




## 2024 VIRTUAL CONFERENCE

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 Wednesday, July 17, 2024

 12:00 PM TO 4:30 PM (EDT)

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**Register now at :**

<https://www.air-nj.org/>

ONLY SOME OF OUR AMAZING  
SPEAKERS!!



### Jed Marsh

- Vice Provost for Institutional Research
- Princeton University



### Stephanie Walsh

- Assistant Director of Research
- Rutgers University, Heldrich Center



### Viktoria Popova

- Executive Director of Institutional Effectiveness, Analytics, and Planning; Chief AI Officer
- Centenary University



### Nima Sherpa

- Lead Data Analyst
- Kean University

# NJ-AIR BOARD

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**Jeremy Reich**

- **Acting Chair, NJ-AIR**
- *New Jersey Institute of Technology, (4-Year Public)*



**Sue Gerber**

- **Secretary, NJ-AIR**
- *William Paterson University, (4-Year Public)*



**Shani D. Carter, Ph.D.,**

- **Website Administrator, NJ-AIR**
- *Stevens Institute of Technology, (4-Year Private)*



**Jacqueline Ring**

- **Committee Member, NJ-AIR**
- *Rowan University, (4-Year Public)*



**Jed Marsh**

- **Committee Member, NJ-AIR**
- *Princeton University, (4-Year Private)*

**Malika Tukibayeva**

- **Committee Member, NJ-AIR**

**Jessica Kay**

- **Committee Member, NJ-AIR**
- *Stockton University (4-Year Public)*

**Fenghua Peng**

- **Committee Member, NJ-AIR**
- *Montclair State University (4-Year Public)*

**Katy-Ann Blacker**

- **Committee Member, NJ-AIR**
- *County College of Morris (2-Year Public)*



### **Mission of NJAIR is**

To promote communication and cooperation among higher education researchers in New Jersey.

### **The goals of NJAIR include:**

- promoting professional development (sharing information, information technology, research methods, etc.)
- facilitating information/data sharing
- identifying and analyzing the emerging issues in higher education
- facilitating networking among colleagues

*Our members and customers are professionals who help others achieve their full potential by improving their knowledge, skills, and abilities in the workplace. They go by many titles: talent development managers, trainers, instructional designers, performance consultants, frontline managers, workplace learning professionals, and more. ATD's members come from more than 120 countries and work in organizations of all sizes and in all industry sectors.*

### **History**

*NJAIR began with a breakfast gathering of New Jersey institutional researchers attending the NEAIR conference in Baltimore in 1994. The meeting was called to generate interest in forming an association that would bring together institutional researchers from all sectors of higher education in New Jersey. The group decided that the best way to move forward would be to hold a conference on topics of general interest to which institutional researchers from all the colleges and universities in the state would be invited.*

*Georgian Court College hosted and subsidized the first annual meeting, held in March 1995. The restructuring of higher education in New Jersey, SPRE, and the Student-Right-to-Know Act were the hot topics addressed at the meeting. After lunch, the idea of forming a multi-sector association was presented and approved by the group. The first steering committee was selected from volunteers interested in turning an idea into an organization.*

*By 1996, the time seemed right to begin to formalize NJAIR. A mission statement was written and the steering committee began to be structured. In 1997, NJAIR became an officially recognized affiliate of AIR. In the fall of 1997, the steering committee moved to incorporate as a nonprofit organization and to collect dues in order to upgrade the kind of services the association could offer. Besides the annual meeting, NJAIR now sponsors a listserv and this website.*

*In 2021, NJAIR went on hiatus due to the demands of the COVID-19 pandemic. In 2022, NJAIR revived to continue its work of connecting higher education researchers from across the state to connect, learn from each other, and tackle today's issues in higher education. Join your colleagues from throughout the state at NJAIR's 2024 conference!*

# Schedule at a Glance

12:00 pm - 12:15 pm	Opening Remarks		
12:15 pm - 1:00 pm	NJOSHE Updates		
	<b>Track 1</b>	<b>Track 2</b>	<b>Track 3</b>
	Host: Jed Marsh	Hosts: Jackie Ring and Sue Gerber	Hosts: Jeremy Reich and Fenghua Peng
1:10 pm - 2:10 pm	<b>Introduction to the New Jersey Statewide Data System</b> Data Management and Governance	<b>Visualizing Data Lineages</b> Analytics and Technology	<b>Data hubs? Dashboards? Infographics? Supporting Students at Princeton</b> Student Success and Program Assessment
2:20 pm - 3:20 pm	<b>Why Undergraduate Outcomes Data are Important</b> Data Management and Governance	<b>Bootstrapping AI and Machine Learning in IR</b> Analytics and Technology	<b>Enhancing Student Success through AI-Powered Applications</b> Analytics and Technology
3:30 pm - 4:30 pm	<b>Simplifying Data Sources with a Data Matrix</b> Data Management and Governance	<b>Year of the DAWG? Emphasizing "Data Comfort" through the Data Analytics Working Group (DAWG) at Princeton</b> Analytics and Technology	<b>Leveraging Data Visualization for Institutional Effectiveness</b> Strategic Planning and Decision Making

