



# 7<sup>TH</sup> AFRICAN INTERNATIONAL CONFERENCE (AIC) ON STATISTICS

ADVANCED STATISTICS AND DATA SCIENCE IN AFRICA

# 2023 PROGRAM



**DAY 1**  
12 JUNE 2023 MONDAY

AT THE CONFERENCE CENTER  
OF CADI AYYAD UNIVERSITY  
MARRAKESH



## PRE-CONFERENCE WORKSHOPS RESERVED FOR WORKSHOPS PARTICIPANTS ONLY

8:00 AM - 9:00 AM WORKSHOP REGISTRATION <b>AIC-MOROCCO TEAM</b>	9:00 AM - 9:05 AM PROGRAM INTRODUCTION <b>YEHENEW KIFLE, UMBC, USA</b>
9:05 AM - 9:10 AM WELCOME ADDRESS <b>NAGARAJ NEERCHAL, UMBC, USA</b>	9:10 AM - 10:30 AM WORKSHOP-I <b>T. M JACOB AND GINTO POTTACKAL</b> International Workshop on Data Science and Analytics
10:30 AM - 11:00 AM COFFEE-TEA BREAK	11:00 AM - 12:30 PM WORKSHOP-I <b>T. M JACOB AND GINTO POTTACKAL</b> International Workshop on Data Science and Analytics
12:30 PM - 2:00 PM LUNCH BREAK	2:00 PM - 4:00 PM WORKSHOP-II <b>NABENDU PAL</b> Parametric Bootstrap with Applications
4:00 PM - 4:30 PM COFFEE-TEA BREAK	4:30 PM - 6:00 PM WORKSHOP-II <b>NABENDU PAL</b> Parametric Bootstrap with Applications

