Dear MI/AIR Colleague,

The beginning of the Fall semester means we are just a few weeks away from the 31st MI/AIR Annual Conference. The 2017 Steering Committee has been hard at work over the last year preparing for the annual conference which will be full of informative presentations and networking opportunities.

This year's conference will be in Ann Arbor, hosted at The Kensington Hotel. The conference will kick-off Wednesday afternoon with a pre-conference workshop. The workshop will introduce attendees to R; a system for statistical analyses and graphics. Further information about the pre-conference is included in the following pages. The conference will continue Thursday and Friday with concurrent presentation sessions, meals, and social events.

The theme for this year's conference is *Student Success: Our Common Thread*. The quality and range of topics for this year's session proposals was incredible. The proposals demonstrated the wide scope of projects we complete on a daily basis and the connectedness of our work to student success. The concurrent sessions should provide great opportunities to learn from our MI/AIR colleagues, and hopefully provide an opportunity to engage in valuable dialogue. The Annual Conference has numerous opportunities outside of the concurrent sessions for networking, whether it's connecting with long-time colleagues or meeting new individuals, the conference's schedule provides a platform for us to engage with our fellow MI/AIR members.

Please make sure to register early for the Conference as well as the Pre-Conference workshop, and don't forget to secure your lodging at The Kensington. Complete details on lodging can be found below. We hope you can join us for the 31st Annual Conference!

Kind regards,

Daniel Merian, Chair
2017 MI/AIR Steering Committee

MI/AIR 2017 Steering Committee

Daniel Merian, *Chair*	Jason Hartz
University of Michigan-Dearborn	Adrian College
Amanda Scherr, *Chair-Elect*	Lisa Lund
Central Michigan University	Montcalm Community College
Mary Meier, *Treasurer*	Krystal Majewski
Central Michigan University	Schoolcraft College
Derick Fedewa	Roger Mourad
Davenport University	Washtenaw Community College
Daniel Getty	Amy Schindler
University of Michigan-Flint	Delta College

31st Annual MI/AIR Conference
"Student Success: Our Common Thread"

The Kensington
Ann Arbor, Michigan

Registration

The conference registration fee covers the cost of all program materials, facility rental, and three meals on Thursday (breakfast, lunch, and dinner), as well as breakfast on Friday morning.

Conference Registration Fee: $135 due October 13, 2017
$150 if received after October 13, 2017

Pre-Conference Workshop Registration Fee: $30

To register, please complete the online registration form on the MI/AIR conference website:
http://miair.org/conferences/ann-arbor-2017

This year we will once again be providing you with the opportunity to use a credit or debit card to pay for your registration fees. Check by mail will also be an option.

Please contact Mary Meier with any questions or concerns at 989-774-7221 or MEIER1ME@cmich.edu

Conference check-in will take place at the registration table in the lobby during the following dates/times:

Wednesday, November 1st: 12:00 pm - 1:00 pm and 5:00 - 6:00 pm
Thursday, November 2nd: 7:30 - 8:30 am

