g. density, diversity, accessibility) and people's perceptions of this objective reality. I presented some early work on this during the first WSTLUR conference in 2011 in Whistler (Canada), where I met Prof. Corinne Mulley (University of Sydney). Since then we have been studying how travel attitudes and spatial perceptions changes (or not) throughout someone's life course and earlier experiences. Furthermore, we noticed that there are numerous studies on travel attitudes and spatial perceptions, but everyone uses their own set of survey questions. Over time, we have now conducted two online surveys with the same set of questions in Sydney (Australia) seeking to determine stability in attitudes and perceptions and develop a validated scale for measurement.

I also continued investigating how individual values and lifestyles shape travel behaviour, even when objective spatial variables like density, diversity and accessibility suggests other patterns – emphasizing the need to integrate lifestyle variables into transport models. This work earned me Fred Burggraf Award at the 2015 TRB Annual Meeting in Washington D.C., for my paper titled "Lifestyles and Modal Choices: Defining, Measuring and Using the 'Lifestyle' Concept.

3. Travel Satisfaction and Well-Being

I worked for a long time (from 2004 until 2016) at Ghent University (Belgium), first as a teaching and research assistant and later as a postdoctoral assistant. During that time, I was also involved in writing project proposals. One of the most important ones, for which I fully developed the research idea building upon my doctoral research, was the Going Soft project, funded by the Flemish research agency FWO. This project focused on how lifestyles, residential self-selection, and subjective well-being influence the interaction between the built environment and travel behaviour. It delved deeper into how travel experiences determine travel satisfaction and subjective well-being. In this project, I mentored Jonas De Vos, now an Associate Professor at University College London and considered one of the leading experts in the field of travel satisfaction. Together with him, we expanded transport research to the domain of subjective well-being.

More recently, continuing this work on how travel experiences influence someone's travel behaviour, with Yannick Cornet (University of Žilina, Slovakia), I explored the worthwhileness of travel time. Our study in Transportation Research Part A showed how travellers perceive the utility of travel time differently (e.g. productive, relaxing, necessary for fitness/health) and how this significantly impacts mode choice and satisfaction. **It underscored that travel duration alone does not explain choices—travel quality matters too. Travel time is therefore not always wasted.**

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4. My most recent work: Hybrid Mobilities

Most recently, I have engaged as a project coordinator in the Horizon Europe project WinWin4WorkLife (https://winwin4worklife.eu/), which investigates telework and the hybridization of daily life. Together with 15 partners, we are examining social, economic, and spatial impacts of telework in urban, rural, and cross-border areas. This research extends my earlier travel behaviour focus, addressing how digital opportunities and constraints are reshaping spatial mobility and accessibility in a hybrid world. We are currently collecting data from employers and employees using surveys, time-use diaries, and interviews in five case studies in Europe. These new datasets will enable us to make recommendations on how to create healthy, inclusive, and sustainable remote work futures.

In summary, my research journey began with a focus on how spatial and social structures shape travel. Over time it extended into the realms of subjectivity, satisfaction, quality, and digital physical integration, always anchored in real world equity and accessibility concerns. Thank you again to IATBR for recognizing my early work—and for fostering a research community that values interdisciplinarity, societal relevance, and insight driven policy.

I look forward to continuing the conversation—and to contributing further to behavioural transport research grounded in the lived realities of space, society, and changing technological landscapes.

CLEARING THE TRACK

Some reflections on understanding and improving women's careers in transport studies

|| Dr Chiara Calastri
|| Winner of the 2017 Eric Pas Dissertation Prize

Dr CHIARA CALASTRI

Dr Chiara Calastri is an Associate Professor at University of Leeds, UK. Her research focuses on Choice Modelling and Transport Economics. Her theoretical and applied contributions have focused on modelling the impact of social influence and time use on travel behaviour. She is the winner of the 2017 Eric Pas Award. She is currently working on large-scale projects on demand-responsive transport and tackling car dependency in Leeds. She has contributed to projects for the Department for Transport, Great British Railway, Rail Safety & Standards Board and the World Bank. She is a member of a UK government advisory panel on modelling and appraisal methods and the Treasurer of the International Association for Travel Behaviour Research.

In recent years, I have become interested in accessibility in transport. The traditional narrative revolves around the idea that people in a wheelchair are a problem to work around, a challenge to solve. More sensible approaches acknowledge that they are just as worthy a demand segment as others, and if they cannot get on the train, it is the system that is unfit for purpose, not them. Being a woman in a male-dominated sector like transport is a bit of the same thing. It's not that we are not good enough; it's just that we operate in a system that wasn't built for us and has only recently started to open up, providing sufficient examples of how to navigate it.

