



Unlock  
Your  
Potential



# 2024 | Training Calendar

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## WHO WE ARE

M&S Research Hub is a multidisciplinary research and academic Institute headquartered in Kassel, Germany.

Networking and partnering with major academic networks worldwide and with more than half of the staff and the academic team working remotely from the USA, UK, Malaysia, and around the World, we organize online and onsite live training in the fields of advanced econometrics, statistics, data analysis, and programming for institutes and individuals. On another front, we design and administrate CGE modeling solutions, development, survey, and impact assessment projects for NGOs, government, and funding institutes.

# OUR LEGACY

We have conducted customized training programs for research centers, central banks, and government teams to help them improve their data modeling and analysis skills.

We have trained groups from a variety of organizations, including the World Bank, UN, IMF, the Saudi Arabian Finance Ministry, the Brazilian Economic Ministry, and the central banks of UAE, Congo, and Mozambique to build up their data analysis skills and leverage their skills to accomplish their regular duties while dealing with the complexities of work and data.



University  
of Manitoba



UNIVERSITY OF LEEDS



United  
Nations



THE WORLD BANK



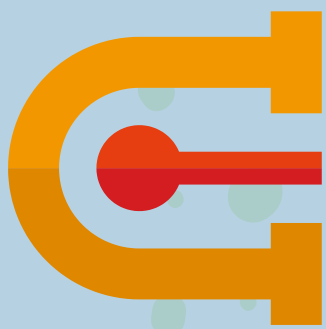
EPFL





## TRAINING HIGHLIGHTS

- Multilingual team of experienced econometricians
- Certified certificate after each module
- Flexible schedule
- Data files, codes, material, literature, and recorded sessions are inclusive
- Learn from home/office 'online training' or onsite training
- Full training covering theories, applications, and hands-on exercises using all common statistical packages
- Opportunity to participate in existing research projects.



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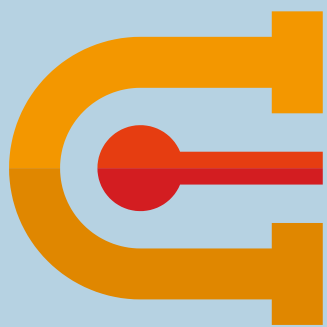
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# *Mark in Your Calendar*



## 2024

*Annual Global  
Economics Confrenece  
(GEC)*

**S**ubscribe to be among the first to  
receive exclusive event details!



# 01. General Equilibrium Macroeconomic (GEM)



## Dates

Jan–March 2024

**4  
Modules**

**Compact 60-hour live and online training covering the following main topics**

Module 1: Intro. to CGE using GTAP

Module 2: CGE in GAMS

Module 3: Advanced CGE in GAMS & GTAP

Module 4: DSGE

## TARGET PARTICIPANTS

**Register**

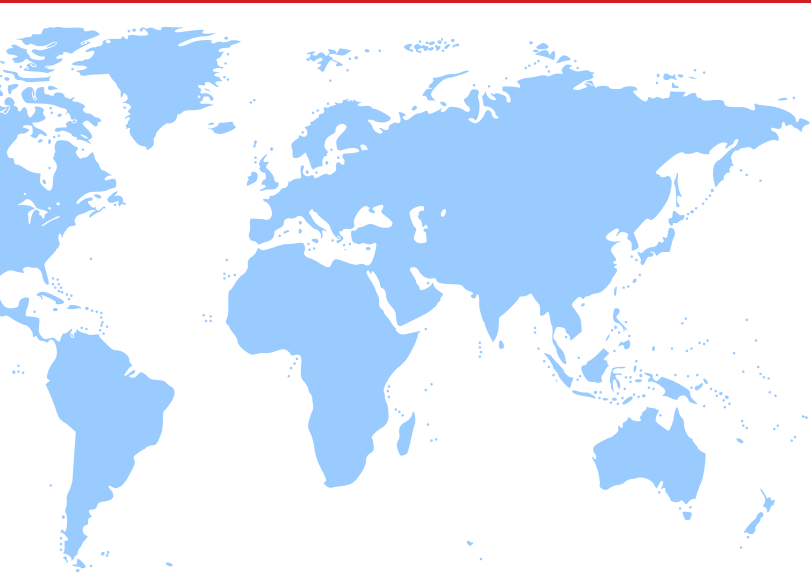
### PUBLIC OFFICIALS

working at central banks, ministries, and government economic units. GEMs are the perfect tools for improving modeling skills to analyze aggregate economic stances and assess policy impact.