# DAY 2

13 JUNE 2023 TUESDAY

AT THE CONFERENCE CENTER  
OF CADI AYYAD UNIVERSITY  
MARRAKESH



8:00 AM - 9:00 AM

CONFERENCE REGISTRATION

AIC-MOROCCO TEAM

## OPENING

9:00 AM - 9:10 AM

PROGRAM INTRODUCTION

**NAGARAJ NEERCHAL AND YEHENEW KIFLE, UMBC, USA**

9:10 AM - 9:20 AM

WELCOME BY THE LOC CHAIR

**IDIR OUASSOU, UCA, MOROCCO**

9:20 AM - 9:35 AM

WELCOME ADDRESS BY THE HOST

**MOULAY LHASSEN HBID, PRESIDENT OF CAU, MOROCCO**

9:35 AM - 9:50 AM

OPENING ADDRESS BY THE GUEST OF HONOR

**ABDELLATIF MIRAOUI, MINISTER OF HIGHER EDUCATION, SCIENTIFIC RESEARCH & INNOVATION, MOROCCO**

9:50 AM - 10:05 AM

ADDRESS BY AIC CHAIR

**BIMAL SINHA, UMBC, USA**

10:05 AM - 10:20 AM

ADDRESS BY ASA EXECUTIVE DIRECTOR

**EXECUTIVE DIRECTOR, AMERICAN STATISTICAL ASSOCIATION**

10:20 AM - 10:30 AM

REMARK BY 7TH AIC CO-ORGANIZER

**ABDUL A. HUSSEIN, WINDSOR UNIVERSITY, CANADA**

10:30 AM - 10:40 AM

GROUP PHOTO

**AIC-MOROCCO TEAM**

10:40 AM - 11:00 AM

COFFEE-TEA BREAK

CHAIR: DEMISSIE ALEMAYEHU, COLUMBIA UNIVERSITY, USA

11:00 AM - 11:40 AM

**THOMAS MATHEW**

PLENARY-1: STATISTICAL CRITERIA FOR COST-EFFECTIVENESS ANALYSIS: A BRIEF OVERVIEW

11:40 AM - 12:20 PM

**NADIA GHAZZALI & NDËYE NIANG**

PLENARY-2: WOMEN IN STEM IN AFRICA AND AROUND THE WORLD - NETWORKING AND BEST PRACTICES

12:20 PM - 12:30 PM

**MOHAMED BELALIA**

PROGRAM INTRODUCTION: 3-PARALLEL SESSIONS

12:30 PM - 2:00 PM

LUNCH BREAK

## PARALLEL SESSION-I ROOM: AMPHI

CHAIR: BIMAL SINHA, UNIVERSITY OF MARYLAND BALTIMORE COUNTY, USA

2:00 PM - 2:30 PM

**JOYEE GHOSH**

INVITED-1: ONLINE BAYESIAN VARIABLE SELECTION FOR STREAMING DATA

2:30 PM - 3:00 PM

**SALIM BOUZEBDA**

INVITED-2: M-PROCESSES AND THEIR APPLICATIONS IN CHANGE-POINTS

3:00 PM - 3:30 PM

**PING MA**

INVITED-3: SUBSAMPLING IN LARGE NETWORKS

3:30 PM - 4:00 PM

COFFEE-TEA BREAK

CHAIR: SÉVÉRIEN NKURUNZIZA, UNIVERSITY OF WINDSOR, CANADA

4:00 PM - 4:20 PM

**KAMAL DIKI**

CONTRIBUTED-1: GAUSSIAN RBF KERNELS AND FOCK SPACES THEORY

4:20 PM - 4:40 PM

**YOUNESS EL ANSARI**

CONTRIBUTED-2: STRONG CONSISTENCY ESTIMATORS OF THE BRENNAN-SCHWARTZ DIFFUSION PROCESS BASED ON MARTINGALES APPROACH.

4:40 PM - 5:00 PM

**AHMED EL-ALAOU**

CONTRIBUTED-3: ON KNOT PLACEMENT FOR ADDITIVE MODELS USING PENALIZED B-SPLINE

5:00 PM - 5:20 PM

**MOHAMMED ES SEBAIY**

CONTRIBUTED-4: ESTIMATING DRIFT PARAMETERS IN A NON-ERGODIC GAUSSIAN VASICEK-TYPE MODEL

5:20 PM - 5:40 PM

**LAHOUCINE HOBBA**

CONTRIBUTED-5: ON SHRINKAGE ESTIMATORS FOR A SYMMETRIC SPHERICALLY DISTRIBUTION UNDER MODIFICATIONS BALANCED LOSS FUNCTIONS