I have hence decided to deviate from the original assignment for this piece (presenting my achievements), trying instead to unpack some unpleasant feelings and share some experiences as a woman in travel behaviour research. My experience of this journey was as a European white woman, and hence different (and easier) than that of many others, but I hope that some of this still resonates and applies to other women and offers some useful insights.

During my PhD, I tackled a (quite disparate) set of modelling challenges, from discrete-continuous problems to inter-intra heterogeneity and consideration sets. I have presented the work at many conferences, practising till late at night until I was as ready as I could be, but worrying just as much about how my hair or my shirt looked as whether the equations on the slides were correct. I sometimes did not approach colleagues or ask questions for fear of looking like a "silly woman". There were many things I used to worry about, and I sometimes wonder whether those concerns were shared by my male colleagues.

Even being asked to write this piece triggered the impostor syndrome that I have felt so acutely for many years, making me question why I was asked to write, if there had been some kind of mistake.

These might seem minor things, but they add up and create deep-seated insecurities that can affect careers. It's important that our female students and early-career colleagues can access knowledge and support to avoid missing opportunities. One

thing that really mattered to me was the recognition and kindness of female senior academics. In 2014, when I had barely started my PhD, Joan Walker took the time during a hectic hEART conference to listen to my half-baked ideas that probably made little sense at the time, but showed genuine interest and offered suggestions. Maria Borjesson, Charlene Rohr and Doina Olaru shared such genuine and positive feedback, even if briefly, that I remember vividly as a surprise, a moment when I thought "apparently it was actually good!" There is something empowering when positive feedback comes from a woman; you can be generally reassured that there are no ulterior motives, and sisterhood is powerful in a world that instils rivalry among girls since childhood.

While many struggle with confidence, the challenge is much greater for women with young children, caring responsibilities or disabilities. Plenty of data shows that the percentage of women steadily decreases on the way up the academic ladder. While some of the issues are structural (e.g. less medical research on conditions prevalent in women), it is still possible to provide adjustments and support to a great extent. Good-quality counselling, spaces to share with peers and mindful supervision are important. Flexibility and willingness to accommodate what may look like complex needs, and accepting that someone who cannot put 130% in their work might still make our field better, is something we must get more used to.

Like in all male-dominated disciplines, the issue of accessing the profession and building confidence is only one side of the problem, the other being the subject matter our work is focused on.

If those who decide on the research to be funded and prioritised are predominantly (white) men, the issues we focus on will be those they experience, and feel are more relevant. There is no big conspiracy or ill-meaning, just a natural experience bias. This explains the disproportionate amount of research on commuting by car and the lack of contributions on mobility of care and complex trip patterns. Yet most of the topics our community studies have important gender aspects.

The two core topics of my PhD thesis were time use and social interactions. Time use is a key topic to understand travel patterns and schedules, and we know that these differ substantially across genders, with men doing more work and leisure, and women spending more time on household tasks and escorting dependents. In a chapter of my thesis, which stemmed from a visiting period in Chile working with the wonderful Juan Antonio Carrasco, we looked at how social capital can affect time use, finding that women who had more support from others spent more time studying. Understanding these patterns can help us design interventions aimed at improving equity. Yet, if included, gender is generally treated as another control variable in our models, and we are content to simply accept that "women prefer cycling less than men" or "women do not like to walk at night". I do not like this phrasing very much.

In a work-in-progress paper with Leeds colleagues Thomas Hancock and Panos Tsoleridis, which I have presented at BTR in August 2025, we find that travel patterns of men and women differ, but those of women without children are more similar to men's. This is in line with national statistics showing that commuting distances are similar in men and women up until their 30s, and then women's reduce drastically, although recent research has shown that the gap persists even in single women without children. Much is left to be understood, and to do so, we need to bring this aspect to prominence in our research and policy-making. As women, we can bring much of our understanding from lived experience into our work, and involve our male colleagues so that they can acquire new perspectives and counter the established experience bias.

At my Institute in Leeds, I work across two research groups, which count, respectively, 6 women out of 24 and 2 women out of 17 (I counted myself twice). This does not mean I feel like an outsider or I am in a hostile environment – I am very fond of my male colleagues and students, and some of the most determined feminists I meet are men. There is certainly a more heightened sensibility to gender issues now with respect to 10 years ago, but I believe we are still not talking about it enough in practical terms and in our everyday realities. Why do we see these numbers, can or should we do something about it and how would our lives, work and society change if we did?