### RESEARCHERS & STUDENTS

who are eager to enhance their macroeconomic modeling skills and advance beyond their regular curricula.

## 02. Computable General Equilibrium (CGE) using GTAP



### Dates

Jan. 2024

May. 2024

Sep. 2024

**Compact 20-hour live and online training covering the following main topics**

1. CGE Model introduction
2. Production and Demand theories
3. GTAP model and database introduction
4. Modeling Nested Production functions in GEMPACK
5. Elasticities: CES, Armington calibration
6. SAM/I-O table construction

### TARGET PARTICIPANTS

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### RESEARCHERS & STUDENTS

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## 02. Computable General Equilibrium (CGE) using GAMS



### Dates

Feb. 2024

Aug. 2024

**Compact 14-hour live and online training covering the following main topics**

1. Modeling a simple economy
2. Arrow-Debreu, Cobb-Douglas, and other CGE-related functions
3. Modeling the government and the rest of the world
5. Introduction to Dynamic CGE models in GAMS

### TARGET PARTICIPANTS

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### PUBLIC OFFICIALS

working at central banks, ministries, and government economic units. GEMS are the perfect tools for improving modeling skills to analyze aggregate economic stances and assess policy impact.

### RESEARCHERS & STUDENTS

who are eager to enhance their macroeconomic modeling skills and advance beyond their regular curricula.

## 02. Advanced Computable General Equilibrium (CGE) using GAMS & GTAP



### Dates

Mar. 2024

Oct. 2024

**Compact 14-hour live and online training covering the following main topics**

1. Working with GTAP slack variables
2. Introducing new conditions to GTAP through code modifications (in GEMPACK)
3. Linking GTAP with econometrics (R )
4. Setting up a dynamic GTAP
5. Linking GTAP with a GAMS model (Global Timber Model)
6. Linking GTAP with a PE model (poverty analysis)

### TARGET PARTICIPANTS

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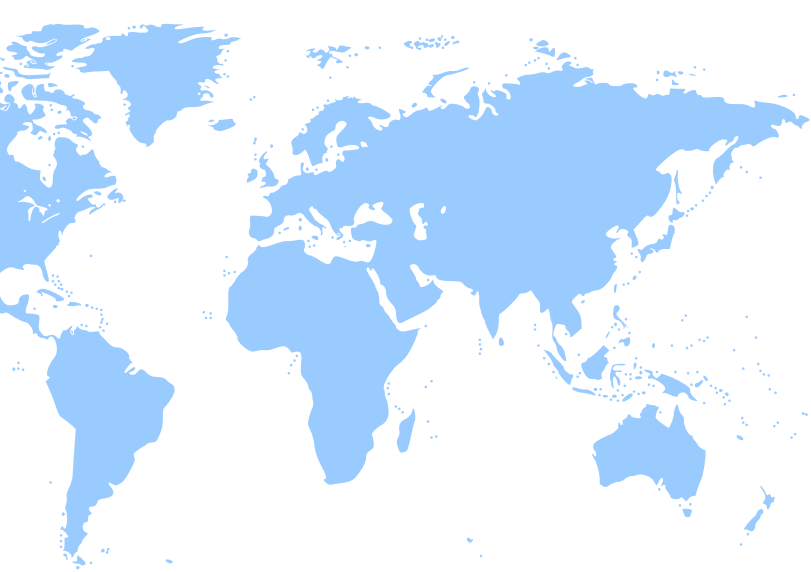
# **CGE MODEL DESIGN**

for Governments and Organisations

[CLICK HERE TO](#)