## PARALLEL SESSION-II ROOM: 3

CHAIR: ANINDYA ROY, UNIVERSITY OF MARYLAND BALTIMORE COUNTY, USA

2:00 PM - 2:30 PM

**SOLOMON W. HARRAR**

INVITED-4: NONPARAMETRIC FINITE MIXTURES FOR OVERCOMING BIOMARKER-ERROR BIAS

2:30 PM - 3:00 PM

**JIN XU**

INVITED-5: MODEL-FREE SCREENING FOR VARIABLES WITH TREATMENT INTERACTION

3:00 PM - 3:30 PM

**FRANK KONIETSCHKE**

INVITED-6: STATISTICAL PLANNING AND EVALUATION OF TRANSLATIONAL TRIALS

3:30 PM - 4:00 PM

COFFEE-TEA BREAK

CHAIR: DOUGE LAHCEN, CADDI AYYAD UNIVERSITY, MOROCCO

4:00 PM - 4:20 PM

**HAFSSA KROUMBI**

CONTRIBUTED-6: MIXED SPACE- HIDDEN MARKOV MODEL

4:20 PM - 4:40 PM

**KAWTAR LAABABI**

CONTRIBUTED-7: TEXT SEGMENTATION USING HIDDEN MARKOV MODEL

4:40 PM - 5:00 PM

**JABRANE MOUSTAID**

CONTRIBUTED-8: ESTIMATION PROBLEM OF THE DRIFT OF SOME GAUSSIAN PROCESS

5:00 PM - 5:20 PM

**JABRANE YOUNES**

CONTRIBUTED-9: U-NET FOR COLORECTAL POLYP SEGMENTATION-BASED GENETIC ALGORITHM OPTIMIZATION

5:20 PM - 5:40 PM

**MOHAMED ALAHIANE**

CONTRIBUTED-10: ON THE CROSS VALIDATED FOR FUNCTIONAL GENERALIZED PARTIALLY LINEAR SINGLE INDEX MODEL

## PARALLEL SESSION-III ROOM: 6

CHAIR: KALIMUTHU KRISHNAMOORTHY, UNIVERSITY OF LOUISIANA AT LAFAYETTE, USA

2:00 PM - 2:30 PM

**JDEREK YOUNG**

INVITED-7: A MODEL-AWARE APPROACH TO QUANTILE REGRESSION FOR CROSS-SECTIONAL DATA WITH ZERO-INFLATED COUNTS

2:30 PM - 3:00 PM

**KARABI NANDY**

INVITED-8: THE DEVELOPMENT OF A SUICIDAL RISK SCALE THROUGH PSYCHOMETRIC ANALYSES

3:00 PM - 3:30 PM

**ABDELAATI DAQUIA**

INVITED-9: EXTREME EXPECTILE ESTIMATION FOR SHORT-TAILED DATA, WITH AN APPLICATION TO MARKET RISK ASSESSMENT

3:30 PM - 4:00 PM

COFFEE-TEA BREAK

CHAIR: ABDUL A. HUSSEIN, WINDSOR UNIVERSITY, CANADA

4:00 PM - 4:20 PM

**NABIL AZOUAGH**

CONTRIBUTED-11: MODELING WITH EXPAR PROCESSES : A FULL METHODOLOGY APPROACH

4:20 PM - 4:40 PM

**MONIR CHADAD**

CONTRIBUTED-12: FUNCTIONAL DIFFERENTIAL EQUATIONS WITH POSITIVITY CONSTRAINTS DRIVEN BY A FRACTIONAL BROWNIAN MOTION

4:40 PM - 5:00 PM

**IMANE JARNI**

CONTRIBUTED-13: REFLECTION PROBLEM ON THE SPACE OF REGULATED FUNCTIONS

5:00 PM - 5:20 PM

**ABDELALI OUBAOUZINE**

CONTRIBUTED-14: COMMUNITY DETECTION METHOD BASED ON NON-DOMINATED SUBGRAPHS

5:20 PM - 5:40 PM

**YOUSSEF ANZARMOU**

CONTRIBUTED-15: SPARSE OVERLAPPED LINEAR DISCRIMINANT ANALYSIS

5:40 PM - 6:00 PM

POSTER SESSION (COMMON FOR ALL SESSIONS)

2023 PROGRAM

7TH AIC STATISTICS



UMBC



جامعة القاضي عياض  
UNIVERSITÉ CADI AYYAD



University  
of Windsor

# DAY 3

14 JUNE 2023 WEDNESDAY

AT THE CONFERENCE CENTER  
OF CADI AYYAD UNIVERSITY  
MARRAKESH



8:50 AM - 9:00 AM PROGRAM INTRODUCTION **YEHENEW KIFLE, UMBC, USA**

**CHAIR: THOMAS MATHEW, UNIVERSITY OF MARYLAND BALTIMORE COUNTY, USA**

9:00 AM - 9:40 AM **DULAL BHAUMIK**  
PLENARY-3: DEVELOPMENT OF A BAYESIAN MULTIMODAL MODEL TO DETECT BIOMARKERS IN NEUROIMAGING STUDIES  
9:40 AM - 10:20 AM **ABDERRAHIM TAAMOUTI**  
PLENARY-4: COPULA-BASED ESTIMATION OF HEALTH INEQUALITY MEASURES WITH AN APPLICATION TO COVID-19

