**Human Factors and Ergonomics Society**

# FELLOW PROFILE

**Name:**   Cleotilde Gonzalez

**Degrees, certifications, etc.:**

Texas Tech University - Ph.D., 1996
College of Business
Management Information Systems
Minor in Human Factors

Texas Tech University- M.Sc., 1992
College of Business
Management Information Systems

Universidad de las Americas-Puebla, -
M.B.A., 1990
Mexico. College of Business

Universidad de las Americas-Puebla, -
B.Sc., 1986
Mexico.
College of Engineering, Computer Science

**Current status:**   Research Professor of Decision Sciences and Founding Director, Dynamic Decision Making Laboratory

**Home page:**   http://www.cmu.edu/ddmlab

## Biography (How you got involved in the field, your major career activities and milestones):

Prof. Gonzalez is a professor in the department of Social and Decision Sciences at Carnegie Mellon University. She is affiliated faculty with the Human-Computer Interaction Institute, the Center for Cognitive Brain Imaging and the Center for Neural Basis of Cognition, all at Carnegie Mellon University; and affiliated faculty with the Center for Research on Training at University of Colorado. She is part of the editorial board of the Journal of Behavioral Decision Making, American Journal of Psychology, and Human Factors Journal, and Associate Editor of the Journal of Cognitive Engineering and Decision Making and System Dynamics Review.

Prof. Gonzalez is an international leader in the area of Decision Making in Dynamic Environments. She investigates experience-based decision making, through experimental and computational modeling methods, to determine when and how individuals rely on experience to make decisions and what type of experiences would help decision makers adapt to novel situations. She is the founding Director of the Dynamic Decision Making Laboratory where new intellectual leaders are formed. Her work relies on a theory of learning and decisions from experience in dynamic tasks, called Instance-Based Learning Theory (IBLT). IBLT is represented computationally in a number of cognitive models to make predictions and provide additional theoretical insights on experience-based decision making.

## Employment History (List top 5 positions):

2007-present: Associate Research Professor, Department of Social and Decision Sciences, Carnegie Mellon University.

2002-present: Founding Director, Dynamic Decision Making Laboratory, Department of Social and Decision Sciences, Carnegie Mellon University.

2000-2006:    Assistant Professor, Department of Social and Decision Sciences, Carnegie Mellon University.

1997-2000:    Postdoctoral Fellow, Tepper School of Business, Carnegie Mellon University.

1996-1997: Assistant/Associate Professor, Computer Engineering Department, Universidad de las Americas, Puebla, Mexico.


## What were your significant contributions to the field?

Prof. Gonzalez's significant contributions to Human Factors can be broadly divided into theory development, applications, knowledge dissemination, and outreach activities:

1. Theoretical contributions. Prof. Gonzalez developed a theory of learning and decisions from experience in dynamic tasks, called Instance-Based Learning Theory (IBLT). As evidenced by her leading publications in highly ranked journals in Psychology and Decision Sciences, IBLT is a well known and accurate account of human decision making in dynamic tasks.  IBLT is represented computationally in a number of cognitive models, that make accurate predictions and provide additional theoretical insights on experience-based decision making.

2. Applied research contributions. Prof. Gonzalez has used IBLT to study decision making in a wide range of real-life contexts such as: visual detection and training in luggage screening; detection of cyber attacks in cyber-security analysis; control and operation of dynamic, complex industrial and natural processes; decision making in military missions; medical diagnosis in emergency conditions; and dynamic allocation of scarce resources, among others. Her leading publications in diverse fields demonstrate the wide-ranging applications of IBLT.

3. Knowledge dissemination. Prof. Gonzalez has mentored dozens of post-doctoral and graduate students. She guides students towards creating and maintaining a productive research program, as evidenced by the positions of academic leadership that most of her students hold. For example, students obtained Assistant Professor positions in the Human Factors Department at the University of Illinois at Urbana-Champaign; the Department of Psychology and Human Factors Program at Old Dominion University; the School of Computing and Electrical Engineering and the School of Humanities and Social Sciences at the Indian Institute of Technology; and the Adaptive Behavior and Cognition group at the Max Planck Institute.

4. Outreach. Prof. Gonzalez offers  interdisciplinary courses in Human Factors internationally, and she makes key-note and invited speeches to diverse audiences in international conferences all over the world. For example, Prof. Gonzalez has developed courses in Human Factors for students from disciplines as diverse as Engineering, Design, Humanities, and Computer Science. These courses have been taught in countries that are under-represented in the Human Factors community such as: Mexico, Poland, and Qatar. Also, Prof. Gonzalez has played a major role in the development and promotion of Human Factors research and development in Latin America. For example, she organized a number of workshops in the international conference on Human Factors in Computing Systems; was the founder of the special interest group in Human Computer Interaction in Latin America (CHI-Mexico); and was the technical program co-chair of the first Latin American Conference in Human Computer Interaction (CLIHC, 2003) in Rio de Janeiro, Brazil.

**Did you receive any notable awards or recognition during your career?**

2014     ***Best Paper Award.*** IEEE Conference on Cognitive Methods in Situation Awareness and Decision Support (CogSIMA 2014). San Antonio, TX. March 3-5, 2014.

2013     ***Elected Society Fellow.*** Human Factors and Ergonomics Society. Formal recognition on October 1, 2013, at the HFES annual meeting. San Diego CA, USA.

2010     ***Runner up prize.*** Games first choice prediction competition. Competition focused on the prediction of behavior in repeated Market Entry Games. Instance-Based Learning model ranked second among 25 submissions: http://mail.sjdm.org/pipermail/jdm-society/2010-October/004647.html

2008     ***Making Connections Award.*** Academy of Management, OB Division. Meeting of the Academy of Management, Los Angeles, CA, USA.

2006     ***Best Paper Award.*** Behavior Representation in Modeling and Simulation (BRIMS) conference. Baltimore, MD. May 15-18, 2006.

**Which articles in the journal *Human Factors* would you say were the most influential to you and your research or practice?**
The work of the following authors:

Mica Endsley
Nancy Cook
Eduardo Salas
Gary Klein
Christopher Wickens

**Please provide any links to your online articles, essays, blogs, Wikipedia pages, etc., that pertain to your research, publications or practice.**

http://www.cmu.edu/ddmlab

**What advice would you give someone considering HF/E as a profession?**

1) Listen and give consideration to others views and opinions. In an interdisciplinary field this is essential.

2) Learn to collaborate. All the fun work I have done is through interdisciplinary collaborations.

3) Take risks: you will not win the lottery unless you enter the lottery!

4) Learn to recognize your mission and your passion.

5) Develop thick skin, and never give up: Tenacity, Persistence, and Perseverance are essential to reach your goals.