6th Annual Conference of the Upstate Chapters of the American Statistical Association

Data Science, Statistics, and the Environment

April 21-22, 2017

Canisius College, Buffalo, New York

UP-STAT 2017

Welcome

Ernest Fokoué
General Chair

On behalf of the whole UP-STAT 2017 organizing committee, I am truly delighted to extend to each and every one of you, a very warm and cordial welcome to the sixth annual conference of the upstate New York chapters of the American Statistical Association. This year, we are profoundly grateful to have our conference back in the awesome Science Hall of the campus of Canisius College.

UP-STAT 2017 ushers in our sixth consecutive year of successfully bringing together brilliant statistical minds from our upstate New York region and its surroundings, a remarkable milestone that could only be achieved thanks to the synergistic and committed collaborative effort of our core UP-STAT organizing committee.

We wholeheartedly thank Prof. Dr. Leonid Khinkis, President of the Buffalo Chapter of the ASA and Dr Adina Oprisan for co-chairing the local organizing committee and working tirelessly with this whole local team/committee to guarantee the smooth running of the conference.

I would also like to extend my heartfelt thanks to the entirety of the organizing committee and all the judges that help decide the awards and recognitions honoring our student participants.

It gives me exceedingly great joy to see that our vision of empowering students through the UP-STAT conference is taking shape and materializing beautifully: UP-STAT 2017 has successfully manifested our vision of having ever more student presenters: indeed out of the forty nine oral presentations gathered by our program chair, Professor Mike McDermott, thirty-four are authored or co-authored by a student. Besides, all the posters are authored by students. This is indeed a phenomenal achievement for us, and I personally celebrate all our students who are the future of our discipline and our country. This record-breaking participation of our students is a dream come true, as we hoped and envisioned from the inception of UP-STAT to make it a vehicle and a forum of expression and dissemination of knowledge for the graduate and advanced undergraduate students of our region and its surroundings. I take this opportunity to encourage and urge all the faculty members present at UP-STAT 2017, to use the UP-STAT conference series as a vehicle to train their research students in the art of participating in scholarly activities.

For the second year in a row, selected manuscripts from the UP-STAT conference will be peer-reviewed for ultimately publication in Mathematics for Applications, a reputable journal indexed/abstracted in MathSciNet.

UP-STAT 2017 kicks off on Friday, April 21st, 2017, which coincides with Earth day. Our conference theme: “Data Science, Statistics and the Environment” captures the spirit of that day quite accurately, and we further stressed the importance of that theme by putting together a panel to discuss various aspects related to mother Earth, the environment, data science and statistics. I anticipate a very insightful and fascinating panel discussion, especially given the variety and diversity of the members of the panel.

As always, the conference theme was chosen to accurately and precisely capture some of the emerging and cutting-edge aspects of statistical science and data science, ranging from theory and methodology to practical applications and this year the subtle aspects of environmental science.

We deem ourselves fortunate and truly blessed that our keynote speaker, Dr Robert Bell from Google, is a world class leader in statistics rooted in a strong theoretical background but crucially with a worldwide reputation of being a great speaker and a brilliant practitioner in applied statistics, machine learning and data science. Dr Bob Bell is widely known for being the winner of the $1 million NetFlix prize with the Collaborative Filtering work that he and his team perfected to emerge as the best team in that challenging recommender systems problem.

Dr Bell will first give our Fr. Haus lecture this year on aspects of record linkage, but of course will also give us the highly anticipated and long awaiting keynote lecture featuring some of the lessons he and his team learned from that famous Netflix prize. This promises to be a powerfully enriching lecture and you want to make sure that you don’t miss it.

For the second year in a row, our conference kicks off on Friday with top-class tutorials, (a total of five this year), and we intend to continue to offer at each subsequent UP-STAT conference a delicious menu of cutting-edge tutorials to keep our attendees abreast of state-of-the-art statistical science techniques and methods.

