

## Agenda for the 2024 Fall Conference of the University of Tennessee 'Data Science Institute'

### **DAY 1 - Thursday, September 12<sup>th</sup> (Plant Sciences Biotechnology Building – 157)**

- 1:00 - 1:30 pm:** Welcome - State of the School of Natural resources and Data Science Institute for Machine Learning and AI (Don Hodges and Tim Young)
- 1:30 – 2:00 pm:** **Dr. Marianne Wanamaker**, Dean – UT Baker School  
**'Labor Markets and Future Employees in the Era of Data Science'**
- 2:00 – 2:40 pm:** **Mikhail Golovnya<sup>1</sup>**, Senior Advisory Data Scientist – Minitab  
**'Data Science and Future for Machine Learning and AI'**  
*In his talk Mikhail gives a high-level overview the modern landscape of AI, its diverse types, algorithms, and key paradigms. He concludes by addressing various controversies and concerns surrounding modern AI and its future.*
- 2:40 – 3:20 pm:** **Ross Metusalem<sup>2</sup>**, Senior Systems Engineer – JMP Statistical Discovery  
**'Data Science for Manufacturing Excellence: From Six Sigma to Deep Learning'**  
*Modern, data rich manufacturing environments present both a challenge and an opportunity. Making sense of a deluge of data is no easy task, but doing it well unlocks a level of manufacturing excellence that is unattainable otherwise. This talk will review several examples of manufacturing excellence achieved through data science, from tried-and-true six sigma techniques through advanced machine learning methods. Examples will be accompanied by several brief demonstrations of techniques implemented in JMP® statistical software.*
- 3:20 pm:** *Coffee Break*
- 3:35 – 4:15 pm:** **Bob Muenchen**, Creator of 'r4stats', <https://r4stats.com/>  
**'Open Source Data Science User Interfaces'**  
*The free and open source languages R and Python have upended the data science marketplace, replacing expensive commercial tools for many applications. However, not everyone has the time or inclination to learn*

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<sup>1</sup> <http://www.mikhailgolovnya.com/>

<sup>2</sup> Ross Metusalem is a Senior Systems Engineer at JMP Statistical Discovery. He helps scientists, engineers, and researchers apply data science and statistics to problems of all sorts. Before joining JMP, he worked as a research scientist for Pearson, an education technology and publishing company. His love of all things data extends further back to his PhD studies in Cognitive Science at UC San Diego.

*such complex languages. To address this, Graphical User Interfaces (GUIs) have been developed that use simple menus and dialog boxes to drive analyses. The GUIs write code behind the scenes, which users can study if they wish. This talk will provide an overview of several GUIs, including BlueSky Statistics, jamovi, JASP, R-Commander, R-AnalyticFlow, R-Instat, RKward, and Orange Data Mining.*

**4:15– 5:30 pm:** Member Company Introduction Presentations for **Staff & Students**

- *Hexion Chemicals*
- *Huber Engineered Woods*
- *Louisiana-Pacific Corp.*
- *Roseburg Forest Products*  
*Dieffenbacher North America – ‘Evoris AI’*

**5:30 pm:** ***‘Welcome-Back’ BBQ Cookout Dinner with Students***

**DAY 2 - Friday, September 13<sup>th</sup> (Agricultural and Natural Resources Building – 124)**

**8:00 – 9:30 am:** **Workshop #1 (*Minitab*)**

**9:30 am:** *Coffee Break*

**9:30 – 11:00 am:** **Workshop #2 (*JMP*)**

*In this JMP software workshop, you will learn a range of tools for foundational graphing and analysis, regression modeling, response optimization, six sigma, and machine learning. There will be several opportunities for hands-on practice. If you don’t already have JMP, you can download a free 30-day trial at [www.jmp.com/try](http://www.jmp.com/try).*

**11:00 – 12:30 pm:** **Workshop #3 (*‘Introduction to BlueSky Statistics’*)**

BlueSky is a free and open-source data science package with extensive data management, visualization, statistical analysis, and machine learning features. Its point-and-click user interface is easy to learn and use. Behind the scenes, it uses the powerful R language. If you wish to learn R programming, you can ask BlueSky to show you the R code that it writes. It uses the popular ggplot R package for visualization and tidyverse commands for data management. Participants are encouraged to download BlueSky from <https://BlueSkyStatistics.com>. The user guide is on the presenter's website: <https://r4stats.com/books/bluesky-statistics-user-guide/>.

**12:30 – 1:30 pm:** *Luncheon*

----- **Conference Ends** -----

**2:00 – 4:00 pm:** **Executive Board Meeting (*Open for all Members to Attend*)**