**12:00 pm to 12:15 pm**

**WELCOME AND OPENING REMARKS**



Jeremy Reich

**Jeremy Reich**

- Assistant Director for Assessment and Accreditation, Off of Institutional Effectiveness
- Acting Chair, NJ-AIR

**12:15 pm to 1:00 pm**



**NJOSHE UPDATES**

**Chad L. May**

- Director of Research and Analysis
- New Jersey Office of the Secretary of Higher Education (OSHE)

During this session we will present some major updates for the 2024-25 research and reporting period that will impact institutions. We will focus on federal IPEDS survey changes and any associated changes to State level data collections. We will focus on specific state-level data collection activities and preview some upcoming changes and issues for discussion. We will also preview and review some current research activities and deliverables developed by the OSHE research team.

1:10 pm to 2:10 pm

**Track 1 - Data Management and Governance**



Stephanie Walsh    Khudodod Khudododov

**INTRODUCTION TO THE NEW JERSEY STATEWIDE DATA SYSTEM (1)**

**Stephanie Walsh**

- Assistant Director of Research
- Rutgers University, Heldrich Center

**Khudodod Khudododov**

- Research Project Manager
- Rutgers University, Heldrich Center

This session will provide an overview of the New Jersey Statewide Data System, the State's P20W longitudinal data system which includes data from K-12, higher education, and the workforce. The purpose of NJSDS is to help the public and stakeholders make data-informed decisions to improve public policies and practices for New Jersey residents. This includes facilitating longitudinal and linked-data research, providing statistical data, and publishing reports on the NJSDS website. Presenters will share additional background about the system, provide an overview of recent research, and discuss future initiatives.

1:10 pm to 2:10 pm

**Track 2 - Analytics and Technology**



David Manley

**VISUALIZING DATA LINEAGES (7)**

**David Manley**

- Senior Institutional Research Analyst
- Rowan University

Institutions grapple with vast amounts of data including student records, administrative systems, and research endeavors. Furthermore, institutions are required to report on this data with nuanced differences to various agencies. Ensuring these nuanced differences trace back to a common data source can be cumbersome in a team environment. Documenting your data's lineage can help institutional reporting teams ensure consistency, however, drawing lineages can be tedious and time consuming. This presentation reviews some of the approaches Rowan University has taken to document and visualize their data lineages, including: manual lineage drawing and layout using Office Apps/Google Apps, manual lineage drawing with automated layout using YEd Desktop/YEd Live, automated lineage drawing and layout of SQL hierarchies using iGraph for R/Python, and continuous lineage monitoring of cross-platform data pipeline with Informatica.

1:10 pm to 2:10 pm

**Track 3 - Student Success and Program Assessment**



Jonathan Stoessel

**DATA HUBS? DASHBOARDS? INFOGRAPHICS? SUPPORTING STUDENTS AT PRINCETON USING SEVERAL EXAMPLES FROM OUR WORK WITH THE VICE PRESIDENT FOR CAMPUS LIFE AND THEIR REPORTING OFFICES ACROSS CAMPUS. (3)**

**Jonathan Stoessel**

- Institutional Research Analyst
- Princeton University

The VPCL Strategic Indicators Dashboard / Infographic compiles various indicators across the undergraduate and graduate student experience, using surveys as the primary data source. Each of the data points selected is aligned with the Campus Life Strategic Plan 2020-2025. Insights from the dashboard could be used to enhance understanding of all, regularly collected data that is related to the Campus Life Strategic Plan, easily access more robust cuts of these datasets and request access necessary to do so, and to inform the continued work and assessment of offices directly charged with implementing aspects of the Campus Life Strategic Plan.

2:20 pm to 3:20 pm

Track 1 - Data Management and Governance



Jed Marsh

WHY UNDERGRADUATE OUTCOME DATA ARE IMPORTANT (5)

Jed Marsh

- Vice Provost for Institutional Research
- Princeton University

The presentation will use comprehensive outcome data to demonstrate that a college degree provides a solid foundation that adds value and helps to prepare students for meaningful lives and careers. We will discuss how institutions can use these data to inform programming, identify gaps, surface emerging needs, and assess progress towards goals and objectives. These data extend and contextualize existing data that are available to the public and importantly help students, and their families see breadth of potential opportunities that our institutions enable.