The conference program is very rich and diverse. I therefore strongly recommend that you take time to carefully select the talks that are the most appealing to you, so that you make the most of your UP-STAT experience. Finally, I strongly encourage each one of you to reach out to other attendees and make this an opportunity to expand your network of statistically-minded collaborators and friends.

On behalf of the organizing committee, I wish to extend my sincere and grateful thanks to all our generous sponsors whose donations and contributions have been vital to the success of the UP-STAT conference series. Thanks to generous sponsorship, we are able to attract and motivate students with a variety of prizes for oral presentations, posters, and data competition. Also, I offer grateful thanks to Mark Gillespie, Communications, Marketing, and Recruiting Manager for the RIT College of Science, for designing our conference poster and program booklet.

I would also like to thank each one of you, precious attendee, for honoring us with your presence here. This conference is for you, and we hope, with your continued attendance, contribution and participation to make the UP-STAT conference series a forum of choice for the annual gathering of the statistical minds of upstate New York and its surroundings.

Enjoy your UP-STAT 2017 conference experience, and be sure to let us know how we can make it better in subsequent years.

With sincere gratitude,

ERNEST FOKOUÉ
Rochester Institute of Technology
General Chair
UP-STAT 2017

Conference Venue

Science Hall
Canisius College
2001 Main St
Buffalo, NY 14208

All events will take place in the Science Hall building. WiFi is available on campus. Friday's cocktail hour, poster session, and dinner will take place in the Student Center.

Conference participants will be able to park in the Science Hall parking ramp.

Sponsors

Organizing Committee

Dr. Michael McDermott
University of Rochester (Program Chair)

Dr. Leonid Khinkis
Canisius College

Dr. Yusuf Bilgic
SUNY Geneseo

Mr. Padraic Neville
SAS Institute

Dr. John Handley
Conduent

Dr. Tanzy Love
University of Rochester

Dr. Adina Oprisan
Canisius College

Dr. Mel Crotzer
Canisius College

Local Organizing Committee

Dr. Leonid Khinkis
Canisius College

Dr. Mel Crotzer
Canisius College

Dr. Adina Oprisan
Canisius College

Dr. Jeff Miecznikowski
University at Buffalo

Dr. Bruce Sun
SUNY Buffalo State

Dr. William Brady
University at Buffalo

Dr. James Huard
Canisius College

Keynote Speaker

ROBERT BELL
Research and Machine Intelligence
Google

Dr Robert Bell is a statistician in Research and Machine Intelligence at Google. He previously worked at RAND and AT&T Labs-Research. His current research interests include machine learning methods, analysis of data from complex samples, and record linkage methods.

Dr. Bell has served on the Fellows Committee of the American Statistical Association, the board of the National Institute of Statistical Sciences, the Committee on National Statistics, the advisory committee of the Division of Behavioral and Social Sciences and Education, and several National Research Council advisory committees studying statistical issues from conduct of the decennial census to airline safety.

Friday, April 21

9:30-10:30 **REGISTRATION**
SH COM (SCIENCE HALL COMMONS)

10:30-12:30 **TUTORIAL**
SH 036

Knowledge Discovery in Criminal Justice Data
John McCluskey, Rochester Institute of Technology

Analyzing Gravitational Wave Data From the LIGO Open Science Center
John Whelan, Rochester Institute of Technology

1:15-3:15 **TUTORIALS**

Introduction to Bayesian Statistical Modeling
Ernest Fokoué, Rochester Institute of Technology
SH 1013 A

BioConductor and Mastery of Data Manipulation
Martin Morgan, Roswell Park Cancer Institute
SH 1013 B

Interactive Data Analysis and Modeling with JMP Pro 13
Mia Stephens, JMP, and Padraic Neville, SAS Institute
SH 036

3:30-4:30 **FR. HAUS MEMORIAL MATHEMATICS LECTURE**
SH 1013 A-B

Diverse Applications of Probabilistic Record Linkage
Robert Bell, Research and Machine Intelligence, Google