Lodging

The Kensington Hotel
3500 South State Street
Ann Arbor, MI 48108
734-761-7800

The Kensington Hotel is the 2017 MI/AIR conference host hotel and is located directly on South State Street, .25 miles off the I-94 State Street Exit 177 in Ann Arbor. MI/AIR has reserved a block of rooms at a conference rate of $129.00 (+ tax) per room. **The block of rooms will be held at this rate until October 20, 2017**. Free parking and Wi-Fi are available at the hotel and guests will have access to the onsite restaurant, fitness center, indoor pool pavilion with sauna and whirlpool, garden, and gazebo. Please make your reservation by calling 734-761-7800 and asking for the Michigan Association for Institutional Research conference rate.
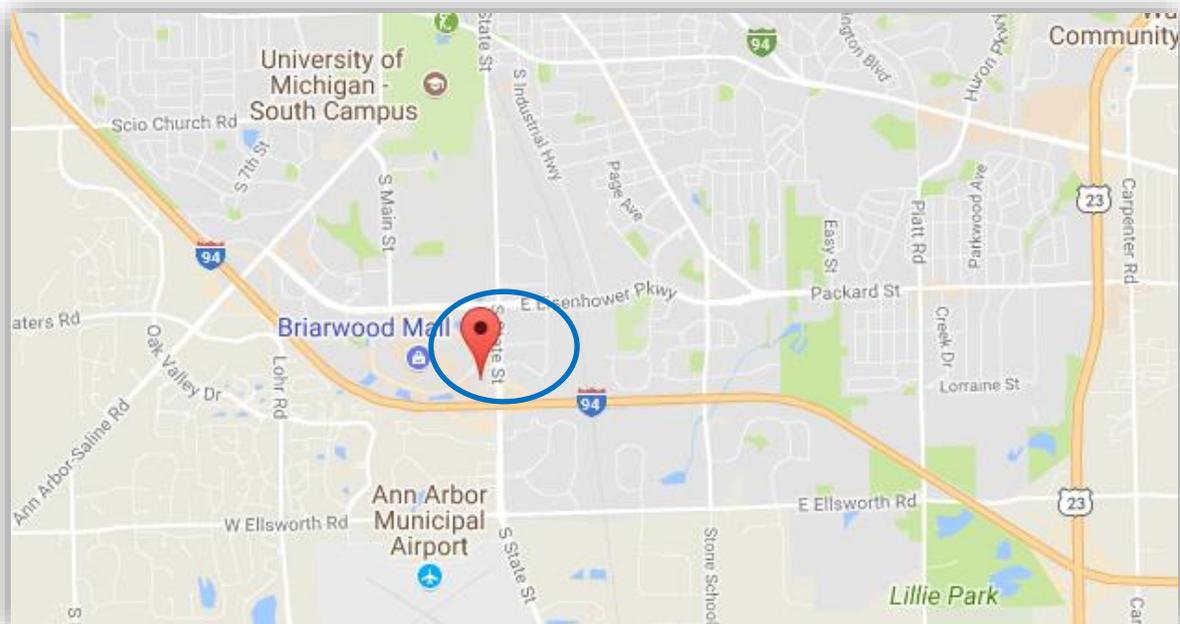
Pre-Conference Workshop

Introduction to R: Featuring IR Examples   *Wednesday, November 1, 1:00 – 5:00 p.m.*

Presenters:

John A. Gonzalez, PhD   *Noah C. Pollock, M.S.*
Director, Institutional Research   *Assistant Director of Assessment*
Rackham Graduate School   *Career Services*
University of Michigan   *Oakland University*

The pre-conference *Introduction to R* will give attendees an opportunity to learn the basics of using R; a free and open source system for statistical analyses and graphics. The session is designed for beginners and will provide a foundational understanding of the uses of R. This hands-on workshop will give attendees the opportunity to work with R during the session.

Participants in this workshop will learn:
- R-basics including adding packages, interface selection, and basic syntax
- How to use R for data management
- How to conduct basic statistical analyses in R
- About developing graphics in R

Requirements:
- A Windows/Mac computer with R-Studio installed (please note installation instructions will be provided prior to the pre-conference and the instructors will be using Windows so there might be differences if you have a Mac)

- Basic familiarity with previous programming/scripting or a willingness to learn

A Proposed Solution for Tracking Academic Program Success Rates

Presenter(s)	Nicholas Wagner
Institution	Saginaw Valley State University
Abstract	Reporting related to student success rates have specifically focused on retention and graduation rates based on entering student level cohorts. Limitations occur when trying to track these same rates based on college/major. This paper/presentation provides an example of how to track first-to-second year retention by academic program in a meaningful way.

A Trend Analysis in Undergraduate Time-to-Degree by Academic Disciplines and Demographic Profiles

Presenter(s)	Sooyeon Kim, Carson Phillips, Christina Ahn
Institution	University of Michigan-Ann Arbor
Abstract	Undergraduate time to degree (UGTTD) provides important information on student success as well as costs and program performance characteristics. Based on U-M graduates who received bachelor's degree from FY 2007 to FY 2016, this study analyzes UGTTD and other relevant indicators including terms enrolled, credits by academic disciplines, and demographic profiles.

ACT+SAT=Confusion

Presenter(s)	Susanne Condron and Reuben Ternes
Institution	Oakland University
Abstract	We explore the impact Michigan's shift from ACT to SAT testing on OU's 2017 freshman student profile, admissions and scholarship offers, and math and writing placement trends. We also consider issues of score equivalence and testing sequence using data on dual ACT + SAT test takers.

Aligning Diverse Data Files Using Python

Presenter(s)	Brian Johnson
Institution	Jackson College
Abstract	Institutional researchers often face many data files filled with similar content that do not align precisely. Combining such files for research and reporting purposes can then become cumbersome and time consuming. Using modest concepts in Python, an open-source programming language, Jackson College has been able to quickly update and fix a decade of historical student data files to make them align with the College's current student data file structures.

