

# Global Initiative of Academic Network (GIAN)

## From Preference to Policy: Discrete Choice Experiments for Climate Change Solutions



शिक्षा मंत्रालय  
MINISTRY OF  
EDUCATION

**Gian**  
GLOBAL INITIATIVE OF ACADEMIC NETWORKS




**Dates: 3-7 February, 2025**

### **Adan L. Martinez-Cruz**

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ForestEconomics, Swedish  
University of Agricultural  
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Across disciplines, researchers are actively developing technical solutions to address the pressing challenges of climate change. However, these solutions often struggle to gain traction with end-users. A significant barrier to adoption is that end-user preferences are rarely integrated into the development process. Without a clear understanding of these preferences, innovations may miss the mark on usability or relevance, limiting their real-world impact. By incorporating insights into end-user preferences during the development stage, researchers can make informed estimates of potential demand and adoption rates. This approach also strengthens cost-benefit analyses, particularly when considering how to allocate public funding among various potential solutions. Such informed decision-making can better ensure that funded solutions are not only effective but also widely adopted and socially beneficial.

Discrete choice experiments (DCEs) offer a robust, mixed-method econometric tool that is especially useful for investigating preferences for new or hypothetical goods and services—such as those solutions yet to be introduced to the market. In a DCE, participants are presented with a set of choices, each consisting of various attributes with differing levels. By analyzing how participants make trade-offs among these attributes, researchers can infer preferences and predict demand. For instance discrete choice experiments have been used to gauge public interest in electric vehicle adoption. By presenting choices with attributes like cost, range, and charging convenience, researchers can estimate which features drive consumer interest, providing critical insights for designing products that align with market demand.

This course will equip participants with the skills to design, implement, analyze, and report findings from discrete choice experiments. While the course will cover the theoretical underpinnings of DCEs, the primary focus will be on hands-on guidance. Participants will be encouraged to develop their own discrete choice experiment, tailored to explore preferences for a good or service they wish to investigate. By the end of the course, participants will not only understand the theoretical framework but will also have practical experience in deploying DCEs to generate actionable insights into consumer preferences.

The course will be relevant to students at MA, M Phil or PhD level or Faculty from reputed academic institutions; officers at IES (Indian Economic Service), IAS (Indian Administrative Services), and Ministry of Environment, Forests and Climate Change

## Course Overview

## Objectives of the course

The course consists of lectures, in-class activities, tutorials and participant-led discussions with the aim of achieving the following objectives:

**Familiarize participants with the theory and application of discrete choice experiments to assessing the preferences of consumers and/or producers for goods or services that are not traded in a market**

**Provide a framework to participants to judge whether the analysis of discrete choice experiments is yielding robust findings.**

**Develop participants' skills to report findings arising from implementation of discrete choice experiments, with emphasis on communicating such findings to policy makers**

**Develop participants' critical thinking skills for assessing advantages and disadvantages of utilizing discrete choice experiments in specific circumstances.**

Participants will apply the concepts learnt in the course to real-world topics in a team-based setting.

## Teaching Faculty: Associate Professor Adan L. Martinez- Cruz



Associate Professor Adan L. Martinez-Cruz is alumnus of University of Maryland, College Park, US; and Centro de Investigacion y Docencia Economicas (CIDE), Mexico. He is Research Affiliated in Centre for Energy Policy and Economics (CEPE), ETH-Zurich, Switzerland; and in Posgrado en Ciencias de la Sostenibilidad, UNAM, Mexico. He is member of the Board of the Latin American Association of Environmental and Resource Economists (LAERE); of the International Advisory Board of the Solar Academy Graduate School, hosted by the Universite Savoie-Mont Blanc, France; and of the Review Board of the recently launched Indian Journal of Economic Studies, edited by University of Delhi's Department of Economics. He has been visiting researcher at the Climate Change and Sustainable Development Unit, IADB, US; and Universidad Iberoamericana, Mexico.