4:30-5:55 **PANEL DISCUSSION**
SH 1013 A-B

Statistics and the Environment
Adina Oprisan, Canisius College (Co-Moderator)
Leonid Khinkis, Canisius College (Co-Moderator)
Elaine Hill, University of Rochester Medical Center
Ernest Fokoué, Rochester Institute of Technology
Terry Bisson, Canisius College
H. David Sheets, Canisius College
John Coles, CUBRC

6:00-7:00 **POSTER SESSION**

7:00-9:00 **DINNER**

Saturday, April 22

Program Summaries

8:00-9:00 **BREAKFAST/REGISTRATION/ORIENTATION**
SH COM

9:00-9:20 **WELCOME**
SH COM

9:30-10:15 **PARALLEL SESSIONS**

Session 1A: Innovations to Improve Introductory Statistics Courses
SH 1053

Session 1B: Model Selection for Various Purposes via Statistical Learning
SH 1028

Session 1C: Text Mining: Methods and Applications
SH 1004

Session 1D: Analysis of Data from Electric Power System Networks and Astronomy
SH 1013 A

Session 1E: Applications of Statistics in Epidemiology
SH 1013 B

Session 1F: Statistics in Sports
SH 1008

10:25-11:10 **PARALLEL SESSIONS**

Session 2A: Model-Based Clustering with Longitudinal Applications
SH 1013 B

Session 2B: Winning with Statistics in Sports
SH 1008

Session 2C: Explorations of Echo State Networks
SH 1028

Session 2D: Statistics and Technology
SH 1013 A

Session 2E: Detecting Hidden Structure in Data: Anomaly Detection and Cadre Learning
SH 100

Session 2F: Issues in and Tools for Statistics Education
SH 1053

11:20-12:05 **PARALLEL SESSIONS**

Session 3A: Time-Course Models with Complex Variance Structure in High-Dimensional Data Analysis
SH 1004

Session 3B: Improving Educational Effectiveness through Data
SH 1053

Session 3C: Applications of Multiple Imputation
SH 1028

Session 3D: The Bradley-Terry Model for Paired Comparisons
SH 1013 A

Session 3E: Design of Experiments
SH 1013 B

Session 3F: Environment and Health
SH 1008

12:15-1:15 **LUNCH**
SH COM

1:25-2:35 **SESSION 4: PROVOST'S WELCOME AND KEYNOTE LECTURE**
SH COM

2:50-3:35 **PARALLEL SESSIONS**

Session 5A: Applications of Statistics in Environmental Studies
SH 1004

Session 5B: Curriculum Development for Data Science Education
SH 1028

Session 5C: New Methods in Multivariate and Nonlinear Regression
SH 1013 A

Session 5D: New Methods in Bioinformatics
SH 1013 B

Session 5E: Analysis of Internet Measurements / Theory of Influence
SH 1053

3:45-4:15 **AWARDS AND WRAP-UP**
SH COM

§ Indicates presentations that are eligible for the student presentation awards

Saturday Program Details

SESSION 1A

SH 1053

Innovations to Improve Introductory Statistics Courses

Session Chair:
Bernadette Lanciaux
Rochester Institute of Technology

9:30-9:50 **CHALLENGES AND SUCCESSES OF FLIPPING AN INTRODUCTORY STATISTICS COURSE §**
Joseph Ciminelli
Department of Biostatistics and Computational Biology, University of Rochester Medical Center

9:55-10:15 **THE RELATIONSHIP BETWEEN ANXIETY AND PERFORMANCE IN A STATISTICS CLASS**
Susan Mason, Sara Ribble, and Brianna Chupa
Department of Psychology, Niagara University

Elizabeth Reid
Department of Mathematics, Elmira College

SESSION 1B

SH 1028

Model Selection for Various Purposes via Statistical Learning Methods and their Application

Session Organizer/Chair:
Yang Yang
Department of Biostatistics
SUNY at Buffalo

9:30-9:45 **A COMPARATIVE STUDY OF SUBGROUP IDENTIFICATION METHODS FOR DIFFERENTIAL TREATMENT EFFECT: PERFORMANCE METRICS AND RECOMMENDATIONS §**
Yang Chen and Marianthi Markatou
Department of Biostatistics, SUNY at Buffalo

Demissie Alemayehu
Pfizer Inc.