Explore the service details  
and areas of activities

# 03. Dynamic Stochastic General Equilibrium (DSGE) using Dynare and Octave



## Dates

Mar. 2024

Jun. 2024

Oct. 2024

**Compact 20-hour live and online training covering the following main topics**

1. Introduction to DSGE Models and Dynare
2. New Keynesian Models, Euler equation and New Philipps Curve
3. Small Open Economy Models
4. Extensions to New Keynesian Models and Habit formation
5. Kalman Filter and Estimation Methods
6. Bayesian Methods and Markov Chain Monte Carlo

## TARGET PARTICIPANTS

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## PUBLIC OFFICIALS

working at central banks, ministries, and government economic units. GEMs are the perfect tools for improving modeling skills to analyze aggregate economic stances and assess policy impact.

## RESEARCHERS & STUDENTS

who are eager to enhance their macroeconomic modeling skills and advance beyond their regular curricula.

## 04. Basic Econometrics Eviews and STATA



### Dates

Feb. 2024

Jun. 2024

Sep. 2024

**Compact 9-hour live and online training covering the following main topics**

1. Classical linear regression assumptions
2. Specification problems
3. OLS
4. Hypothesis Testing
5. Single & and multivariate analysis
6. Regression analysis
7. WLS, GLS and FMGLS

**TARGET  
PARTICIPANTS**

**Register**

### STUDENTS, EDUCATORS AND PUBLIC OFFICIALS

those who require econometrics knowledge for policy-making and administration, teaching and learning.

### JUNIOR RESEARCHERS & PROFESSIONALS

Those working in various industries who need a professional understanding of applied econometrics to excel in their careers and research, such as marketing professionals, managers, and policymakers.



# 05. Time Series Econometrics Eviews and STATA



## Dates

Mar. 2024

July. 2024

Oct. 2024

**Compact 28-hour live and online training covering the following main topics**

1. Stationarity and model selection criteria
2. Dynamic time series models (e.g. VAR, XVAR, SVAR, VECM)
3. ARDL, ARMA & ARIMA
4. Volatility models: ARCH family
5. In and out-sample Forecasting
6. Introduction to Mixed Data Sampling (MIDAS)
7. HAC Estimators

## TARGET PARTICIPANTS

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## STUDENTS, EDUCATORS AND PUBLIC OFFICIALS

those who require econometrics knowledge for policy-making and administration, teaching and learning.

## JUNIOR RESEARCHERS & PROFESSIONALS

Those working in various industries who need a professional understanding of applied econometrics to excel in their careers and research, such as marketing professionals, managers, and policymakers.



### Dates

April. 2024

Aug. 2024

Nov. 2024

**Compact 30-hour live and online training covering the following main topics**

1. Panel specification tests (Chow, wald, panel unit root, Hausman, etc.)
2. Dynamic panel models: DPD, panel VAR & GMM, IV models
3. Panel ARDL
4. Panel Data for Limited Dependent Variables
5. DCC under GMM
6. Dynamic Threshold
7. Intro to Global VAR

## TARGET PARTICIPANTS

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### STUDENTS, EDUCATORS AND PUBLIC OFFICIALS

those who require econometrics and data analysis knowledge for policy-making, administration, teaching and learning.

### JUNIOR RESEARCHERS & PROFESSIONALS

Those working in various industries who need a professional understanding of applied econometrics to excel in their careers and research, such as marketing professionals, managers, and policymakers.

## 07. Advanced Econometrics Eviews and STATA



### Dates

May. 2024

Sep. 2024

Dec. 2024

**Compact 27-hour live and online training covering the following main topics**

1. Nonlinearity: testing & appropriate models
2. Structural equation modeling
3. Logit & Probit models
4. Censored & Truncated models
5. Endogeneity and instrumental variables model
6. Treatment effect Models

## TARGET PARTICIPANTS

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### STUDENTS, EDUCATORS AND PUBLIC OFFICIALS

those who require econometrics and data analysis knowledge for policy-making, administration, teaching and learning.

