UNIVERSITY OF MALAYA

UMCORS
UNIVERSITY OF MALAYA MALAYSIAN CENTRE OF REGULATORY STUDIES

PRIDE
PARTICIPATORY RESEARCH INNOVATION & DEVELOPMENT ENCLAVE

ONE DAY WORKSHOP ON:

PRIORITISATION OF VARIABLES AND INDEX DEVELOPMENT USING ANALYTICAL HIERARCHAL PROCESS (AHP)

17 JULY, 2017 | 8.30AM – 5.30PM

DECISION MAKING WITH ANALYTICAL NETWORK PROCESS (ANP)

18 JULY, 2017 | 8.30AM – 5.30PM

REGISTER NOW
HRDF-claimable

Facilitator

Dr. Shujaat Mubarik

Associate Professor

Associate Dean, Faculty of Business Administration & Social Sciences

Mohammad Ali Jinnah University, Karachi, Pakistan

Dr. Mubarik brings a blend of experience both from academia and industry which increases the efficacy and learning of his workshops. He has been associated with Muhammad Ali Jinnah University Karachi from last 08 years, presently serving as Associate Dean, Faculty of Business Administration. He has a thorough experience of using Multi Attribute Data Management (MADM) techniques especially AHP, ANP, AHP Fuzzzy etc. He used AHP in his PhD thesis to develop the Human Capital Index and is considered among the early researchers who used AHP for such tasks. He is consulted by a number of postgraduate students, researchers and lecturers in Malaysia and abroad. He has conducted a number of workshops on ANP and AHP in Asian countries and he is widely popular for his teaching expertise in MADM, structural equation modelling and meta-analysis. The unique aspect of Dr. Mubarik's workshop is his individual attention to every participant. He strives to equip participants to find solution to their research problems. His research work has been published in highly reputable and diverse journals like Learning Organization, American Journal of Transplantation, International Journal of Social Economics, and Social Indicators Research etc.

PRIORITISATION OF VARIABLES AND INDEX DEVELOPMENT USING ANALYTICAL HIERARCHAL PROCESS (AHP) WORKSHOP

17 JULY, 2017

WORKSHOP DESCRIPTION

Researchers from diverse fields ranging from computer science to humanities **select** and **prioritise** variables to analyse their research objectives. Further, they also develop various kinds of **indices** to gauge a phenomenon. The index development becomes challenging especially when dealing with variables that are less quantitative in nature. Further, an index consists of multiple variables; the inclusion of the right variable according to its weightage remains an important task. In this context, Analytical Hierarchal Process (AHP) is perhaps, the most widely used decision-making approach in the world today which can synthesise over many dimensions. AHP gives a numerical value on a subjective judgement about the relative importance of each variable, and synthesise these considerations to assign a variable which has the highest priority in decision-making. Concisely, AHP provides selection, prioritisation, index development and sensitivity analysis of variables simultaneously. In case uncertainty arises in the decision making process, Fuzzy-AHP (an extended version of AHP) is used to overcome the problem.

WORKSHOP CONTENT

MORNING SESSION

Overview of AHP
- Decision theory
- The scope of the decree
- Decision analysis

Decision-making process with the AHP
- Stages of decision-making
- The process of calculation

Case Description AHP
- Making the AHP hierarchy
- Developing an AHP questionnaire

Working with AHP software
- Processing the pairwise comparison matrix
- Creating the hierarchy software
- Pairwise comparison matrix
- Local and global priority weights

Index Development
- Use of AHP to develop index
- Sensitive analysis

Summarizing the results for reporting

AFTERNOON SESSION

Publishing using AHP Methods
- Where to publish
- Effective results reporting

Application of AHP to solve business problems
- Developing models to solve problems in management, engineering, computer and natural scienceas

Fuzzy-AHP
- Difference between AHP & Fuzzy AHP
- Where Fuzzy AHP is used?

F-AHP methodology
- Triangular fuzzy number
- Triangular fuzzy pairwise comparison matrices
- Aggregate the groups decisions
- Compute the value of fuzzy synthetic extent and approximate the fuzzy priorities
- Consistency test

WHY SHOULD YOU ATTEND THIS WORKSHOP?

- ❑ This workshop will be a game-changer in your research voyage and equip you with this innovative technique to conduct your analysis
- ❑ The trainer will help you individually to address questions related to your methodology and perform analysis using your data
- ❑ Research papers using AHP have been published in high impact factor journals from all fields like *Omega, Social Indicator Research, Strategic HR Review, Expert Systems with Applications, and American Journal of Transplantation.*
- ❑ After attending this workshop, you will be able to:
  - ✓ Select the **best** variables for your model
  - ✓ Assign weightage to every component according to its importance
  - ✓ Develop index encapsulating representation of each selected variables according to its importance

SOFTWARE

- ❑ Application of AHP/F-AHP will be taught by using Expert Choice software. The Expert Choice software is able to process as many as 32765 respondents, with the number of nodes per cluster and unlimited decision alternatives

DECISION MAKING WITH ANALYTICAL NETWORK PROCESS (ANP) WORKSHOP

18 JULY, 2017

WORKSHOP DESCRIPTION

It is widely recommended for variables to be scientifically selected before proceeding to analysis. In the same way, it is also essential to prioritise variables to investigate their true impact. Such purposes are served by multi attribute data management (MADM) techniques. Among MADM, ANP is considered the most effective technique to overcome a number of weaknesses of other techniques. It transforms the problems into a network format and solves it by taking into account the interdependencies of variables irrespective of their position in the network. Hence, the Analytic Network Process (ANP) is perhaps the most widely used decision making approach in the world today which can synthesise over many dimensions. ANP gives a numerical value on a subjective judgement about the relative importance of each variable, and synthesises these considerations to assign a variable which has the highest priority in decision making. This precisely leads to developing index. This innovative way of prioritising and developing index has been highly applauded by reputable research journals and universities.