9:45-10:00 **TUNING PARAMETER SELECTION IN THE LASSO WITH UNSPECIFIED PROPENSITY §**
Yang Yang and Jiwei Zhao
Department of Biostatistics, SUNY at Buffalo

§ Indicates presentations that are eligible for the student presentation awards

10:00-10:15 **BOOSTRAPPING ESTIMATES OF CLUSTERING STABILITY WITH APPLICATIONS TO MODEL SELECTION AND LARGE-SCALE DATA §**
Han Yu, Brian Chapman, Arianna DiFlorio, Ellen Eischen, David Gotz, Matthews Jacob, and Rachael Hageman Blair
Department of Biostatistics, SUNY at Buffalo

SESSION 1C

SH 1004

Text Mining: Methods and Applications

Session Chair: John Handley, Xerox/Conduent

9:30-9:50 **THE APPLICATION OF TOPIC MODELING IN THE COMMUNITY VIEWS ON THE CRIMINAL JUSTICE SYSTEM PROJECT §**
Sujeong Seo
College of Science
Rochester Institute of Technology

9:55-10:15 **TEXT MINING WITH A BAYESIAN HIDDEN TOPIC MARKOV MODEL §**
K. Tyler Wilcox
College of Science
Rochester Institute of Technology

SESSION 1D

SH 1013 A

Analysis Data from Electric Power System Networks and Astronomy

Session Chair: Yusuf Bilgic, SUNY Geneseo

9:30-9:50 **STATISTICAL APPROACHES TO ANOMALY DETECTION AND INTUITIVE VISUALIZATION OF PHASOR MEASUREMENT UNIT (PMU) DATA FROM ELECTRIC POWER SYSTEMS**
Ernest Fokoué
College of Science
Rochester Institute of Technology

Esa Rantanen
Department of Psychology
Rochester Institute of Technology

Jacob Hunt
Department of Biology
Rochester Institute of Technology

§ Indicates presentations that are eligible for the student presentation awards

9:55-10:15 **INFERRING THE RATE AND DISTRIBUTION OF COMPACT BINARY MERGERS OBSERVED THROUGH GRAVITATIONAL WAVE DETECTORS USING MARKOV CHAIN MONTE CARLO §**
Daniel Wysocki and Richard O'Shaughnessy
College of Science
Rochester Institute of Technology

SESSION 1E

SH 1013 B

Applications of Statistics in Epidemiology
Session Chair: Mark Heiler, PayChex

9:30-9:50 **PREDICTING CHOLERA-POSITIVE CASES IN HAITI §**
Jessica Young
College of Science
Rochester Institute of Technology

9:55-10:15 **USING BAYESIAN MULTILEVEL MODELS TO QUANTIFY VARIATION IN SUBOPTIMAL LYMPH NODE EXAMINATION AFTER COLECTOMY §**
Adan Becerra
Department of Public Health Sciences
University of Rochester

SESSION 1F

SH 1008

Statistics in Sports
Session Chair: Maria Caterina Bramati, Cornell University

9:30-9:50 **APPLYING MULTI-RESOLUTION STOCHASTIC MODELING TO INDIVIDUAL TENNIS POINTS §**
Calvin Floyd
College of Science
Rochester Institute of Technology

SESSION 2A

SH 1013 B

Model-Based Clustering with Longitudinal Data Applications
Session Organizer/Chair: Amy LaLonde, Department of Biostatistics and Computational Biology, University of Rochester Medical Center