### JUNIOR RESEARCHERS & PROFESSIONALS

Those working in various industries who need a professional understanding of applied econometrics to excel in their careers and research, such as marketing professionals, managers, and policymakers.

## 08. Prog-metrics: Common models using Python-Practical labs only

### Dates

May. 2024

Dec. 2024



**Compact 9-hour live and online training covering the following main topics**

- 1.Introduction to Data Processing and Linear Regression in Python
- 2.Cross-Section and Panel Data Analysis in Python
- 3.Univariate and Multivariate Time-series Analysis in Python
- 4.Advanced (Open) Topics

### TARGET PARTICIPANTS

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### STUDENTS, EDUCATORS AND PUBLIC OFFICIALS

those who require econometrics and data analysis knowledge for policy-making, administration, teaching and learning.

### JUNIOR RESEARCHERS & PROFESSIONALS

Those working in various industries who need a professional understanding of applied econometrics to excel in their careers and research, such as marketing professionals, managers, and policymakers.

## 09. Prog-metrics: Common models using R- Practical labs only



### Dates

March. 2024

July. 2024

**2 Modules**

**Compact 15-hour live and online training covering the following main topics**

- 1.Introduction to R, Data in R
- 2.Regression Analysis, Time Series Analysis Volatility models (ARIMA and GARCH systems) and Multivariate Endogenous Models (VAR Family)
- 3.Quantile Regression
- 4.Parametrics and Nonparametrics Regressions: splines and kernel regressions

## TARGET PARTICIPANTS

**Register**

## STUDENTS, EDUCATORS AND PUBLIC OFFICIALS

those who require econometrics and data analysis knowledge for policy-making, administration, teaching and learning.

## JUNIOR RESEARCHERS & PROFESSIONALS

Those working in various industries who need a professional understanding of applied econometrics to excel in their careers and research, such as marketing professionals, managers, and policymakers.

# 10. Bayesian for Research and Data Science



## Dates

May. 2024

July. 2024

Oct. 2024

**Compact 15-hour live and online training covering the following main topics**

1. Introduction and Setup
2. Probability Theory
3. Model Inference
4. Bayesian A/B-testing
5. Hierarchical Models
6. Simple Linear Regression
7. Logistic Regression

## TARGET PARTICIPANTS

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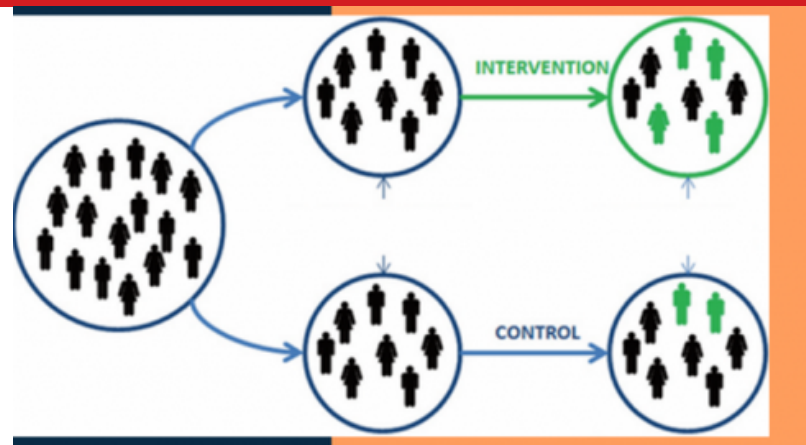
## DATA SCIENTISTS AND RESEARCHERS

who want to expand their knowledge and skills in Bayesian statistics to enhance their data analysis techniques.

## ANALYSTS AND ACADEMICS

Business analysts, financial analysts, and other professionals who work with data and want to understand Bayesian methods for more robust decision-making. Lecturers who may want to incorporate Bayesian concepts into their teaching curriculum.