He describes himself as an empirical and interdisciplinary micro-economist, specialized in applications and innovations of non-market valuation techniques. His work explores people's values for nature and their preferences for environmental and social goods. He actively seeks and enjoys transdisciplinary collaborations to tackle the challenges of both climate change and sustainable development. With a strong emphasis on policy relevance, he engages with policymakers to address their needs and ensure that research insights contribute to informed decision-making.

His academic work is published in top field economic journals and high-impact factor interdisciplinary outlets; for instance, A note on the different interpretation of the correlation parameters in the Bivariate Probit and the Recursive Bivariate Probit, in *Economics Letters*; The benefits of titling indigenous communities in the Peruvian Amazon: A stated preference approach, in *Land Economics*; and Animal welfare has a priority: Swiss consumers' preferences for animal welfare, greenhouse gas reductions, and other sustainability improvements in dairy products, in *Food Quality and Preferences*.

## Teaching Faculty: Professor Sangeeta Bansal



Professor Sangeeta Bansal is a professor in economics at the Centre for International Trade and Development, Jawaharlal Nehru University. Her research interests are wide ranging and at the intersection of environment, economic development, climate change and health economics. She studies energy and environmental regulations, the motivations and effectiveness of corporate social responsibility efforts in India, the effects of air pollution and obesity on life expectancy among others. She has applied economic theory, empirical economics and experimental methods in her research. She has authored over 75 peer reviewed publications, that are widely cited. Her research papers are published in top economics journals including Journal of Environmental Economics and Management, Energy Economics, Agricultural Economics, Environment and Resource Economics, and Environment and Development Economics.

She is editor of the journal Agricultural Economics (the flagship journal of the International Association of Agricultural Economists), co-editor of Resource and Energy Economics and on editorial boards of many other reputed international journals. She has been awarded several fellowships including Fulbright-Nehru Research Fellowship to visit University of California, Berkeley, and a fellowship to visit ETH-Zurich, Levenick Resident Scholar to visit University of Illinois, Urbana Champaign . She has provided consultancy to IFPRI, Washington, D.C., South Asian Network for Development and Environment and Economics (SANDEE), ICSSR, and Food Safety and Standards Authority of India.

## LECTURE SCHEDULE

### **Day 1: Monday, February 3, 2025**

Lecture and Tutorial: Foundations of Discrete Choice Experiments (DCEs)  
Design of students' own DCE

### **Day 2: Tuesday, February 4, 2025**

Lecture and Tutorial:  
Analysis of DCEs  
Formatting DCEs for  
analysis

### **Day 3: Wednesday, February 5, 2025**

Lecture and Tutorial: Reporting  
findings from DCEs  
Students' analysis of their own  
DCE

### **Day 4: Thursday, February 6, 2025**

Lecture and Tutorial: Common  
challenges in implementing DCEs  
Lessons and policy implications from  
DCEs  
Interpretation and reporting of  
students' own DCE

### **Day 5: Friday, February 7, 2025**

Lecture and Tutorial: Existing and  
potential applications of DCEs to  
address India's challenges  
Students' presentation of findings and  
implications arising from own DCEs

Winding up of the course, feedback  
and discussion on the course,  
student evaluation.

# Preregistration and Fees

Prior registration is mandatory for all students as per the procedure provided on the JNU GIAN web portal ([www.jnu.ac.in/gian](http://www.jnu.ac.in/gian))

MA students: INR 100

PhD Students: INR 1000

Faculty/professionals from other recognised educational institutions: Rs. 2000

Industry and Private Institutions (India): Rs 2000

Participants from abroad: USD 100

An application for fee waiver from students from Indian universities can be submitted for consideration via email application to the course coordinator: [sangeta@mail.jnu.ac.in](mailto:sangeta@mail.jnu.ac.in);

Registration starts from 1 January 2024.

Lectures (Feb 3 to Feb 7, 2025) will be held at

The Convention Center, Jawaharlal Nehru University, New Delhi

## Who Can Attend?

MA, M Phil or PhD Students;

Faculty;

Officers at IES (Indian Economic Service), IAS (Indian Administrative Services), and Ministry of Environment, Forests and Climate Change;

Industry representatives;

Fellows and Researchers at Research Institutions