10:25-10:45 **CLUSTERING DEVIATIONS IN TRAJECTORIES TO UNDERSTAND FACTORS IMPACTING YOUNG FEMALES' PHYSICAL ACTIVITY LEVELS §**
Amy LaLonde, Tanzy Love, and Tongtong Wu
Department of Biostatistics and Computational Biology,
University of Rochester Medical Center

§ Indicates presentations that are eligible for the student presentation awards

10:50-11:10 **NONLINEAR MIXED-EFFECTS MIXTURE REGRESSION MODELS FOR CLUSTERING LONGITUDINAL DATA §**
Chongshu Chen
Department of Biostatistics and Computational Biology,
University of Rochester Medical Center

SESSION 2B

SH 1008

Winning with Statistics in Sports
Session Organizer/Chair: Samuel Ventura,
Department of Statistics, Carnegie Mellon University

10:25-10:40 **A STATISTICAL ANALYSIS OF THE NFL DRAFT: VALUING DRAFT PICKS AND PREDICTING FUTURE PLAYER SUCCESS §**
Nick Citrone and Samuel Ventura
Department of Statistics
Carnegie Mellon University

10:40-10:55 **NFLSCRAPR: AN R PACKAGE FOR EASY ACCESS TO NFL DATA AND NEW MODEL FOR EXPECTED POINTS AND WIN PROBABILITY §**
Ronald Yurko, Max Horowitz, and Samuel Ventura
Department of Statistics
Carnegie Mellon University

10:55-11:10 **THE DATA COLLECTION PROCESS AND PLAY SELECTION IN DIVISION I COLLEGE FOOTBALL §**
Taylor Pellerin and Michael Schuckers
Department of Mathematics, St. Lawrence University

SESSION 2C

SH 1028

Explorations of Echo State Networks
Session Organizer/Chair: Xupin Zhang
Warner School of Education, University of Rochester

10:25-10:45 **DESIGN EXPLORATION ON ECHO STATE NETWORKS §**
Seyed Langroudi
Department of Computer Engineering
Rochester Institute of Technology

10:50-11:10 **STATISTICS BEHIND ECHO STATE NETWORKS §**
Qiuyi Wu
College of Science
Rochester Institute of Technology

§ Indicates presentations that are eligible for the student presentation awards

SESSION 2D

SH 1013 A

Statistics and Technology

Session Chair: Mihail Barbosu, Rochester Institute of Technology

10:25-10:45 **DETERMINING UNREPORTED CRIME RATE IN ROCHESTER FROM EMERGENCY CALL DATA §**
Justin Comparetta
College of Science
Rochester Institute of Technology

10:50-11:10 **DIFFERENTIAL ASPECTS AND PERFORMANCE ANALYSIS OF TIME DIFFERENCE OF ARRIVAL (TDOA) TECHNIQUE OF SOUND LOCALIZATION AND MODERN AUDIO RECOGNITION TECHNIQUES OF AN ASSISTIVE WEARABLE DEVICE FOR THE DEAF OR HARD OF HEARING POPULATION §**
Hrishikesh Karale and Gary Behm
College of Science
Rochester Institute of Technology

Subrina Farah
Department of Family Medicine
University of Rochester

SESSION 2E

SH 1004

Detecting Hidden Structure in Data: Anomaly Detection and Cadre Learning

Session Organizer/Chair: Andrés Vargas,
Department of Mathematical Sciences, Rensselaer Polytechnic Institute

10:25-10:45 **ANOMALY DETECTION IN CHIP MANUFACTURING §**
Andrés Vargas
Department of Mathematical Sciences
Rensselaer Polytechnic Institute

Ridwan Al Iqbal
Department of Computer Science
Rensselaer Polytechnic Institute

10:50-11:10 **SUPERVISED LEARNING OF PREDICTIVE CADRES §**
Alexander New
Department of Mathematical Sciences
Rensselaer Polytechnic Institute