Alpha Go and Higher Education

Presenter(s)	Reuben Ternes
Institution	Oakland University
Abstract	Google recently announced a machine learning algorithm that has now beaten the world's best Go player, a game that includes more possible board states than there are atoms in the universe. This technical talk explores this algorithm and broadly discusses the future of machine learning in higher education.

An Automated Approach to State and Federal Report Preparation Using Sequel

Presenter(s)	Kelly Perez-Vergara
Institution	Oakland Community College
Abstract	Historically, programs like MS Excel or IBM SPSS, which offer some automation of repeated procedures, were used to manipulate data extracted from Student Information Systems. However, these processes are often manual and leave significant room for user error. Using a sequel server and stored procedures to freeze data and manipulate it, our department reduced reporting time while increasing data quality. We will demonstrate our table structure, queries used to generate various external reports, and validation techniques.

An Enrollment Management Approach to Investigating Low-Income Students' Transition to Higher Education

Presenter(s)	Steven Lonn and Kristen Glasener
Institution	University of Michigan
Abstract	This presentation will detail the methodology of a mixed method longitudinal study of low-income undergraduate students' perceptions of factors related to student success. Interviews, focus groups, surveys, and administrative data are combined to demonstrate how this nuanced approach can reveal a multi-layered view of new students' experiences and perceptions.

An Incremental Cost Analysis Approach to Class Cancellation Decisions

Presenter(s)	Robert Marsh
Institution	North Central Michigan College
Abstract	A spreadsheet-based method was developed to combine all incremental tuition revenue—taking into account various residences and discounts—and the incremental cost of instruction for all sections offered to help determine the financial viability of borderline sections during the class cancellation decision process. The breakeven or "tipping" point was calculated and presented

graphically as a tool for decision makers.

Presentation Sessions (Master list – alphabetical) *continued*

Credit Momentum: Go Green Go 15

Presenter(s)	Susan M. Richter
Institution	Michigan State University
Abstract	MSU launched Go Green Go 15 to encourage students to take 15 or more credits each semester with the goal of attempting 30 before a student's second year. We explore why attempting 30 credits is an indicator of student success and the initiatives aimed at MSU staff to promote 30 credits.

Determinants of Success at Graduation

Presenter(s)	Charles A. Graessle
Institution	Olivet College
Abstract	Employment and graduate study are important outcomes and have been the focus of our recent research. Methods and analyses are briefly described that identify causes in academics, engagement, outcomes assessments, and other college processes. The presentation ends with implications for assessment for accreditation (which we just finished), publicity, and improving college processes generally.

Increase in 4 Year Graduation Rate - Student vs. University Factors

Presenter(s)	Amanda Scherr, Robert Roe, and Mary Meier
Institution	Central Michigan University
Abstract	Based on the entering profile (according to the HERI model), CMU's 4 year graduation rate has continually been lower than expected. Recently however, there was a 7% increase. Here, using a variety of statistical techniques, we attempt to determine the impact of student factors (number of credits from high school, choice of major) vs university factors (better advising, admission criteria).

IPEDS Benchmarking Tips and Tricks

Presenter(s)	Eileen Brennan
Institution	Henry Ford College

Abstract	IPEDS Data Collections and institutional characteristics definitions have changed in the past few years. This presentation will review using some new definitions and searches to get benchmarking data that best suits your needs.

Presentation Sessions (Master list – alphabetical) *continued*

Maximizing Response: Practical Lessons from Campus Climate Surveys

Presenter(s)	Julie Smith, Robert Young, Jillian Hunsanger
Institution	Multi-Institutional (University of Michigan Ann Arbor, UM-Dearborn, New York University, University of New Mexico)
Abstract	Methodological techniques that help Campus Climate studies achieve high response rates will be shared. Specifically: mobile optimization; assistive device accessibility optimization; interviewer non-response prompts; respondent e-mail communications. Topics will be introduced with examples of how each technique was employed in a campus climate study and its impact on response rates.

Measuring the Impact of Study Abroad Programs on Student Performance: Propensity Score vs Case Control Matching

Presenter(s)	Emma Gyasi and Robert Roe
Institution	Central Michigan University
Abstract	To accurately assess the impact of study abroad (SA) programs on student performance, it is necessary to account for differences in the types of students who SA and those who do not (e.g. income, entry credentials, ethnicity, etc.). Here we address these issues by choosing an appropriate control group using the case control matching technique.

