In conjunction with the joint conferences iCMS2017 & UROS2017, the organizing committee invites participants to our pre-conference workshop.

Who Should Attend?
Lecturers, Researchers, Engineers, Students, Industry Professionals and Scientists of any discipline who wish to explore R and Big Data. Since this is a continuation to our first R pre-conference workshop in 2015, prior experience with R is required since the instructor will not cover the very basics of R but doing an introductory course on efficient methods in R. Thus, please be prepared for knowing some basics on R.

The following URL may help you get started
- either knowledge in basic R (preferred) or doing the examples on http://tryr.codeschool.com/
or/package RSwirl beforehand.
- reading http://adv-r.had.co.nz/ until (and including) the chapter on functions.

ABOUT
The R platform provides a powerful and comprehensive platform for visualizing data, understanding and evaluating statistical models, and effectively communicating research results to both technical and nontechnical audiences. R is a programming language and software environment for statistical computing and graphics supported by the R Foundation for Statistical Computing. The R language is widely used among statisticians and data miners for developing statistical software and data analysis. R is ready to use for applications in data science and data analytics also for big data sets. In the workshop, some important issues are touched, whereas the focus is the use of efficient tools in R.

Speaker
Matthias Templ, PhD
• Owner of data analysis company OG.
• Lectures at the Institute of Data Analysis & Process Design, Zurich University of Applied Sciences, Switzerland; An associate professor at Vienna University of Technology; Researcher at Statistics Austria.
• Consultant for UNIDO, the World Bank and the OECD.
• Published 45 papers in scientific journals
• Author of R packages – sdcMicro, simPop, robCompositions & VIM
• Author of books: Statistical Disclosure Control for Microdata: Methods and Application in R & Simulation for Data Science with R
• Editor-in-chief of the Austrian Journal of Statistics; associate editor for Springer’s Journal Wirtschafts-und Sozialstatistische Archiv; editor for journal The Register.

For more information, please visit www.icmskdh.net
FACULTY of COMPUTER & MATHEMATICAL SCIENCES
Universiti Teknologi MARA (UiTM) Cawangan Kedah, Kampus Sungai Petani, 08400 Merbok, Kedah, Malaysia
Workshop Objectives

It is expected that after this 2-day workshop, participants will be able to:

- use efficient R code
- perform parallel computing using R
- use R packages to perform data analytics
- work with big data sets using R packages like dplyr, Rcpp, ggplot2, and etc

Program Schedule

<table>
<thead>
<tr>
<th>DAY 1 SUNDAY (5th Nov 2017)</th>
<th>DAY 2 MONDAY (6th Nov 2017)</th>
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<tbody>
<tr>
<td>8.15 – 8.45 Registration</td>
<td>Registration</td>
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<tr>
<td>10.45 – 11.00 COFFEE BREAK AND DISCUSSION</td>
<td></td>
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<tr>
<td>11.00 – 13.00 Indexing and vectorized computations and data manipulation with base R. The aim is to use efficient R code and functions.</td>
<td>Some comments and issues when working with big data sets. We touch issues on keeping data in a data base and outline some approaches to deal with big data sets.</td>
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<tr>
<td>13.00 – 14.00 LUNCH AND DISCUSSION</td>
<td>Data visualization using ggplot2 to produce nice looking graphics with less code. The main aim is to understand the concept of the grammar of graphics implementation of ggplot2 (aethetics, geometric objects, statistical objects, scales, themes). The differences to the graphics package are shown and participants will be trained to use ggplot2 on example data sets.</td>
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<tr>
<td>14.00 – 17.00 Efficient and fast data manipulation with dplyr (and optionally data.table) to speed up your data manipulation and use a consistent approach for data manipulation. Seven useful functions when working with dplyr and the use of pipeline syntax. Application of these functions on example data.</td>
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<tr>
<td>17.00 TEA BREAK</td>
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</tbody>
</table>

Workshop Fee Per Participant

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Early Bird</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Participant</td>
<td>RM 980</td>
<td>RM 1500</td>
</tr>
<tr>
<td>International Participant</td>
<td>USD 250</td>
<td>USD 380</td>
</tr>
<tr>
<td>Local Student</td>
<td>RM 890</td>
<td>RM 1200</td>
</tr>
<tr>
<td>International Student</td>
<td>USD 230</td>
<td>USD 320</td>
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</tbody>
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PAYMENT

Bank Name: Bank Islam Malaysia Bhd (Sungai Petani Branch),
Bank Address: No.71 & 72 Lorong, Legenda 1, Legenda Heights, 08000 Sungai Petani, Kedah, MALAYSIA
Bank Account Number: 02020010021120

Bank Name: Akaun Amanah UiTM Kedah
Bank Address: Bendahari UiTM Kedah
Swift Code: BIMBMYKL
GST: 001418756096

For more information, please visit www.icmskdh.net
To register please go to: http://submit.confbay.com/conf/icms2017ws