§ Indicates presentations that are eligible for the student presentation awards

SESSION 2F

SH 1053

Issues in and Tools for Statistics Education

Session Chair: Adina Oprisan, Canisius College

10:25-10:45 **MET, SET, AND SO NEXT?**
Yusuf Bilgic
Department of Mathematics
SUNY Geneseo

10:50-11:10 **BIOMARKERCHALLENGE: AN INTERACTIVE R PACKAGE AND SHINY APP TO TEACH COMMON STATISTICAL TECHNIQUES USED IN EVALUATING GENETIC BIOMARKERS §**
Luther Vucic and Daniel Gaile
Department of Biostatistics
SUNY at Buffalo

SESSION 3A

SH 1004

Time-Course Models with Complex Variance Structure in High-Dimensional Data Analysis

Session Organizer/Chair: Yun Zhang
Department of Biostatistics and Computational Biology
University of Rochester Medical Center

11:20-11:35 **ON THE EQUIVALENCE OF REGULARIZED HIGH-DIMENSIONAL REGRESSION IN TIME-COURSE DATA ANALYSIS §**
Yun Zhang and Xing Qiu
Department of Biostatistics and Computational Biology
University of Rochester Medical Center

Juilee Thakar
Department of Microbiology and Immunology
University of Rochester Medical Center

11:35-11:50 **AN EFFICIENT MONTE CARLO SAMPLING METHOD FOR SPHERICAL POLYGONS WITH APPLICATIONS TO WIRELESS COMMUNICATION STUDIES §**
Jiatong Sui and Xing Qiu
Department of Biostatistics and Computational Biology
University of Rochester Medical Center

Hongjun Li
College of Science
Beijing Forestry University

§ Indicates presentations that are eligible for the student presentation awards

11:50-12:05 **A NOVEL NETWORK RECONSTRUCTION METHOD BASED ON A HIGH-DIMENSIONAL LINEAR STATE SPACE MODEL WITH APPLICATIONS TO TIME-SERIES MICROBIOME DATA §**
Yu Gu and Xing Qiu
Department of Biostatistics and Computational Biology
University of Rochester Medical Center

Yogeshwar Kelkar
Department of Biology
University of Rochester

Hulin Wu
Department of Biostatistics
University of Texas Health Science Center at Houston

SESSION 3B

SH 1053

Improving Educational Effectiveness through Data

Session Organizer/Chair: Xiaoyu Wan
Warner School of Education, University of Rochester

11:20-11:40 **AN ANALYSIS OF CERTIFICATION RATE IN EDX MASSIVE OPEN ONLINE COURSES (MOOC) §**
Xiaoyu Wan
Warner School of Education
University of Rochester

11:45-12:05 **FINDING MORE SILENT MOTIVATIONAL RESOURCES FOR DEPRESSION SYMPTOMS AND ACADEMIC OUTCOMES AMONG ADOLESCENTS §**
Jungming Lee
Warner School of Education
University of Rochester

SESSION 3C

SH 1028

Applications of Multiple Imputation

Session Chair: Leonid Khinkis, Canisius College

11:20-11:40 **STATISTICAL METHODS TO HANDLE NON-DETECTS IN QPCR §**
Valeriia Sherina
Department of Biostatistics and Computational Biology
University of Rochester Medical Center

11:45-12:05 **MULTIPLE IMPUTATION VS. SINGLE IMPUTATION FOR MISSING DATA IN SCORING HEALTH MEASURES**
Subrina Farah, Kevin Fiscella, and Mechelle Sanders
Department of Family Medicine
University of Rochester Medical Center

§ Indicates presentations that are eligible for the student presentation awards

SESSION 3D

SH 1013 A

The Bradley-Terry Model for Paired Comparisons

Session Chair: Tanzy Love, University of Rochester Medical Center

11:20-11:40 **PRIOR DISTRIBUTIONS FOR THE BRADLEY-TERRY MODEL OF PAIRED COMPARISONS**
John Whelan
College of Science
Rochester Institute of Technology