From Curiosity to Contribution

My Journey in Travel Behavior Research

|| Dr Xinyi Wang
|| Winner of the 2023 Eric Pas Dissertation Prize

DR Xinyi Wang

Xinyi Wang (pronounced "Shin-yee Wong") is a Postdoctoral Associate at the JTL Urban Mobility Lab in the Department of Urban Studies and Planning at the Massachusetts Institute of Technology (MIT). She received her Ph.D. in Transportation Systems and Engineering from the Georgia Institute of Technology, where her dissertation examined the causal impacts of teleworking on travel behavior, earning her the 2023 Eric Pas Dissertation Prize from IATBR.

Xinyi holds a Bachelor of Engineering in Transportation Engineering from Southeast University, Nanjing, China, along with Master's degrees in Civil Engineering and Statistics from Georgia Tech. Her interdisciplinary training supports her research interests in travel behavior, survey methods, statistical modeling, machine learning, and the equity and gender dimensions of transportation systems.

As an undergraduate in transportation engineering at Southeast University in China, I was exposed to many facets of the field, from roadway design and logistics to traffic safety and human behavior. Over time, I realized my strongest interest was not just in systems, but in people. **I was drawn to the decisions individuals make in their daily travel: how they choose, what motivates them, and how those choices affect their lives.**

This growing interest led me to pursue a Ph.D. in transportation systems at the Georgia Institute of Technology (Georgia Tech), where I focused on travel behavior. To me, travel is not just a necessity, it is an essential part of life that reflects people's needs, priorities, and values. **I wanted to be a scholar who helps translate individual preferences into insights for policymakers, planners, and system designers, thereby improving services and promoting well-being.**

At Georgia Tech, I had the extraordinary privilege of being mentored by Dr. Patricia Mokhtarian, a leading figure in travel behavior research and recipient of IATBR's Lifetime Achievement Award. Her mentorship, intellectually rigorous, patient, and inspiring, shaped not only my research approach but also my perspective on the purpose of scholarly work. I am deeply grateful for her support throughout my Ph.D. journey.

Early in the program, I was funded by the TOMNET University Transportation Center, which allowed me to explore a range of research topics. These included intra-household vehicle ownership and the impact of transportation on subjective well-being using multi-year survey data. Through this work, I became particularly interested in gender roles in travel and how transportation systems can better support individuals' lived experiences.

In 2020, the COVID-19 pandemic significantly impacted both my daily life and the direction of my research. I turned my focus to the dramatic rise in teleworking, which became the centerpiece of my dissertation. This work earned several honors, including the 2023 Eric Pas Dissertation Prize from IATBR. It also sparked a long-term research interest in how telework reshapes travel behavior.

A long-standing question in the field, **"Does teleworking increase or decrease travel demand?"**, became the foundation of my empirical work in my dissertation. Prior studies have yielded inconclusive results, often due to the omission of selection bias between teleworkers and

non-teleworkers. To address this, I applied endogenous switching regression models to estimate the counterfactual vehicle-miles driven (VMD) for each group. This allowed me to isolate the causal impact of teleworking on travel demand.

The findings were clear: on average, teleworking reduces VMD. Beyond the average effect, I examined heterogeneity across individuals. I hypothesized that people who feel stressed by their commutes might reduce travel more than those who do not. I segmented the sample accordingly and found that travel-stressed individuals experienced greater reductions in VMD, while non-stressed individuals were more likely to use the flexibility of telework to take additional trips. These insights deepen our understanding of how telework affects different populations and provide a more nuanced foundation for future policy.

Methodologically, my dissertation introduced several innovations. I was the first to derive analytical expressions for the back-transformed treatment effect in an Ordered Probit Switching Regression (OPSR) model, allowing meaningful interpretation of log-transformed travel outcomes. I also developed a simulation-

based approach for the Multinomial Logit Switching Regression (MNLSR) model, clarifying ambiguities in earlier literature and relaxing key constraints. These models can now be more accurately applied to a wider range of behavioral studies.

To make these tools more accessible, I am currently collaborating with researchers to develop an R package that implements OPSR models with my source code. I have also continued to explore the evolving nature of telework by examining hybrid and partial-day telework, as well as their impact on both local and long-distance travel. This work reinforces my broader research goal: **to understand travel behavior as dynamic, diverse, and deeply intertwined with people's well-being.**

Looking ahead, I hope to continue conducting research that informs both theory and practice. I am committed to developing methods that allow us to better account for heterogeneity and selection in behavior, and to grounding those methods in questions that matter to people's daily lives. I'm especially grateful to be part of the IATBR community, which continues to inspire and challenge me with its commitment to advancing thoughtful, interdisciplinary research.

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