

ISAHP2018 CONFERENCE IN HONG KONG, JULY 12-15

Rozann Saaty

This year the International Symposium on the Analytic Hierarchy Process (ISAHP2018) was dedicated to the memory of Thomas Saaty, the father of the Analytic Hierarchy Process, and my husband of 52 years, who passed away on August 17, 2017, at the age of 91. The conference chair was Luis Vargas, Tom's longtime colleague at the University of Pittsburgh's Joseph M. Katz Graduate School of Business where he held the chair of Distinguished University Professor. Their names are linked on many AHP articles and books that they co-authored during the past 40 years.

The conference was an outstanding gathering of friends and colleagues from Tom's long lifetime. Among the attendees were people who served as chairmen from seven previous conferences: Luis Vargas (Pittsburgh, 1991 and Hong Kong, 2018), Kirti Peniwati (Bali, 2005) Rozann Saaty (Pittsburgh 2009), Fabio DeFelice and Antonella Petrillo (Sorrento, 2011), Rafikul Islam (Kuala Lumpur, 2013), and Enrique Mu (Washington, D.C., 2014).

For those who weren't able to attend, and for those who were there and would like to remember the conference, I am going to summarize the main events in this symposium day by day.

DAY 1 — Thursday, July 12, Pre-conference workshops

The first day of the conference was a workshop day that began with a 3-hour seminar by Dr. Elena Rokou on the SuperDecisions software for AHP and ANP. Elena Rokou is the Executive Research Director of Creative Decisions Foundation and has designed the new look and updated the SuperDecisions software which the Foundation makes available to students and researchers around the world. Intangibles can be measured using human judgment and included in multicriteria decision making with the Analytic Hierarchical Process (AHP) and the Analytic Network Process (ANP). They are the most powerful synthesis methodologies for combining judgments and data to effectively rank options and predict outcomes (<https://www.superdecisions.com>).



Luis Vargas, Elena Rokou, and her daughter Francesca. the youngest conference attendee

Luis Vargas, professor at the University of Pittsburgh, presented the second workshop on conducting negotiations, an extension of the "Getting to Yes" approach where parties do not see each other as adversaries but as collaborative teams, looking for a fair and equitable solution to the conflict. The AHP is a perfect approach to negotiation and conflict resolution because with it negotiation teams can measure intangibles and value-related issues that are usually at the heart of the process and arrive at equitable tradeoffs. In the workshop, Professor Vargas demonstrated a unique way to handle negotiations using AHP. He has facilitated conflict resolution sessions for the past 10 years involving the Israelis and Palestinians. The results from this work were valuable to the participants from both sides as they found feasible tradeoffs among the many issues that will have to be resolved once the two parties decide they are actually willing to make peace. When they decide to make peace, even though it has not been in the cards so far, this work will prove to be invaluable in working out the details of the settlement.



Enrique Mu presenting a workshop on publishing AHP/ANP papers

The third workshop was presented by Dr. Enrique Mu, Professor at Carlow University and summer program director at the University of Pittsburgh. It was an extremely valuable workshop about how to improve your chances of getting your AHP/ANP paper published. Enrique is the Editor-in-Chief of the *International Journal of the AHP (IJAHP)*, now indexed in Scopus, and has served as a reviewer for many publications as well as publishing many AHP/ANP papers of his own. During the workshop he gave each participant a comprehensive but succinct list of what to include in a paper and equally important what not to do. He emphasized the need to be specific about who had made the judgments and why they were qualified to do so.



Rozann Saaty presenting a workshop

The last workshop, presented by me, was “*The Art of Structuring AHP and ANP Models*”. I focused on the basics of making a judgment in answering a pairwise comparison question. A judgment on a pair of elements should always hold the dominated element in mind as the unit, estimate how many times larger the dominant one is, and enter that number in the pairwise comparison matrix. Too often users treat the fundamental 1 to 9 scale of the AHP as an ordinal scale, rather than a scale of absolute numbers. The solution vector for the pairwise comparison matrix is a relative absolute scale with ratio properties. It does not have a zero. I also covered how to prevent “rank reversal”. A long-time criticism leveled at the AHP is that the ranks of existing alternatives can change when new ones are added or removed. This can be avoided by re-weighting the criteria

to properly include the effect of the structural dependence among elements. There are examples where rank reversal occurs and is understandable and desirable, so it is more a question of “Which is correct for this situation?” There are completely understandable reasons for either allowing rank reversal or not allowing it, and it is up to the decision maker to decide in advance which is appropriate.