Overall Structure, Current Foci, and Future Directions of IR in the U.S.

Presenter(s)	Bin Ning
Institution	Eastern Michigan University
Abstract	The presentation provides an overview of IR functions, primary areas of current responsibilities, and future trends and challenges the IR world is facing. The presentation uses both a national perspective to look at IR profession as well as EMU's IR office as an example to demonstrate several important business intelligence tools the office has developed in recent years.

Prediction of Continuing Graduate Enrollment from Undergraduate Graduates by Using Adaptive Boosting

Presenter(s)	Meng Chen and Bin Ning
Institution	Eastern Michigan University
Abstract	Obtaining an undergraduate degree has become a priority for the majority of high school graduates. Nevertheless, pursuing a graduate degree after undergraduate study can be a much looser and open decision for many bachelor graduates. With the nation's economy getting back on the right track since 2009, many universities have seen a decline of graduate enrollments. Matriculating more graduate students has become an important priority for many of us, and the research on how to encourage and recruit our own institutional graduates into graduate programs becomes more critical. Eastern Michigan University (EMU) enrolls around 18,000 undergraduate students and 4,000 graduate students each fall. Historically every year, around 20% of the undergraduate students who graduated from EMU will continue their graduate education at EMU. In the past 5 years, EMU's graduate enrollment dropped by more than a thousand students and the percentage of continuing enrollment from EMU's undergraduate into graduate programs also reduced from 20% to 14%.
	In this study, factors that may affect undergraduate graduates who will continue graduate study at the same institution have been explored by using machine learning method—Adaptive Boosting. Among of them, employment opportunity in same institution, college, major, department and graduation indicator have significant roles in continuation of graduate study.

Prediction of First-Year GPA by Using Advanced Machine-Learning Algorithms

Presenter(s)	Bin Ning and Meng Chen
Institution	Eastern Michigan University
Abstract	With the development of computational power and "Big Data" available, institutions have more and more need to make accurate data-driven decisions.
	Machine learning is algorithms that can learn from data without relying on rules-based programing. It is a sub-field of computer science and artificial intelligence. Like traditional statistics, both of them learning from data. However, machine learning requires no prior assumptions about the underlying relationships between the variables. In this study, we predicted first-year college GPA by using various machine learning algorithms including artificial neural network. Factors including were: high school GPA, ACT composite score, gender, ethnicity, residency, major, college, first semester GPA, honor students indicator, on-campus residents' indicator, low-income indicator, first-generation indicator and full-part-time faculty indicator. This study gives an example how IR can take advantage of new computational power and richer data. Results of this study also can be used to predict retention, probation and improve students' success.

The Role of Unmet Financial Need in Retention

Presenter(s)	Reuben Ternes
Institution	Oakland University
Abstract	Why do financially needy students retain at lower rates? If we meet the financial need of all of our students, what would that do to retention rates? We use simple regression techniques to estimate the impact that unmet financial need has on student retention rate.

Toward Multiple Measures for Math Placement at Mid Michigan Community College

Presenter(s)	Peter Velguth
Institution	Mid Michigan Community College
Abstract	We wanted to improve math course placement through data-informed decision tools to replace Accuplacer or SAT. We made a preliminary investigation of the predictive value of high school math courses and HSGPA on student success in first math course performance. The new placement mechanism uses these and other data.

Transfer Students: An MSU Success Story

Presenter(s)	Susan M. Richter and Irene Weber
Institution	Michigan State University
Abstract	Each year a fifth (20.8 percent) of MSU's entering class are transfer students, of which 63 percent transfer from 2-year institutions. This presentation will explore key metrics of student success as it pertains to transfer students. We pay particular attention to outcomes of students that transferred from Michigan two-year institutions.

Using Alternative Metrics to Predict College Student Success: The Student Behavior and Experience Inventory Research Initiative

Presenter(s)	Jacob Bradburn, Dr. Neal Schmitt, Dr. Ann Marie Ryan, Dr. Christopher Nye, Morgan Showler, Joshua Prasad
Institution	Michigan State University
Abstract	What individual characteristics, besides standardized test scores and high school GPA, may a university want to use to select students who will be successful in a collegiate environment? This presentation will detail the Student Behavior and Experience Inventory research initiative and its goal to develop alternative predictors of student success.