10:20 AM - 11:00 AM COFFEE-TEA BREAK

**PARALLEL SESSION-I  
ROOM: AMPHI**  
**CHAIR: NADIA GHAZZALI, UNIVERSITY OF QUEBEC AT TROIS-RIVIÈRES, CANADA**

11:00 AM - 11:30 AM **WENXUAN ZHONG**  
INVITED: MASKED MIRROR VALIDATION IN GRAPHON ESTIMATION  
11:30 AM - 12:00 PM **RUNA BHAUMIK**  
INVITED: A CLOUD-BASED SUICIDE IDEATION SURVEILLANCE SYSTEM  
12:00 PM - 12:30 PM **ISHANI ROY & KARABI NANDY**  
INVITED: HOW TO BUILD A SUCCESSFUL PROFESSIONAL CAREER: A CONVERSATION WITH WOMEN STATISTICIANS IN ACADEMIA AND GOVERNMENT  
12:30 PM - 1:00 PM  
GROUP DISCUSSION

1:00 PM - 2:00 PM LUNCH BREAK

**PARALLEL SESSION-II  
ROOM: 3**  
**CHAIR: TAOUIK BOUEZMARNI, SHERBROOK UNIVERSITY, CANADA**

11:00 AM - 11:30 AM **JEFFREY WILSON**  
INVITED-10: FITTING MARGINAL MODELS IN ANALYZING CORRELATED BINARY SATA WITH TIME DEPENDENT COVARIATES  
11:30 AM - 12:00 PM **GIDEON ZAMBA**  
INVITED-11: ESTIMATION AND INFERENCE FOR RECURRENT EVENT DATA WITH COVARIATES UNDER MEASUREMENT ERROR  
12:00 PM - 12:30 PM **DING-GENG CHEN**  
INVITED-12: FROM STATISTICAL POWER TO BAYESIAN ASSURANCE: TIME FOR THE PARADIGM CHANGE IN CLINICAL TRIAL DESIGN  
12:30 PM - 1:00 PM **YI HUANG**  
INVITED-13: COMPARISON OF CAUSAL METHODS FOR AVERAGE TREATMENT EFFECT ESTIMATION ALLOWING COVARIATE MEASUREMENT ERROR

1:00 PM - 2:00 PM LUNCH BREAK

**PARALLEL SESSION-II  
ROOM: 3**  
**CHAIR: MALICK MBDOJ, BOWIE STATE UNIVERSITY, USA**

2:00 PM - 2:30 PM **TALHA ARSLAN**  
INVITED-14: MODIFIED MINIMUM DISTANCE ESTIMATION IN SIMPLE LINEAR REGRESSION  
2:30 PM - 3:00 PM **KARIM OUALKACHA**  
INVITED-15: MATRIX COMPLETION IN GENETIC METHYLATION STUDIES: LMCC, A LINEAR MODEL OF COREGIONALIZATION WITH INFORMATIVE COVARIATES  
3:00 PM - 3:30 PM **THU NGUYEN**  
INVITED-16: TIME SERIES FORECASTING WITH TRANSFORMER-BASED APPROACHES

3:30 PM - 4:00 PM COFFEE-TEA BREAK

**PARALLEL SESSION-II  
ROOM: 3**  
**CHAIR: KARIM OUALKACHA, UNIVERSITY OF QUEBEC IN MONTREAL, CANADA**

4:00 PM - 4:20 PM **MOHAMMED BOUASABAH**  
CONTRIBUTED-16: MACHINE LEARNING IN FINANCIAL MARKETS: PREDICTION ALGORITHMS  
4:20 PM - 4:40 PM **MOHAMED YASSER BOUNNITE**  
CONTRIBUTED-17: MODELING E-LEARNING STUDENT PROGRESSION USING MARKOV CHAINS AND AI  
4:40 PM - 5:00 PM **HAILE MEKONNEN FENTA**  
CONTRIBUTED-18: A MACHINE LEARNING CLASSIFIER APPROACH FOR IDENTIFYING THE DETERMINANTS OF UNDER-FIVE CHILD UNDERNUTRITION IN ETHIOPIAN ADMINISTRATIVE ZONES  
5:00 PM - 5:20 PM **FADWA AABOUB**  
CONTRIBUTED-19: A NOVEL FILTER APPROACH BASED ON MULTI-CRITERIA DECISION MAKING FOR MICROARRAY GENE EXPRESSION DATA  
5:20 PM - 5:40 PM **FATIMA ZAHRA JANANE**  
CONTRIBUTED-20: A NEW TOPSIS-BASED FILTER ON PREORDONNANCES FOR DNA FEATURE SELECTION

