

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

19 & 20 October, 2016 | 8.30am – 5.30pm | Wisma R&D, University of Malaya

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## WORKSHOP DESCRIPTION

Researchers from diverse fields ranging from computer science to humanities **select** and **prioritise** the 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. Additionally, 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. In summary, AHP provides selection, prioritisation, index development and sensitivity analysis of variables simultaneously.

## 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
- ❑ After attending this workshop, participants will be able to:
  - ✓ Select the **best** variables for their model
  - ✓ Assign weightage to every component according to its importance
  - ✓ Develop index encapsulating representation of each selected variables according to its importance



The workshop will be conducted in a computer lab; however participants can bring their own laptop for installation of the software.

All participants will be provided with two (2) software – Expert Choice and Goepel, K.D. AHP (Microsoft Excel version) to perform AHP. The Expert Choice software is able to process as many as 32765 respondents, with the number of nodes per cluster and unlimited decision alternatives

### DAY 1: BASIC AHP

#### Overview of AHP

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

#### Decision-making process with the AHP

- Decision-making with AHP stage
- The process of calculation of AHP

#### Case Description AHP

- Developing the AHP hierarchy
- Developing an AHP Questionnaire
- Processing pairwise comparison matrix

#### Working with the AHP Questionnaire Developed

- Processing the pairwise comparison matrix
- Creating the hierarchy software
- Pairwise comparison matrix
- Geometric mean and local and global priority weights

### DAY 2: ADVANCED AHP

#### Publishing using AHP Methods

- Where to publish
- Why publish
- Effective results reporting

#### Index Development

- Use of AHP to develop index
- Application of AHP index

#### Advanced analysis

- Sensitivity analysis
- Developing models using AHP for simulation

#### Application of AHP for solving business problems

- Developing model for solving problems in management, engineering, computer and natural sciences

\* PARTICIPANTS CAN CHOOSE TO REGISTER FOR DAY 1: BASIC AHP OR DAY 2: ADVANCED AHP, OR FOR BOTH DAYS.

## ASSOCIATE PROFESSOR DR. SHUJAAT MUBARIK

Dr. Mubarik brings a blend of experience from academia and industry which increases the efficacy and learning of his workshops. He has been associated with Muhammad Ali Jinnah University Karachi for the last 8 years, presently serving as Head of Department of Management Sciences. He has a thorough experience of using AHP. He used AHP in his PhD thesis to develop a Human Capital Index and is considered among the early researchers who used AHP for such tasks. He is consulted by numerous postgraduate students, researchers and lecturers in Malaysia and abroad. He has conducted several workshops on AHP in Asian countries and he is widely popular for his teaching expertise in AHP, 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 solutions 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.



## REGISTRATION FEE

ONE DAY TWO DAYS

**STUDENTS\*** RM300 RM400

**OTHERS** RM400 RM550

**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 19 SEPTEMBER, 2016**

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

*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 which days you will be attending:*

Day 1: Basic AHP (19 October 2016)

Day 2: Advanced AHP (20 October 2016)

**Participant (2)** : \_\_\_\_\_

**Organisation** : \_\_\_\_\_

**Designation** : \_\_\_\_\_

**Email** : \_\_\_\_\_

**Mobile No.** : \_\_\_\_\_

*Please select which days you will be attending:*

Day 1: Basic AHP (19 October 2016)

Day 2: Advanced AHP (20 October 2016)

**Participant (3)** : \_\_\_\_\_

**Organisation** : \_\_\_\_\_

**Designation** : \_\_\_\_\_

**Email** : \_\_\_\_\_

**Mobile No.** : \_\_\_\_\_

*Please select which days you will be attending:*

Day 1: Basic AHP (19 October 2016)

Day 2: Advanced AHP (20 October 2016)

## 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 13, Wisma R&D, University of Malaya,  
Jalan Pantai Baharu, 59990 Kuala Lumpur.

4. Please fax or 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 or fax) to UMCORS

To register, please send/ fax/ email this form **BEFORE 12 October 2016** to:

Address: University of Malaya Malaysian Centre of Regulatory Studies (UMCoRS),  
Level 13, Wisma R&D, University of Malaya  
59990 Jalan Pantai Baru, Kuala Lumpur, Malaysia.

Tel: 03-2246 3372/ 3363/ 3370/ 3368

Fax: 03-2246 3367

Email: [umcors.events@um.edu.my](mailto:umcors.events@um.edu.my)

Web: [www.umcors.um.edu.my](http://www.umcors.um.edu.my)

Facebook: [www.facebook.com/UMCoRS](http://www.facebook.com/UMCoRS)

Twitter: UMCORS

Contact Persons: Ms. Amelia/ Ms. Yana