The welcome reception on the opening workshop day provided a chance to relax and enjoy a beverage at the beautiful pool house of the Hyatt Hotel after a full day of attending workshops.

DAY 2 – Friday, July 13, First regular conference day



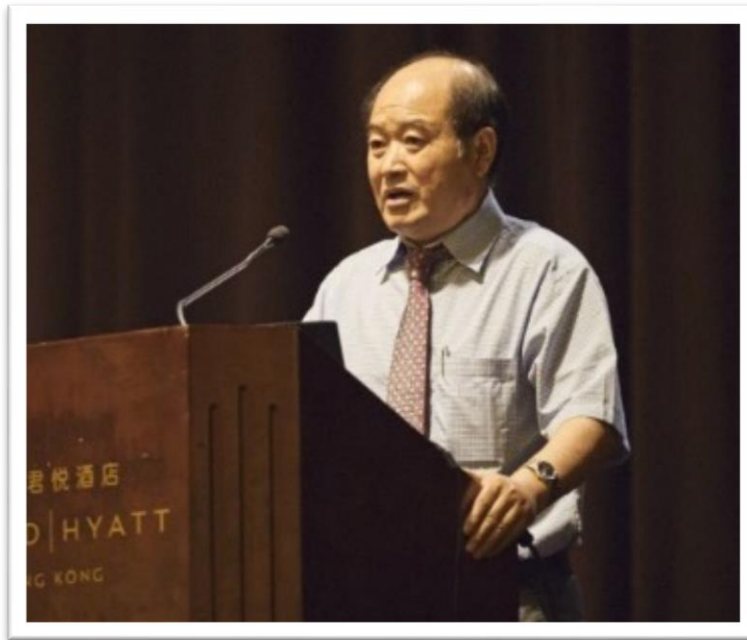
Luis Vargas opening the conference with a welcome address

Friday morning Luis Vargas, Chairman of ISAHP2018, and Professor at the Katz Graduate School, University of Pittsburgh, where Tom Saaty worked for 30 years, opened the meeting with a welcome address. Luis worked with Tom from the time he arrived at the Wharton School of the University of Pennsylvania as a young graduate in mathematics on the prestigious Juan Marche Fellowship from Spain. Tom and Luis moved to the Katz Graduate School of the University of Pittsburgh in 1979 and continued their collaboration through the years, writing many seminal papers and books about the AHP and ANP and applying the AHP in a significant conflict resolution exercise. They organized negotiation meetings along with Jerry Zoffer, Dean Emeritus of the Katz Graduate School of Business, between representatives of Palestine and Israel for 10 years, the most recent being held in the fall of 2017 after Tom passed away.



John Saaty giving the memorial address for his father

The memorial address for Tom was given by his son John following Luis Vargas' opening welcome. John and his brother Daniel founded Decision Lens, Inc. in Virginia in 2002, a company that produces software for organizations based on AHP. They have taken the AHP from being a scholarly exercise into the public realm. In his talk, John gave a brief overview of the customers that now use the software, both government agencies and businesses, to align their priorities and resources to do more with less.



Dr. Yong Shi, Chinese Academy of Sciences, Beijing, China, Main keynote address

Yong Shi of Key Lab of Big Data Mining and Knowledge Management, Chinese Academy of Sciences, Beijing, China, gave the keynote address on this opening day. He talked of Tom Saaty's influence on the Chinese academic community through AHP/ANP and also through his long interest in and lecturing on creative thinking. Yong reviewed how AHP/ANP has been widely used in China for decision-making problems since the 1980's. Tom's book, *Creativity, Problem Solving and Decision Making*, was translated by Yong Shi and his colleagues into Chinese. They have distributed it widely in China so that it has become a bestseller at airport and train stations where many books are sold. Yong reminisced about Tom's energy on his last trip to China in October 2016 when he was a guest of the Chinese Academy of Sciences and lectured at seven famous Chinese universities around Beijing. On the same trip he also visited Tianjin University in Tianjin, China, where there were still professors at that school who as students in 1988 had attended the first ISAHP conference in Tianjin organized by Professor Shubo Xu.