**PARALLEL SESSION-II  
ROOM: 6**  
**CHAIR: DULAL BHAUMIK, UNIVERSITY OF ILLINOIS AT CHICAGO, USA**

11:00 AM - 11:30 AM **CARLOS COELHO**  
INVITED-17: MULTI-WAY MANOVA AND MULTIVARIATE LINEAR MODEL LIKELIHOOD RATIO TESTS FOR THE HIGH-DIMENSIONAL CASE  
11:30 AM - 12:00 PM **KAI WANG**  
INVITED-18: SUPPORT INTERVAL FOR TWO SAMPLE SUMMARY DATA BASED MENDELIAN RANDOMIZATION IN THE PRESENCE OF WINNER'S CURSE  
12:00 PM - 12:30 PM **ABERA WOUHIB**  
INVITED-19: FUNDING OPPORTUNITIES AT NIMH TO STATISTICAL AND COMPUTATIONAL ROLES IN GLOBAL SETTING  
12:30 PM - 1:00 PM **MOHAMED EL MACHKOURI**  
INVITED-20: RECURSIVE KERNEL DENSITY ESTIMATION FOR DEPENDENT RANDOM FIELDS

1:00 PM - 2:00 PM LUNCH BREAK

**PARALLEL SESSION-II  
ROOM: 6**  
**CHAIR: YI HAUNG, UNIVERSITY OF MARYLAND, BALTIMORE COUNTY, USA**

2:00 PM - 2:30 PM **KALIMUTHU KRISHNAMOORTHY**  
INVITED-21: CONFIDENCE ESTIMATION BASED ON DATA FROM INDEPENDENT STUDIES  
2:30 PM - 3:00 PM **RAJESH NANDY**  
INVITED-22: INDEPENDENT COMPONENT ANALYSIS IN THE PRESENCE OF UNKNOWN CORRELATED GAUSSIAN NOISE  
3:00 PM - 3:30 PM **MOHAMED BELALIA**  
INVITED-23: TESTING SYMMETRY FOR BIVARIATE COPULAS USING BERNSTEIN POLYNOMIALS

3:30 PM - 4:00 PM COFFEE-TEA BREAK

**PARALLEL SESSION-II  
ROOM: 6**  
**CHAIR: NOUREDDINE BERRAHO, CADI AYYAD UNIVERSITY, MOROCCO**

4:00 PM - 4:20 PM **ABDELATI LAGZINI**  
CONTRIBUTED-21: BAYESIAN INFERENCE FOR SIS TYPE EPIDEMIC MODEL, BY SKELLAM'S DISTRIBUTION AND APPLICATION TO COVID  
4:20 PM - 4:40 PM **SIDI M. LALAoui B. C.**  
CONTRIBUTED-22: MODELING THE DAILY NUMBER OF ACTIVE COVID-19 CASES USING GAUSSIAN MIXTURE MODEL  
4:40 PM - 5:00 PM **SIDD ROY**  
CONTRIBUTED-23: A LATENT HEALTH PROCESS MODEL FOR DYNAMIC RISK PREDICTION WITH APPLICATION TO AN HPV STUDY  
5:00 PM - 5:20 PM **RYAN LAFFERTY**  
CONTRIBUTED-24: SAMPLING FROM SCALE MIXTURES UNDER LINEAR CONSTRAINTS  
5:20 PM - 5:40 PM **FATIMA EZZAHRA REBBAH**  
CONTRIBUTED-25: COMPARISON OF FILTER-BASED FEATURE SELECTION METHODS FOR MICROARRAY DATASETS.

