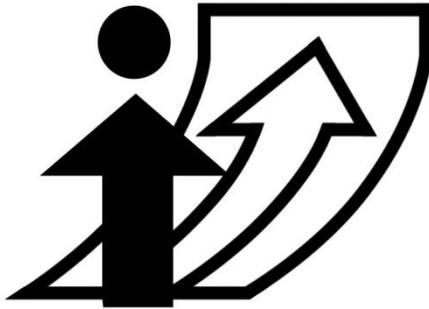


# TRAVEL BEHAVIOUR RESEARCH IN AN EVOLVING WORLD

SELECT PAPERS FROM THE  
12<sup>TH</sup> INTERNATIONAL CONFERENCE ON  
TRAVEL BEHAVIOUR RESEARCH



EDITED BY

**Ram M. Pendyala**

*Arizona State University, Tempe, USA*

**Chandra R. Bhat**

*The University of Texas, Austin, USA*

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## PREFACE

This volume contains specially commissioned papers and workshop reports from the 12th International Conference on Travel Behaviour Research (<http://iatbr2009.asu.edu>), which was held December 13-18, 2009 in the city of Jaipur in the northwestern state of Rajasthan, India. This conference was organized by the International Association for Travel Behaviour Research (IATBR) as part of its triennial conference series dedicated to advancing our understanding of human travel behaviour. The conference continued the outstanding tradition of excellence set by its predecessors and was held, for the first time, in a rapidly developing country of Asia. The IATBR Conference series is recognized worldwide as the premier occasion for connecting with fellow travel behaviour researchers, sharing cutting-edge research and development activities in the field, learning about the latest analysis and modeling methods, and defining the research agenda for the profession. The conference series brings together researchers and practitioners from around the world who aim to understand, model, and measure travel behaviour, and who apply travel behaviour research methods to the development and evaluation of land use and transport policies in a wide variety of economic, demographic, socio-cultural, and geographic contexts.

The theme of the 12th conference, “travel behaviour research in an evolving world”, recognized the rapid evolutionary transformation that is taking place around the world. At the dawn of the twentieth century, about 13 percent of the world’s population lived in urban areas; by the time this conference was held in Jaipur, close to 50 percent of the world’s population was crowded into urban areas. By the middle of the twenty-first century, it is projected that cities will be home to more than 70 percent of the world’s population. The rapid urbanization of the planet has resulted in many critical infrastructure challenges – with transport serving as a focal point for policy debate as the desire and need for access and mobility continues unabated. In particular, transport professionals around the world are grappling with challenges facing their communities stemming from a rapid growth in vehicular travel demand coupled with declining revenue streams and increasingly sprawled land use development patterns that make it difficult, if not impossible, to operate high-quality public transport services. At the same time, the emergence of the notions of sustainability and livability as planning paradigms and the endless opportunities for efficiency offered by new technologies and alternative fuels offer hope that new breakthrough solutions that address the critical transport challenges confronting our communities are on the horizon.

Travel behaviour researchers play a central role in developing transport solutions for a rapidly evolving world because it is a deep understanding of the activity and travel choices that people make under a wide range of spatio-temporal and modal contexts that make it possible to forecast the impacts of alternative design strategies, policy actions, and financing mechanisms. As evidenced by the active exchanges and discussions at the 12th conference, great strides have been made over the past several years in analyzing, understanding, explaining, and modeling travel behaviour. However, much remains to be done, particularly in an era where activity-travel patterns and time use behavior are being influenced by the ubiquitous presence of technology in people’s lives and many interactions take place as much in virtual space as they do in real space. Methodological

advances in choice modeling and microsimulation approaches to activity-travel forecasting have the potential to transform travel modeling practice in profound ways, and the work presented at the 12th International Conference on Travel Behaviour Research served as a harbinger of the promise that the future holds for the profession.

With more than 200 delegates from over 30 countries, including more than 30 attendees from developing countries, the conference served as an ideal venue for information exchange and defining a research agenda for the field. Invited keynote speeches delivered by such luminaries of the field as Professor David Hensher (University of Sydney and 2009 IATBR Lifetime Achievement Award winner), Professor Moshe Ben-Akiva (Massachusetts Institute of Technology and 2006 IATBR Lifetime Achievement Award winner), and Professor Peter Jones (University College, London) set the stage for an intellectually stimulating conference that featured nearly 200 presentations in more than 30 sessions on all aspects of travel behaviour analysis, modeling, and theory. The conference also featured eight workshops, with each workshop covering a contemporary topic or theme of critical interest to the profession. Each workshop was led by two invited co-chairs, one drawn from a developed economy and another from a developing country. Helping shape the discussions in the workshop were two invited resource papers, once again drawn from both a developed and developing country context to ensure that multiple perspectives were accommodated in the workshop. Reports from the workshops offer a compelling research agenda for the profession and will help shape the trajectory of the field for years to come. This volume includes one keynote paper, all of the invited resource papers, and eight workshop reports – thus providing a concise treatise on the past, present, and future of the field.