# 11. Behavioral Econometrics using STATA



## Dates

Feb. 2024

Oct. 2024

## Compact 17-hour live and online training covering the following main topics

1. Historical development
2. Differences between classical and behavioral theory
3. Loss aversion, time inconsistency, social norms, reciprocity, status quo, etc.
4. What is Nudging? and Toolkit of instruments
5. Engagement Mechanisms, Default Options ( defaults ), Social Comparison (descriptive and prescriptive).

## TARGET PARTICIPANTS

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## MARKETING

those who want to develop strategies that are used to attract potential consumers through different methods

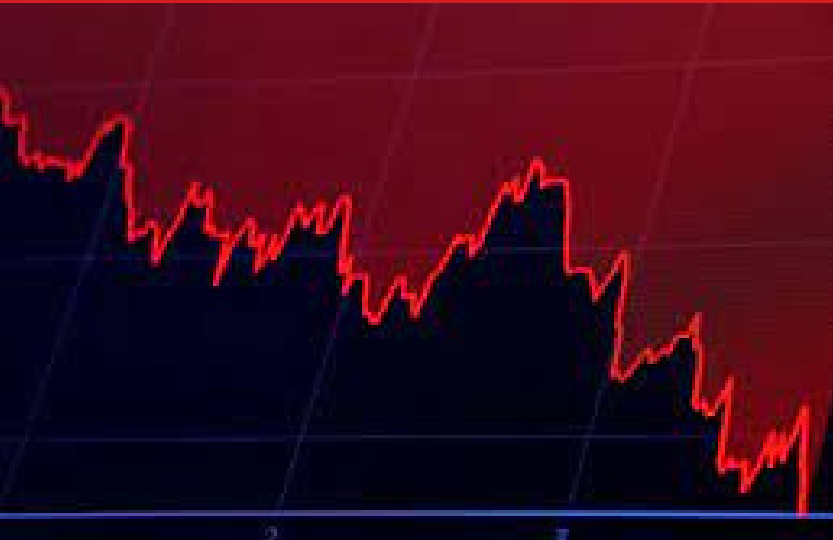
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## PROFESSIONALS AND ECONOMISTS

Professionals and students in the field of economics who want to delve deeper into the application of econometric techniques to study and model behavioral economics. Individuals from various disciplines, including psychology, sociology, and finance, who are interested in incorporating behavioral econometric methods into their research.



## 12. Wavelets and Quantile on Quantile using R



### Dates

Access offline course  
anytime

**Compact 8-hour offline training covering the following main topics**

1. Introduction to R-Programming Language and R-studio Interface
2. The basic concept of Wavelet and its applications
3. Wavelet correlation, wavelet covariance, and cross-wavelet
4. Continuous wavelet transform and cross wavelet transform
5. Introduction to quantile on quantile and quantile autoregressive
6. Granger causality in Quantile on Quantile regression
7. Non-parametric quantile methods

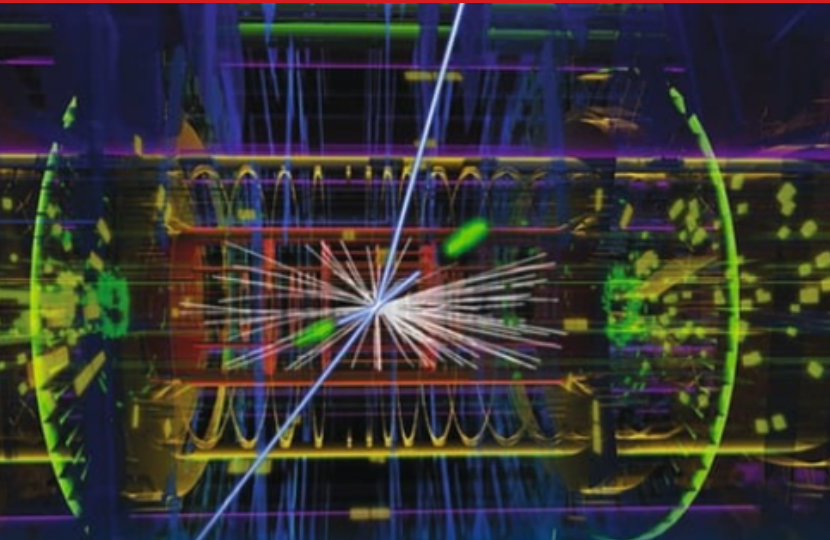
**TARGET  
PARTICIPANTS**

**Register**

**SCHOLARS, BANKERS, AND DATA PRACTITIONERS**

Learn and enhance their knowledge about Wavelet and quantile methods using R programming language and Matlab.