2:20 pm to 3:20 pm

Track 2 - Analytics and Technology



Viktoria Popova

BOOTSTRAPPING AI AND MACHINE LEARNING IN IR (2)

Viktoria Popova

- Executive Director of Institutional Effectiveness, Analytics, and Planning; Chief AI Officer
- Centenary University

As higher education faces the challenge of innovating without extra financial resources, bootstrapping has become an art form. This presentation explores the integration of AI and machine learning (ML) within institutional research (IR), catering to all -- AI users, non-users, and those experimenting with machine learning projects. We will share how open-source tools can transform IR operations from descriptive reporting to machine learning levels of predictive and prescriptive analysis. The session will include techniques for interactive data visualization and demonstrations on working with both quantitative data and text data (Natural Language Processing). We will also explore the benefits of practicing with simulated data, which is invaluable for testing and refining methods before full implementation. Yes, it will be a fast-paced session (akin to a drive on the Garden State Parkway perhaps?), but the ultimate destination is to equip attendees with customizable approaches for bootstrapping innovation in IR.

2:20 pm to 3:20 pm

Track 3 - Analytics and Technology



Sahana Varadaraju

ENHANCING STUDENT SUCCESS THROUGH AI-POWERED APPLICATIONS (9)

Sahana Varadaraju

- Senior Application Developer
- Rowan University

This presentation will demonstrate how AI, specifically ChatGPT, enhances student and faculty success in higher education. It introduces a Python-based application that integrates with ChatGPT to handle queries about courses, schedules, and seat availability. Users can ask questions through the application, and the background process provides solutions based on stored database information. The application securely retrieves data from the database and the Banner system, ensuring ChatGPT doesn't directly access it. With JWT-secured API endpoints, the solution guarantees data security, flexibility, and minimal setup. It's cost-effective, scalable, and adaptable, significantly improving access to critical information for students and faculty while enhancing administrative efficiency. Highlighting its benefits, this AI-powered approach has the potential to transform higher education by providing timely, accurate information, contributing to user success and satisfaction.

3:30 pm to 4:30 pm

**Track 1 - Data Management and Governance**



Jamie Kifferly

**SIMPLIFYING DATA SOURCES WITH A DATA MATRIX (10)**

**Jamie Kifferly**

- *Institutional Research Analyst*
- *Rowan University*

The Rowan University Office of Institutional Research & Analytics identified a critical need for a unified data source amidst various survey types we encounter. Our presentation will delve into the reasons behind this necessity, outlining the creation process of what we term the "Data Matrix". This singular data repository aims to drive our dashboards and other reporting mechanisms, catering to both internal and external reporting requirements. We'll discuss challenges we have encountered and our strategies to overcome them. Additionally, we'll highlight the integration of Tableau to enhance our readiness for external surveys.

3:30 pm to 4:30 pm

**Track 2 - Analytics and Technology**



Jonathan Stoessel

**YEAR OF THE DAWG? EMPHASIZING "DATA COMFORT" THROUGH THE DATA ANALYTICS WORKING GROUP (DAWG) AT PRINCETON (4)**

**Jon Stoessel**

- *Institutional Research Analyst*
- *Princeton University*

The Data Analytics Working Group (DAWG) was re-convened in February 2023. DAWG has five main objectives which are to encourage dialogue among data users to share their experiences of using various datasets, highlight the interdisciplinary nature of this work across units, focus on how data projects can be created / delivered / received by the campus community, foster a welcoming environment for sharing analytics project successes / challenges, and to exchange best practices for visualization and analysis. All done in a comfortable and low-stakes environment with no expertise required.

3:30 pm to 4:30 pm

**Track 3 - Strategic Planning and Decision Making**



Nima Sherpa



Neva Lozada

**LEVERAGING DATA VISUALIZATION FOR INSTITUTIONAL EFFECTIVENESS [FORECASTS AND INSTITUTIONAL EFFECTIVENESS DASHBOARDS] (8)**

**Nima Sherpa**

- *Lead Data Analyst*
- *Kean University*

**Neva Lozada, Ed.D.**

- *Associate Vice President of Administration*
- *Kean University*

**Hong Gao, Ph.D.**

- *Director*
- *Kean University*

In today's data-driven world, higher education institutions face the challenge of harnessing the power of data to enhance their effectiveness. Through the inception of the Division of Strategic Analytics and Data Illumination, Kean University has empowered its community to access, analyze, and utilize data to support decision-making and foster innovation. This presentation explores the pivotal role of data visualization for driving institutional effectiveness, offering insight into how visual representation of data can drive informed and streamline decision-making in course registration, and enrollment management. Through our historical and real-time student data, attendees will gain the highlights of how Kean is utilizing data visualization in transforming enrollment datasets into actionable insights and fostering the data-driven culture across the institution. By leveraging data visualization strategies, institutions can make more informed decisions, gain deeper insights, and achieve their goals with greater efficiency and impact.