Several papers presented at the conference have been published in special issues of journals. A set of five papers on the theme of “Recent Developments in Discrete Choice Model Formulation, Estimation, and Inference” has been published in Volume 46, Issue 2 (February 2012) of *Transportation Research Part B: Methodological*. Professor Chandra R. Bhat of the University of Texas at Austin served as Guest Editor for this special issue. Another set of five papers on the theme of “Multi-dimensional Advances in Travel Modeling” has been published in Volume 38, Number 6 (November 2011) of *Transportation*. Professors Abdul R. Pinjari of the University of South Florida in Tampa and Ram M. Pendyala of Arizona State University in Tempe served as Guest Editors for this special issue.

From a cultural standpoint, the conference venue in Jaipur, India offered a glimpse into the rich folk traditions and cuisine of North India. The conference was held at the Le Meridien Hotel in Jaipur, and many thanks go to Mr. Rahul Sharma and his staff at Le Meridien for their warm hospitality and immaculate service. The conference co-chairs would like to thank the IATBR Executive Board, without whose support this conference would not have been possible. Lisa Macias, Administrative Assistant to Professor Chandra Bhat at the University of Texas at Austin, is owed a debt of gratitude for her assistance with conference logistics and support. The hard work of many graduate students from the University of Texas at Austin, including Naveen Eluru, Rajesh Paleti, Ipek Sener, Marisol Castro, Nazneen Ferdous, Jeffrey LaMondia, and Raghu Sidharthan, and Arizona State University, including Karthik Konduri and Bhargava Sana, is gratefully acknowledged. These students provided much needed logistical support, and devoted countless hours to coordinating conference arrangements and helping with

workshop reports. Finally, the production of this book was made possible by the outstanding work of Keith Christian at Arizona State University who spent many hours formatting and proof-editing papers included in this volume. It is hoped that this volume will serve as a useful reference for academics, practitioners, stakeholders, and new researchers for many years to come.

*Professor Ram M. Pendyala, Ph.D.*  
Arizona State University, Tempe, USA  
IATBR-2009 Conference Co-Chair

*Professor Chandra R. Bhat, Ph.D.*  
The University of Texas, Austin, USA  
IATBR-2009 Conference Co-Chair



## **THE INTERNATIONAL ASSOCIATION FOR TRAVEL BEHAVIOUR RESEARCH (IATBR)**

**Website: [www.iatbr.org](http://www.iatbr.org)**

The International Association for Travel Behaviour Research (IATBR) is an international organization of academic scholars, researchers, practitioners, consultants, and public agency professionals dedicated to the advancement of travel behaviour research. The organization aims to serve as a forum that brings together professionals from a wide range of disciplines interested in the study of the factors that influence activity and travel choices of people and businesses, formulation of new computational and analytical modeling methods and approaches for forecasting activity-travel demand, and analysis of land use and transportation impacts of a wide range of socio-economic, public policy, and modal scenarios. The association was established in the 1970's to facilitate the exchange of information among researchers around the world with a governing Executive Board reflecting the international balance of interests in travel behaviour research.

The main activity of the association has been the organisation of triennial conferences on travel behaviour research. Papers presented at IATBR conferences have traditionally appeared in a series of books published by Elsevier/Emerald, and in special issues of various journals. The Association meets annually in January at the Transportation Research Board Meeting in Washington, D.C. and occasionally at the European Transport Conference in Europe. In addition, IATBR supports activities of sister organisations such as the Transportation Research Board and World Conference on Transport Research.

The Association also recognizes achievements of individuals through the award of two special prizes. The first is an annual doctoral dissertation prize named after the late Eric I. Pas and awarded each year to recognize the best dissertation in the field of travel behaviour research. The second is a triennial lifetime achievement award that is presented at each IATBR conference to recognize the body of work of outstanding contributors to the field.