Luis Vargas and Monica Garcia-Melon, Universitat Polytecnic of Valencia, Valencia, Spain, enjoying the great food

DAY 2 – Friday evening, July 13, Awards reception

On Friday evening there was an Awards reception. The best papers from this year were awarded for innovation. One of the papers awarded was that of Enrique Mu and his students Julie E. Forbes and Abigail M. Hebb.



Enrique Mu and students receiving an Innovation Award for their paper

The following papers received an award:

- BAYESIAN IDENTIFICATION OF HOMOGENEOUS SUBGROUPS OF ACTORS IN A LOCAL AHP-MULTICRITERIA DECISION MAKING CONTEXT (Poster Presentation), José María Moreno-Jiménez, University of Zaragoza; Alfredo Altuzarra, Facultad de Economía y Empresa Universidad De Zaragoza (Spain); Pilar Gargallo, Universidad de Zaragoza; Manuel Salvador, Universidad de Zaragoza.
- IMPLEMENTATION OF AN ONLINE SOFTWARE TOOL FOR THE ANALYTIC HIERARCHY PROCESS (AHP-OS), Klaus D Goepel, Business Performance Management Singapore

- JUDGMENT SCALES OF THE ANALYTICAL HIERARCHY PROCESS – THE BALANCED SCALE, Klaus D Goepel, Business Performance Management Singapore
- AN ANP-BASED SIMULATION OF VULNERABILITY OF TWO-WAY COUPLED SOCIO-ECOLOGICAL SYSTEMS, Luis Antonio Bojórquez-Tapia, LANCIS UNAM, Mexico; Hallie Eakin, School of Sustainability, Arizona State University; Marco A Janssen, School of Sustainability, Arizona State University; Andrés Baeza, School of Sustainability, Arizona State University
- PROJECT EVALUATION IN LOCAL GOVERNMENTS TO REALIZE WOMEN ACTIVE PROMOTION SOCIETY IN JAPAN, Ryo Koizumi, Suwa University of Science; Yoichi Iida, Suwa University of Science
- A MULTI-CRITERIA MODEL FOR SELECTING THE MOST SUITABLE CLASSIFIER FOR SUPPORTING ASSISTIVE TECHNOLOGY ADOPTION IN PEOPLE WITH DEMENTIA, Miguel Angel Ortiz Barrios, Universidad de la Costa, Colombia; Antanas Verikas, Halmstad University; Chris Nugent, Ulster University; Mark Donnelly, Ulster University; Leo Galway, Ulster University; Macarena Espinilla, University of Jaen; Ian Cleland, Ulster University
- RISK PERCEPTION OF UNCERTAINTIES IN SUPPLY CHAIN, Yuji Sato, Graduate School of Management, Chukyo University, Japan
- USING THE AHP TO ESTABLISH INCLUSIVE HOUSING DEVELOPMENT PRIORITIES FOR INDUSTRY, Ali Lakhani, Griffith University; Heidi Zeeman, Griffith University; Rafikul Islam, International Islamic University Malaysia; David Watling, Griffith University; Courtney J. Wright, Griffith University; Dianne Smith, Curtin University
- AN ANP MODEL TO IMPROVE PEDESTRIAN ACCESSIBILITY IN THE CITY CENTER OF CARTAGENA DE INDIAS (COLOMBIA), Monica Garcia-Melon, Universitat Politecnica de Valencia, Spain; Hannia Karime González-Urango, Universitat Politecnica de Valencia; Michela Le Pira, University of Catania; Giuseppe Inturri, University of Catania
- ASSESSMENT OF HEALTH-RELATED QUALITY OF LIFE (HRQL) IN LOW-BACK PAIN PATIENTS BEFORE AND AFTER VAX-D DISC DECOMPRESSION TREATMENT. ANALYSIS USING THE COMPUTER-ASSISTED ANALYTIC HIERARCHY PROCESS (AHP), Ivan Naumov, Cyberspace Solutions, Inc; Albert Mancini, Fisioterapia Center; Kenneth Vinton, Pain Relief & Wellness Strategies Center; James Kittelberger, Physical Therapy Center; Thomas L. Saaty, University of Pittsburgh, U.S.
- ETHICAL DECISION MAKING IN ACTION: EVALUATING HOSPITAL CARE ATTENDANCE APPROACHES, Julie E. Forbes, Carlow University - UPMC Presbyterian-Shadyside; Abigail M. Hebb, Carlow University - UPMC

Presbyterian-Shadyside; Enrique Mu, Carlow University - College of Leadership and Social Change