6:30 PM - 8:30 PM **GALA DINNER AT CHEZ ALI**  
(REQUIRES EITHER AN INVITATION OR THE PURCHASE OF AN EVENT TICKET)

7TH AIC 2023 PROGRAM



UMBC



جامعة القاضي عياض  
UNIVERSITÉ CADI AYYAD



University of Windsor

# DAY 4

15 JUNE 2023 THURSDAY

AT THE NATIONAL SCHOOL  
OF APPLIED SCIENCES  
OF MARRAKESH



8:50 AM - 9:00 AM PROGRAM INTRODUCTION

YEHENEW KIFLE, UMBC, USA

CHAIR: NAGARAJ NEERCHAL, UNIVERSITY OF MARYLAND BALTIMORE COUNTY, USA

9:00 AM - 9:40 AM **TAOUFIK BOUEZMARNI**

PLENARY-5: NONPARAMETRIC INFERENCE FOR COPULAS AND MEASURES OF DEPENDENCE UNDER LENGTH-BIASED SAMPLING AND INFORMATIVE CENSORING

9:40 AM - 10:20 AM **SÉVÉRIEN NKURUNZIZA**

PLENARY-6: ESTIMATION AND TESTING IN GENERALIZED ORNSTEIN-UHLENBECK PROCESSES WITH CHANGE-POINTS

10:20 AM - 11:00 AM **ANINDYA ROY**

PLENARY-7: SPARSITY AND INFERENCE FOR NORMAL MEAN RESTRICTED TO CLOSED CONVEX POLYHEDRAL

11:00 AM - 11:30 AM COFFEE-TEA BREAK

CHAIR: CHOKRI KHALID, HASSAN II UNIVERSITY, MOROCCO

11:30 AM - 11:50 AM **DANIEL SCHULZE**

CONTRIBUTED-26: USING ITEM RESPONSE THEORY FOR TESTING ASSUMPTIONS UNDERLYING CLINICAL SCORES

11:50 AM - 12:10 PM **ABDELAZIZ ALOUI**

CONTRIBUTED-27: MIXTURE REGRESSION MODEL SELECTION FOR LONGITUDINAL DATA BY INFORMATION CRITERIA

12:10 PM - 12:30 PM **NADIA ASRIR**

CONTRIBUTED-28: A NEW ALTERNATIVE OF SLICED INVERSE REGRESSION FOR HIGH CORRELATED DATA

12:30 PM - 2:00 PM LUNCH BREAK

CHAIR: DANIEL SCHULZE, CHARITE BERLIN, INSTITUTE OF BIOMETRY AND CLINICAL EPIDEMIOLOGY, GERMANY

2:00 PM - 2:20 PM **ASMAA BENZMANE**

CONTRIBUTED-29: FEATURE SCREENING IN HIGH-DIMENSIONAL REGRESSION PROBLEMS

2:20 PM - 2:40 PM **SAFAA BOUAMIRA**

CONTRIBUTED-30: PHIK CORRELATION FILTER FOR FEATURE SELECTION IN HIGH DIMENSIONAL DATA

2:40 PM - 3:00 PM **STÉPHANE BOUKA**

CONTRIBUTED-31: ON ESTIMATION AND PREDICTION IN A SPATIAL SEMI-FUNCTIONAL LINEAR REGRESSION MODEL WITH DERIVATIVES

3:00 PM - 3:20 PM **MOUNIR BOUMAHDI**

CONTRIBUTED-32: GENERALIZED REGRESSION FUNCTION FOR SURROGATE SCALAR RESPONSE

3:20 PM - 4:00 PM COFFEE-TEA BREAK

CHAIR: HAMMOU EL BARMi, THE CITY UNIVERSITY OF NEW YORK, USA

4:00 PM - 4:20 PM **HICHAM CHAOUCH**

CONTRIBUTED-33: LEAST SQUARE ESTIMATOR FOR ORNSTEIN-UHLENBECK PROCESSES DRIVEN BY N-MIXTURE

4:20 PM - 4:40 PM **KHALID CHOKRI**

CONTRIBUTED-34: LIMIT LAWS IN THE PARTIALLY LINEAR ADDITIVE MODEL

4:40 PM - 5:00 PM **MOHAMMED EL AOUISSI**

CONTRIBUTED-35: RECURSIVE ESTIMATION OF NONPARAMETRIC REGRESSION WITH WEAKLY DEPENDENT FUNCTIONAL COVARIATES.