The activities of the Association are coordinated by a geographically diverse Executive Board that includes a Chair, Vice-Chair, Secretary/Treasurer, Past Chair, and five regular board members. The members of the Board serve staggered terms such that about half of the positions become vacant once every two years and are filled through an election process that is conducted at the end of every odd-numbered year. Membership in the Association is open to all, and nominal annual membership dues are collected to help support the activities of the Association.

## LIST OF CONTRIBUTORS

|                                  |  |
|----------------------------------|--|
| Mr. Jimmy Armoogum               | IFSTTAR, Noisy le Grand, France                                  |
| Professor Kay W. Axhausen        | Swiss Federal Institute of Technology (ETH), Zürich, Switzerland |
| Professor Chandra R. Bhat        | The University of Texas at Austin, Texas, USA                    |
| Professor Michiel C.J. Bliemer   | The University of Sydney, Sydney, Australia                      |
| Professor Peter Bonsall          | University of Leeds, Leeds, United Kingdom                       |
| Dr. Stacey Bricka                | Texas Transportation Institute, Austin, Texas, USA               |
| Professor David Brownstone       | The University of California at Irvine, California, USA          |
| Professor Elisabetta Cherchi     | Technical University of Denmark, Lyngby, Denmark                 |
| Professor Andre de Palma         | Ecole Normale Supérieure de Cachan, Cachan, France               |
| Mr. Nagendra Singh Dhakar        | University of Florida, Gainesville, Florida, USA                 |
| Professor Naveen Eluru           | McGill University, Montreal, Quebec, Canada                      |
| Dr. Nazneen Ferdous              | Resource Systems Group, Inc., White River Junction, Vermont, USA |
| Professor Gunnar Flötteröd       | KTH Royal Institute of Technology, Stockholm, Sweden             |
| Professor Konstadinos G. Goulias | The University of California at Santa Barbara, California, USA   |
| Professor Sanjay Gupta           | School of Planning and Architecture, New Delhi, India            |
| Professor Susan L. Handy         | The University of California at Davis, California, USA           |
| Professor R. Jayakrishnan        | The University of California at Irvine, California, USA          |
| Professor Peter M. Jones         | University College London, London, United Kingdom                |
| Professor Kazuya Kawamura        | University of Illinois at Chicago, Illinois, USA                 |
| Professor Karthik C. Konduri     | University of Connecticut, Storrs, Connecticut, USA              |
| Professor Kevin J. Krizek        | University of Colorado, Boulder, Colorado, USA                   |
| Dr. Ravindra Kumar               | Central Road Research Institute, New Delhi, India                |
| Professor Jeffrey J. LaMondia    | Auburn University, Auburn, Alabama, USA                          |
| Professor Martin Lee-Gosselin    | Université Laval, Quebec, Canada                                 |
| Professor Eric J. Miller         | University of Toronto, Ontario, Canada                           |
| Professor Abolfazl Mohammadian   | University of Illinois at Chicago, Illinois, USA                 |
| Professor Kai Nagel              | Technical University of Berlin, Berlin, Germany                  |
| Professor Agostino Nuzzolo       | University of Rome “Tor Vergata”, Rome, Italy                    |
| Professor Juan de Dios Ortúzar   | Pontificia Universidad Católica de Chile, Santiago, Chile        |

|  |  |
|--|--|
| Professor Ram M. Pendyala                  | Arizona State University, Tempe, Arizona, USA  |
| Dr. Sean M. Puckett                        | John A. Volpe National Transportation Systems<br>Center, Cambridge, Massachusetts, USA |
| Professor Matthew J. Roorda                | University of Toronto, Ontario, Canada   |
| Professor John M. Rose                     | The University of Sydney, Sydney, Australia  |
| Dr. Wafaa Saleh                            | Napier University, Edinburgh, United Kingdom   |
| Professor Amir Samimi                      | Sharif University of Technology, Tehran, Iran  |
| Dr. Sudeshna Sen                           | NuStats LLC, Austin, Texas, USA  |
| Dr. Ipek N. Sener                          | Texas Transportation Institute, Austin, Texas, USA                                     |
| Professor Karthik K. Srinivasan            | Indian Institute of Technology, Chennai, India   |
| Professor Sivaramakrishnan -<br>Srinivasan | University of Florida, Gainesville, Florida, USA                                       |
| Professor Paul A. Waddell                  | The University of California at Berkeley, California,<br>USA                           |
| Professor Mark Wardman                     | University of Leeds, Leeds, United Kingdom   |