11:45-12:05 **MAJOR LEAGUE BASEBALL AND THE BRADLEY-TERRY MODEL: A BAYESIAN PERSPECTIVE §**
Gabriel Phelan and John Whelan
College of Science
Rochester Institute of Technology

SESSION 3E

SH 1013 B

Design of Experiments

Session Organizer/Chair: Darsh Thakkar
College of Science, Rochester Institute of Technology

11:20-11:35 **V50 EXPERIMENTAL TESTING OF PERSONAL PROTECTIVE EQUIPMENT §**
Darsh Thakkar
College of Science
Rochester Institute of Technology

11:35-11:50 **DETERMINING AN ECONOMIC AND EFFECTIVE EXPERIMENTAL DESIGN BASED ON AVERAGE VARIANCE OF PREDICTION VALUE §**
Rupansh Goantiya
College of Science
Rochester Institute of Technology

11:50-12:05 **EVALUATING DIFFERENT EXPERIMENTAL DESIGNS WHEN USING ROBUST REGRESSION §**
Pranay Kumar
College of Science
Rochester Institute of Technology

§ Indicates presentations that are eligible for the student presentation awards

SESSION 3F

SH 1008

Environment and Health

Session Organizer/Chair: Qiuyi Wu
College of Science, Rochester Institute of Technology

11:20-11:40 **PATTERNS IN PUBLIC DRINKING WATER CONTAMINATION IN SEVERAL US STATES SINCE 2000 §**
Xupin Zhang
Warner School of Education
University of Rochester

11:45-12:05 **USING MACHINE LEARNING FOR PREDICTING OBESITY §**
Zhen Tan
Department of Biochemistry and Biophysics
University of Rochester Medical Center

SESSION 4

SH COM

Keynote Lecture

Session Chair: Leonid Khinkis, Canisius College

1:25-2:35 **LESSONS FROM THE $1,000,000 NETFLIX PRIZE**
Robert Bell
Research and Machine Intelligence
Google

SESSION 5A

SH 1004

Applications of Statistics in Environmental Studies

Session Chair: K. Tyler Wilcox, Rochester Institute of Technology

2:50-3:10 **ICE WEDGE THERMAL VARIATION IN EAST ANTARCTICA: A TIME SERIES APPROACH**
Maria Caterina Bramati
Department of Statistical Sciences
Cornell University, and
Department of Methods and Models
for Economics, Territory, and Finance
Sapienza University of Rome

Rossana Raffi and Alessio Baldassarre
Department of Earth Sciences
Sapienza University of Rome

§ Indicates presentations that are eligible for the student presentation awards

3:15-3:35 **A MARKOV CHAIN METHOD TO EXAMINE THE PATTERN AND DISTRIBUTION OF RAINFALL §**
Maruf Raheem
Department of Engineering and Mathematics
Sheffield Hallam University

SESSION 5B

SH 1028

Curriculum Development for Data Science Education

Session Chair: Jessica Young, Rochester Institute of Technology

2:50-3:10 **TEACHING INTRODUCTORY STATISTICS IN AN ERA OF BIG DATA**
Bernadette Lanciaux
College of Science
Rochester Institute of Technology

3:15-3:35 **WHAT WOULD A DATA SCIENCE GENERAL EDUCATION COURSE CONTAIN?**
Kirk Anne
Computing and Information Technology
SUNY Geneseo

SESSION 5C

SH 1013 A

New Methods in Multivariate and Nonlinear Regression

Session Chair: Garrett Matthew, Corning, Inc.