5:00 PM - 5:20 PM **PETER MPHEKGWANA**

CONTRIBUTED-36: SHRINKAGE TESTIMATOR FOR THE COMMON MEAN OF SEVERAL UNIVARIATE NORMAL POPULATIONS WITH POSSIBLY UNEQUAL VARIANCES

CHAIR: RIDA BENHADDOU, OHIO UNIVERSITY, USA

11:30 AM - 11:50 AM **BASMA EL MOURTJI**

CONTRIBUTED-37: STATISTICAL EVALUATION OF THREE NEW MEASURES FOR BALANCING RELEVANCE, REDUNDANCY, AND COMPLEMENTARITY IN FEATURE SELECTION

11:50 AM - 12:10 PM **ABDELLAH ATANANE**

CONTRIBUTED-38: A KTH POWER EXPECTILE REGRESSION ESTIMATOR FOR CENSORED DATA: RIGHT-CENSORED DATA

12:10 PM - 12:30 PM **MOHAMED S. E. ARROUCH**

CONTRIBUTED-39: ANALYSIS OF RÉGIME CHANGES IN NONLINEAR TIME SERIES WITH CONDITIONAL HETEROSCEDASTICITY

12:30 PM - 2:00 PM LUNCH BREAK

CHAIR: MOHAMED EL MACHKOURI, UNIVERSITY OF ROUEN NORMANDY, FRANCE

2:00 PM - 2:20 PM **MAMADOU ALIOU BARRY**

CONTRIBUTED-40: A CLASS OF REDUCED-BIAS ESTIMATORS OF TAIL INDEX AND EXTREME QUANTILES UNDER DEPENDENCE SERIALS

2:20 PM - 2:40 PM **MOHAMMED BENMOUMEN**

CONTRIBUTED-41: MODELING AND FORECASTING THE MASI INDEX: AN APPLICATION OF GARCH MODELS

2:40 PM - 3:00 PM **SALIOU DIOUF**

CONTRIBUTED-42: EXTREME VALUE THEORY FOR SPACE-TIME WITH RANDOM COEFFICIENTS

3:00 PM - 3:20 PM **MOHAMED-AMINE ELAAFANI**

CONTRIBUTED-43: CUMULATIVE SUM (CUSUM) APPROACH FOR CHANGE POINT DETECTION IN SOME PARTICULAR TIME SERIES

3:20 PM - 4:00 PM COFFEE-TEA BREAK

CHAIR: BELFADLI RACHID, CADI AYYAD UNIVERSITY, MOROCCO

4:00 PM - 4:20 PM **EL HADJI DEME**

CONTRIBUTED-44: MODELING EXTREME EVENTS ON ENVIRONMENTAL RISKS: RETURN LEVELS OF SUB-SAHARAN DUST WAVES WITH THEIR IMPACTS ON AIR QUALITY AND POTENTIAL LEVEL ON HEALTH IN WEST AFRICA.

4:20 PM - 4:40 PM **MAME BIRAME DIOUF**

CONTRIBUTED-45: BOX-COX TRANSFORMATION ON PARAMETER ESTIMATION IN EXTREME VALUE THEORY FOR HEAVY-TAILED DISTRIBUTIONS UNDER SERIAL DEPENDENCE AND APPLICATIONS TO ENVIRONMENTAL RISKS.