- PROGRAM ACCREDITATION: A NETWORK MODEL FOR CRITERIA DEPENDENCIES AND PRIORITIZATION, Mujgan Sagir Ozdemir, ESOGU, Turkey

DAY 3 -- Saturday, July 14, Regular conference day



Iwan Azis, one of Indonesia’s most famous economists and AHP scholar

Professor Iwan J. Azis presented the first keynote address on Saturday titled, “AHP/ANP Relevance in a More Complex Global Economy”. He has taught at Cornell University since the early 1990s. During 2005-2010, he was Director of Graduate Studies of the Regional Science program there. Since 2015 he has also been teaching as Faculty of Economics and Business, University of Indonesia. Iwan’s talk was especially relevant today because of the tariff wars started by the current president of the United States, Donald Trump. His vantage point as an eminent economist familiar with both the American position from his long tenure at the University of Cornell and from his position as a famous economist very familiar with the economic positions of countries in Asia, gave us an inside look at what the prospects are for the world economy in the future.

Tom and Iwan Azis were friends from the 1990’s when Tom spent weeks at a time in Indonesia working with Iwan on economic issues specific to Indonesia. Their close relationship continued with visits back and forth to the U.S., the last one being a trip by Iwan to Pittsburgh only a few weeks before Tom passed away.



Shashi Bhattarai of Nepal giving keynote address

Shashi Bhattarai is the Chairman of Knowledge Holding International Pvt. Ltd., and Nepal Consultant, The World Bank Group and United Nations Industrial Development Organization (UNIDO). The title of Shashi's address was "In Memory of Professor Thomas Saaty: Demand Driven Cases of the Analytic Hierarchy Process Application". He gave a very interesting talk about recent AHP applications in Nepal and Bhutan with stories derived from demand responsive, practical and internalized utility of AHP by the users, hosts and enthusiasts from that part of the world. Shashi shared a story with me about when he first met Tom at a conference in Ottawa, Canada around 1990. He was a young scholar when he attended the conference and Tom was being attacked vigorously by critics of the AHP. Shashi was impressed by Tom's ability to withstand and rebut the fire. He became an enthusiastic supporter of AHP, applying it many times in Nepal and spreading it among other researchers there.



Hao Gang, City University of Hong Kong, giving keynote address

Dr. Hao Gang is a Professor in the Department of Management Science at the City University of Hong Kong. It was our good fortune that she is based in Hong Kong and agreed to give a talk at the ISAHP2018 conference. Professor Hao described an interesting project she is currently involved with that uses AHP. Many small and medium sized companies in China today are considering outsourcing their manufacturing to the smaller emerging market Asian countries near China. Gang and her colleagues are developing an AHP decision template that managers can use to decide which country is best-fitted for their purposes. Gang was one of the first PhD students from mainland China allowed to come to the U. S. to study. She arrived at the University of Pittsburgh shortly after the first ISAHP meeting in Tianjin, China, in 1988, and she received her PhD at the Katz Graduate School of Business working with Thomas Saaty and Luis Vargas. Her talk was particularly impressive because of how thoroughly she understood, remembered and was able to apply AHP.

DAY 4 – Sunday, July 15, Final conference day



Dr. Kirti Peniwati, Jakarta, Indonesia, giving the final memorial address

Dr. Kirti Peniwati of Jakarta, Indonesia, gave the final keynote address. Kirti obtained her PhD in Decision Science from the Katz Graduate School of Business, University of Pittsburgh, working with Tom and Luis Vargas and went on to have a distinguished career at the PPM Management Institute in Jakarta, one of the premiere graduate schools in Indonesia. She has been an active decision facilitator since her retirement from PPM. Kirti wrote an amazing thesis when she was a PhD student that said Kenneth Arrow's "Impossibility of Group Choice" theorem is not impossible if you apply AHP. She also co-authored the book "Group Decision Making" with Tom. In her talk, Kirti told how working with Tom had affected her life and among other memories recalled that many of their most significant discussions occurred walking to the university together on some mornings. Many people in the audience had similar memories and it brought some of them to the point of tears.

As his wife and collaborator of 52 years, it has been my pleasure to write this news article and I want to thank the many friends and colleagues of Thomas Saaty who loved him and came to Hong Kong, from far places in many cases, to share in this special gathering. Thank you!



Group photo taken just before the conference broke up on the last day