2:50-3:10 **H-CANONICAL REGRESSION**
Joseph Voelkel and Wei Qian
College of Science
Rochester Institute of Technology

3:15-3:35 **METHODOLOGICAL CHALLENGES IN NONLINEAR REGRESSION**
Leonid Khinkis, Adina Oprisan, and Milburn Crotzer
Department of Mathematics and Statistics
Canisius College

§ Indicates presentations that are eligible for the student presentation awards

SESSION 5D

SH 1013 B

New Methods in Bioinformatics

Session Chair: Adan Becerra, University of Rochester Medical Center

2:50-3:10 **TWO COMPLEMENTARY METHODS FOR RELATIVE QUANTIFICATION OF LIGAND BINDING SITE BURIAL DEPTH IN PROTEINS: THE 'CUTTING PLANE' AND 'TANGENT SPHERE' METHODS**

Vicente Reyes
Ronin Institute

3:15-3:35 **A VISUAL-COMPUTATIONAL METHOD FOR ATOMISTIC FUNCTIONAL AND EVOLUTIONARY COMPARISON OF BIOLOGICAL MOLECULAR DYNAMICS**

Gregory Babbitt
College of Science
Rochester Institute of Technology

Jamie Mortensen, Erin Coppola, and Justin Liao
Department of Biomedical Engineering
Rochester Institute of Technology

SESSION 5E

SH 1053

Analysis of Internet Measurements / Theory of Influence

Session Chair: Matthew Williams, Monroe Community College

2:50-3:10 **QUASI-PARAMETRIC DEPENDENCE BETWEEN NEW INTERNET MEASUREMENT AND GLOBALIZATION**

Bruce Sun
Department of Mathematics
SUNY Buffalo State

3:15-3:35 **INTRODUCTION TO THE THEORY OF INFLUENCE**

Mihail Barbosu
College of Science
Rochester Institute of Technology

SESSION 6

SH COM

Awards and Recognitions + Ceremony and wrap-up

3:45-3:55 **CONCLUDING REMARKS AND ACKNOWLEDGEMENTS**

3:55-4:10 **AWARDS AND RECOGNITIONS CEREMONY**

4:10-4:15 **ANNOUNCEMENTS ON UP-STAT 2018**

Notes: There will be raffles and other fun activities during the intermissions.
Check out conference announcements on the website

The General Chair wishes to wholeheartedly thank all the student helpers for working diligently to promote UP-STAT 2017

- SUJEONG SEO, MS APPLIED STATISTICS, RIT
- SHIYANG MA, PHD STATISTICS, U OF R
- QIUYI WU, MS APPLIED STATISTICS, RIT
- XUPIN ZHANG, PHD HUMAN DEVELOPMENT, U OF R
- WILLIAM HAMMOND, BS COMPUTER SCIENCE, RIT
- ADAN BECERRA, PHD STATISTICS/EPIDEMIOLOGY, U OF R
- MATTHEW CORSETTI, PHD STATISTICS, U OF R

The General Chair also wishes to extend special thanks to our precious and competent judges for volunteering to assess/score/grade the presentations of our students, so that the most deserving are properly and duly honored and recognized.

- DR JOSEPH VOELKEL, RIT
- DR TANZY LOVE, U OF R
- DR SAMUEL VENTURA, CARNEGIE MELLON UNIVERSITY
- DR MARIA CATERINA BRAMATI, CORNELL UNIVERSITY
- DR LEONID KHINKIS, CANISIUS COLLEGE
- DR ADINA OPRISAN, CANISIUS COLLEGE
- DR KIRK ANNE, SUNY GENESEO
- DR MIHAIL BARBOSU, RIT
- DR NILAY SAPIO, RIT
- DR MILBURN (MEL) CROTZER, CANISIUS COLLEGE
- DR YUSUF BILGIC, SUNY GENESEO
- DR JOHN HANDLEY, CONDUENT/XEROX
- DR JOHN WHELAN, RIT
- DR BERNIE LANCIAUX, RIT
- DR DAVID SHEETS, RIT
- DR MARVIN GRUBER, RITDR GREG BABBITT, RIT
- MR GARRETT BOCHICCHIO, CORNING INC
- MR MATTHEW WILLIAMS, MCC AND RIT
- MR MARK HEILER, PAYCHEX

SEE YOU AT

UP-STAT 2018!