# 13. Linear Programming and Sensitivity Analysis using GAMS



## Dates

May 2024

## 4-day online Workshop covering the following main topics

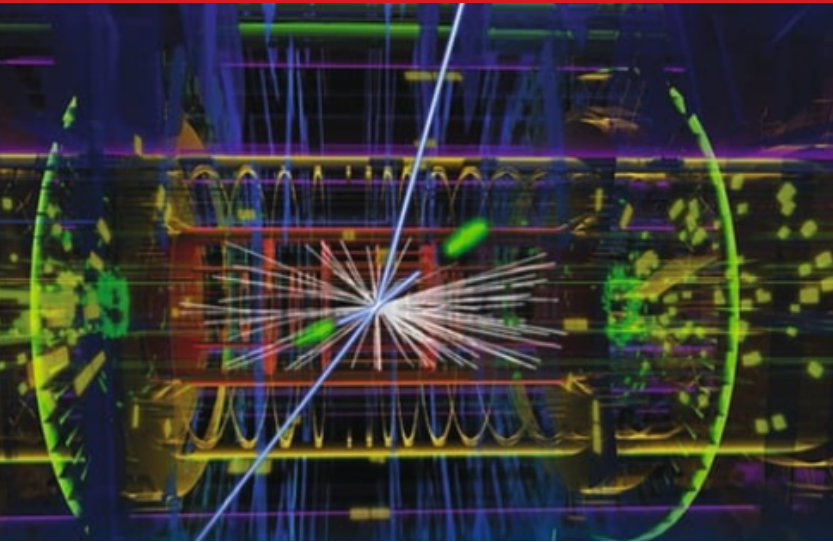
1. Introduction to Optimization
2. Unconstrained Optimization
3. Linear Programming (LP), Integer Programming (IP)
4. Nonlinear Programming (NLP) and Sensitivity Analysis
5. Introduction to GAMS
6. Problem Formulation and Mathematical Modeling
7. Sensitivity Analysis in GAMS

## LEARNING OBJECTIVES

[Register](#)

- \*Grasp fundamental concepts of optimization and their real-world applications.
- \*Explore various optimization techniques, understanding their strengths and weaknesses.
- \*Develop proficiency in modeling and solving optimization problems using GAMS.
- \*Apply optimization principles to address complex issues in economics, business, engineering, and other domains.
- \*Foster critical thinking and problem-solving skills.

## 14. Biostatistics using STATA and R



### Dates

April 2024

Aug. 2024

### Compact **20-hour online** and live training covering the following main topics

1. Hazard function and Hazard ratios, Proportional Hazard Assumptions
2. Parametric and semi-parametric Hazard Models
3. Drawing Kaplan Meier Curves in R and STATA, Log-rank test in R and
4. What are Randomized Controlled Trials?
5. Scientific Principles of RCTs, Justification of RCTs
6. Designing and Monitoring of RCTs
7. Multiphase Optimization Strategy Implementation Trial (MOST) Trial