WORKSHOP CONTENT

MORNING SESSION

- Overview of ANP
- Structuring the decision problem in detail
- Determining the control criteria and sub-criteria in the control hierarchies
- Determining a complete set of network clusters (components) and their relevant elements
- Constructing a of super matrix

AFTERNOON SESSION

- Paired comparisons
- Computation of the limit priorities of the stochastic super matrix
- Synthesis
- Determining strategic criteria and their priorities
- Performing sensitivity analysis

SOFTWARE

- All participants will be provided the Super Decisions software to perform ANP
- The workshop will be conducted in a computer lab; however participants can bring their own laptop for installation of the software.

WHY SHOULD YOU ATTEND THIS WORKSHOP?

- This workshop will act as a game changer in your research voyage and will equip you with this innovative technique to conduct your analysis.
- The trainer will help you individually to address questions related to your methodology and will enable you to perform analysis with your own data.
- Research papers using ANP have been published in high impact factor journals from all fields like *Omega, Social Indicator Research, Strategic HR Review, Expert Systems with Applications and Management Decision.*

REGISTRATION FEE

	Prioritisation of Variables & Index Development Using Analytical Hierarchal Process (AHP)	Decision Making With Analytical Network Process (ANP)	Registration For Both Workshops
STUDENTS*	RM400	RM400	RM700
OTHERS	RM450	RM450	RM800

GROUP FEE	Three (3) or more participants from the same organisation are entitled to a 10% discount from the total fee
EARLY BIRD FEE	10% discount from the registration fee will be given to participants who register **BEFORE 16 JUNE, 2017**

* Students who register must provide a copy of your valid student card – front and back

○ Participants can avail only one discount, either early bird or group discount

○ Fee includes full refreshments: lunch and two (2) tea breaks for the duration, workshop notes and a certificate of attendance

Participant's Information

Participant (1) :_____

Organisation :_____

Designation :_____

Email :_____

Mobile No. :_____

Please select your preferred option:

❑ 17 July, 2017- Prioritisation of Variables & Index Development Using Analytical Hierarchal Process (AHP)

❑ 18 July, 2017- Decision Making With Analytical Network Process (ANP)

Participant (2) :_____

Organisation :_____

Designation :_____

Email :_____

Mobile No. :_____

Please select your preferred option:

❑ 17 July, 2017- Prioritisation of Variables & Index Development Using Analytical Hierarchal Process (AHP)

❑ 18 July, 2017- Decision Making With Analytical Network Process (ANP)

Participant (3) :_____

Organisation :_____

Designation :_____

Email :_____

Mobile No. :_____

Please select your preferred option:

❑ 17 July, 2017- Prioritisation of Variables & Index Development Using Analytical Hierarchal Process (AHP)

❑ 18 July, 2017- Decision Making With Analytical Network Process (ANP)

Contact Details (Billing Purposes)

Name	
Designation	
Email	
Address	
Tel/ Mobile No	

Payment Options [Please tick as applicable]

	Cash		**Government L.O/ P.O**
	Cheque		**Invoice**

Foreign participants are required to pay via interbank transfer in equivalent Ringgit Malaysia (RM)

Payment is due prior to commencement of programme and must be made by:

1. **Cash:** Payment can be made on the day of the programme provided that an LoU is submitted to UMCoRS two (2) weeks before the programme date

2. **Cash and Cheque Deposit/ Online Transfer/ Telegraphic Transfer/ Government L.O.:** Payment must be made by crossed A/C Payee and issued in favour of "**Bendahari Universiti Malaya**"

   Account No: 80-0127999-8
   Bank: CIMB Bank Berhad,
   Universiti Malaya,
   50603 Kuala Lumpur
   Swift Code: CIBBMYKL

3. Cheques by post must be addressed to:

   University of Malaya Malaysian Centre of Regulatory Studies (UMCoRS),
   Level 1, Faculty of Law
   50603, Kuala Lumpur.

4. Please email a clear copy of your supporting document (deposit slip, EFT advice, remittance advice, voucher, etc) once payment is made.

5. All fees are exclusive of any kind of taxes, withholding or otherwise. In any case of taxes applicable, the client has to ensure the taxes are paid on top of the fees paid for this programme. Compliance with the local tax laws is the responsibility of the client

6. Any bank charges and/ or expenses incurred must be borne by the payer

7. A confirmation letter and invoice will be sent upon receipt of your registration. Full payment is required before the programme. Only those participants whose fees have been paid in full will be admitted to the event.

Cancellation and Refund Policy:

- If any registered participant cannot attend the workshop, substitutions/ replacements are welcome at any time.
- Cancellations within 14 days prior to the programme will carry a 50% cancellation fee.
- Cancellations within less than 7 days prior to the programme date carry a 100% liability.
- All cancellations must be made in writing (email) to UMCoRS

To register, please send/ email this form **BEFORE 03 JULY 2017** to:

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Level 13, Wisma R&D, University of Malaya
59990 Jalan Pantai Baru, Kuala Lumpur, Malaysia.
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Facebook: www.facebook.com/UMCoRS
Twitter: UMCoRS
Contact Persons: Ms. Yana