4:40 PM - 5:00 PM **FATIMA-EZZAHRA FARAH**

CONTRIBUTED-46: VOLATILITY ESTIMATION OF GAUSSIAN MEAN-REVERTING ORNSTEIN-UHLENBECK PROCESS OF THE SECOND KIND

CHAIR: NOUREDDINE BERRAHOU, CADI AYYAD UNIVERSITY, MOROCCO

11:30 AM - 11:50 AM **MOHAMMED LOURIKI**

CONTRIBUTED-47: LÉVY PROCESS PINNED AT RANDOM TIME FOR MODELLING OF THE FINANCIAL INFORMATION

11:50 AM - 12:10 PM **ZAKARIAE DRABECH**

CONTRIBUTED-48: SEQUENTIAL DETECTION OF MULTIPLE MEAN SHIFTS IN DATA SEQUENCES

12:10 PM - 12:30 PM **OUSSAMA RIDA**

CONTRIBUTED-49: MODELLING SOCIAL MEDIA POPULARITY WITH A STOCHASTIC SHIFTED-GOMPertz DIFFUSION PROCESS

12:30 PM - 2:00 PM LUNCH BREAK

CHAIR: DOUGE LAHCEN, CADI AYYAD UNIVERSITY, MOROCCO

2:00 PM - 2:20 PM **NAJLA BNOUACHIR**

CONTRIBUTED-50: PRECISION MATRIX ESTIMATORS FOR PORTFOLIO OPTIMIZATION

2:20 PM - 2:40 PM **HAJAR KAMEL**

CONTRIBUTED-51: A HYBRID MULTI-CRITERIA ENSEMBLE-LEARNING BASED CLASSIFIER FOR IMBALANCED DATA

2:40 PM - 3:00 PM **ABDELKARIM OUALAID**

CONTRIBUTED-52: A MILD APPROACH TO SPATIAL DISCRETISATION FOR BACKWARD STOCHASTIC DIFFERENTIAL EQUATIONS IN INFINITE DIMENSIONS

3:00 PM - 3:20 PM **NEZHA MOHAOUI**

CONTRIBUTED-53: A NOVEL NON-PARAMETRIC BIVARIATE DISTRIBUTION ESTIMATOR BASED ON B-SPLINES APPROACH

3:20 PM - 4:00 PM COFFEE-TEA BREAK

CHAIR: IDIR OUASSOU CADI AYYAD UNIVERSITY, MORROCO

4:00 PM - 4:20 PM **BERRAHOU NOUREDDINE**

CONTRIBUTED-54: A NONPARAMETRIC DISTRIBUTION-FREE TEST OF INDEPENDENCE AMONG CONTINUOUS RANDOM VECTORS BASED ON L1-ERROR

4:20 PM - 4:40 PM **DOUGE LAHCEN**

CONTRIBUTED-55: A NON-PARAMETRIC TEST OF CONDITIONAL INDEPENDENCE BASED ON  $\$L_{15}$ -ERROR

4:40 PM - 5:00 PM **SALAH KHANDANI**

CONTRIBUTED-56: NONPARAMETRIC KERNEL SPATIAL DENSITY ESTIMATION ON RIEMANNIAN MANIFOLDS

5:00 PM - 5:20 PM **RIDA BENHADDOU**

CONTRIBUTED-57: ADAPTIVE ESTIMATION FOR THE BIVARIATE ADDITIVE REGRESSION MODEL IN RANDOM DESIGN WITH LONG-MEMORY DEPENDENT ERRORS

7TH AIC 2023 PROGRAM

STATISTICS



UMBC



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UNIVERSITÉ CADI AYYAD



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# CLOSING

9:00 AM - 9:30 AM	PROGRAM INTRODUCTION <b>YEHEW KIFLE, UMBC, USA</b>
9:30 AM - 9:40 AM	BOOK DONATION <b>NAGARAJ NEERCHAL, UMBC, USA</b>
9:40 AM - 9:45 AM	UPCOMING 8TH AIC HOST <b>TBA</b>
9:45 AM - 10:00 AM	CLOSING REMARK <b>VICE-PRESIDENT OF CADI AYYAD UNIVERSITY, MOROCCO</b>
10:00 AM - 10:10 AM	VOTE OF THANKS <b>AIC-MOROCCO TEAM</b>
10:10 AM - 11:00 AM	COFFEE-TEA BREAK
2:00 PM - 6:00 PM	<b>GROUP SIGHTSEEING IN THE CITY OF MARRAKESH</b>



UMBC



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UNIVERSITÉ CADI AYYAD



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of Windsor