



Athabasca University Faculty of Graduate Studies Workshops

Research Software Tools

Introduction to SPSS: Saturday, May 19, 2018, 9:00 a.m. - 10:30 a.m. (MT)

Introduction to R for Data Analysis: Saturday, May 26, 2018, 9:00 a.m. - 10:30 a.m. (MT)

Available for all Graduate Students of Athabasca University,
University of Lethbridge, University of Alberta and University of Calgary

Mode of delivery: Adobe Connect

Registration deadline is May 15, 2018 (for SPSS) and May 22, 2018 for (R for Data)

Moderator: Dr. Oscar Lin, Associate Dean, Faculty of Graduate Studies, Athabasca University

Agenda

Session 1 – May 19, 2018

9:00 a.m. – 10:30 a.m. Introduction to SPSS

Presenter: Dr. Sami A. Houry, Institutional Research and Assessment Officer, Office of Institutional Studies, Athabasca University

In this session, you will learn about:

- Creating and formatting a data file
 - Entering data
 - Importing a data file and utilizing data views and variable views
 - Understanding variables: transforming variables, variable types, values, missing values and measures
 - Generating frequencies and descriptive statistics
 - Generating cross-tabulations and associated inferential statistics.
-
-

Session 2 – May 26, 2018

9:00 a.m. – 10:30 a.m. Introduction to R for Data Analysis

Presenter: Dr. Dunwei Wen, Associate Professor, Faculty of Science and Technology, Athabasca University

In this session, you will learn about:

- Explaining data objects and manipulations of R programming language
- Loading and exploring data in R Commander (Rcmdr)
- Using Rcmdr to run and present basic descriptive analysis
- Exploring codes and performing R programs in RStudio
- R graphics for data visualization
- Performing basic statistical inference including estimation and hypothesis test
- Analysis of variance
- Basic predictive analysis including linear regression, multiple regression and logistic regression

Instructor Bios:



Dr. Sami A. Houry is an institutional research and assessment officer with the Office of Institutional Studies at Athabasca University. With a focus on research methods and more specifically statistics and data analysis, his 20 year corporate experience spans various positions in information technology, business consulting and education, including marketing research, strategic and operational planning, program reviews, and project management. In addition to his professional work, for the past seven years Dr. Houry has been undertaking research in Complexity Science.

Dr. Houry has a Bachelor of Science degree in Physics from the University of Toronto, an MBA from Memorial University of Newfoundland, and a Certified Marketing Research Professional designation from the Marketing Research and Intelligence Association. He completed his doctoral studies at Athabasca University with a focus on Complexity Science applications in management, the coming together of his physics and business backgrounds.



Dr. Dunwei Wen is Associate Professor in the School of Computing and Information Systems at Athabasca University, Alberta, Canada. He received his PhD in pattern recognition and intelligent systems from Central South University, and MSc and BEng from Tianjin University and Hunan University respectively. Prior to his current position, he was a visiting scholar in the Department of Computing Science at the University of Alberta, and Professor at the School of Information Science and Engineering at Central South University.

Dr. Wen's research interests include artificial intelligence, machine learning, natural language processing, data mining, text analytics, pattern recognition and intelligent systems, and their application in industry, medicine and education. He has published more than sixty papers in peer-reviewed journals and conferences. Dr Wen has taught a number of graduate and undergraduate courses in computing and information systems such as Artificial Intelligence, Statistical Language Processing for Text Analytics, Business Intelligence, Theory of Computation, Data Mining, Intelligent Control, and Foundations of Software Techniques, and has supervised fifty graduate students and research assistants in these universities.

Notes and Learning Outcomes:

- The focus of the sessions should be practical (learning by doing principle) to enhance the learning relevance to workshop participants.
- Participants will be sent course packages including lecture notes, references, and instructions on how to download and install the research software tools (e.g. free trial versions) prior to the workshop sessions.
- Given the introductory level, the workshop learning outcomes are as follows:
 - 1) Describe diverse quantitative research software tools;
 - 2) Discuss the relevance of various research software tools for data analyses;
 - 3) Apply some basic operations/functionalities with diverse quantitative research software tools;
 - 4) Assess the overall usefulness of diverse quantitative research software tools.