## INTRO & LEARNING OBJECTIVES

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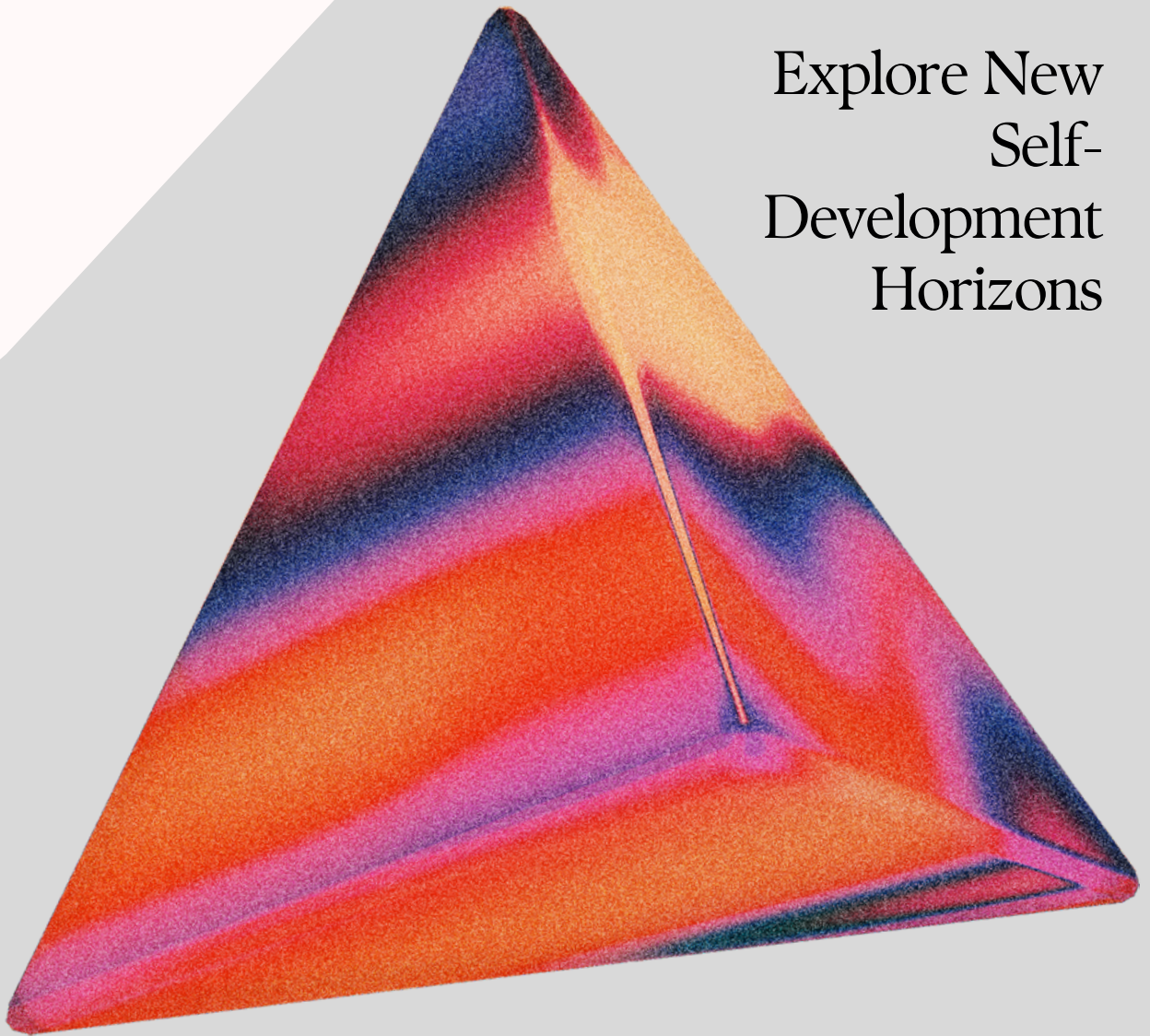
Biostatistics is a work-kit of tools and methods to collect, analyze, and interpret biological data especially data relating to medicine. These methods allow you to quantify the uncertainty associated with simulation models, which are used to forecast the spread of infection/the efficiency of a new medicine/the significance of a particular human gene in disease control, etc.

M&S Research Hub organizes comprehensive structured training for researchers, graduate students, practitioners, and scientists at all proficiency levels to teach foundations on biostatistical methods and the design of clinical trials and survival analysis.

**FREE**

# Webinar Series

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