## **Program for the Indiana Section MAA Meeting Spring 2024**

## Marian University, Indianapolis

## April 5-6, 2024

\*\*Note: All times listed are in Eastern Time Zone \*\*\*

| Friday, April 5                   |                 |  |                     |  |  |
|-----------------------------------|-----------------|--|---------------------|--|--|
| 3:00 - 5:00                       | Registration    | 3:30 – 3:50  | ICMC Registration   |  |  |
| Atrium of Witchger                |                 | Atrium of Witchger                                     |                     |  |  |
| Engineering Building              |                 | Engineering Building                                   |                     |  |  |
| 5:00 - 6:15                       | Executive Board | 4:00 – 4:15  | ICMC Orientation    |  |  |
| Witchger Engineering              | Meeting         | Marian Hall 251  |                     |  |  |
| Building 261                      |                 | 4:30 - 6:30  | ICMC                |  |  |
| 4:30-6:20                         |                 |  |                     |  |  |
| Book Sale                         |                 |  |                     |  |  |
| Witchger Engineering Building 334 |                 |  |                     |  |  |
| Contributed Talks                 |                 | Marian Hall 305  |                     |  |  |
|                                   |                 | Moderator: Krysi Leganza, Ulndy                        |                     |  |  |
| 5:00 – 5:20                       |                 | Rodney Lynch, IUPUC                                    |                     |  |  |
|                                   |                 | Multiplicative inverses of determinant 0 matrices      |                     |  |  |
|                                   |                 | (§)  |                     |  |  |
| 5:30 – 5:50                       |                 | Young Hwan You, IU East                                |                     |  |  |
|                                   |                 | Recovering initial temperature profile of a one-       |                     |  |  |
|                                   |                 | dimensional uniform rod via finite linear time         |                     |  |  |
|                                   |                 | sampling under periodic boundary conditions (§)        |                     |  |  |
| 6:00 – 6:20                       |                 | Rodney Lynch, IUPUC                                    |                     |  |  |
|                                   |                 | Outer products, generalized identities, and            |                     |  |  |
|                                   |                 | generalized inverses (§, §§)                           |                     |  |  |
| 6:30 – 7:45                       |                 | Banquet  | Student Pizza Party |  |  |
|                                   |                 | Alumni Hall  | Marian Hall 305     |  |  |
| 7:30 – 8:00                       |                 | Awards Pre   | esentation          |  |  |
| Alumni Hall                       |                 |  |                     |  |  |
| 8:00 – 9:00                       |                 | Deborah Kent, University of St. Andrews                |                     |  |  |
| Alumni Hall                       |                 | Mostly in the zone: Mathematics and 19 <sup>th</sup> - |                     |  |  |
|                                   |                 | century eclipse expeditions (§, §§)                    |                     |  |  |

Student Talks: (\*) Graduate Student; (\*\*) Undergraduate Student

(§) Presentation accessible to Undergraduates

(§§) Presentation of interest to K-12 Faculty

Each contributed talk is to be a 20-minute talk followed by 5 minutes for questions

For any comments, please contact the 2023-2024 Chair of the Section,

Livia Hummel, <a href="https://hummell@uindy.edu">hummell@uindy.edu</a>

|                 | Saturday  | y, April 6                     |                             |
|-----------------|---|--------------------------------|-----------------------------|
| 7:30 – 8:30     | Registration  |                                |                             |
|                 | Atrium of Witchger Engineering Building   |                                |                             |
| 8:30 - 3:30     | Book Sale   |                                |                             |
|                 | Witchger Engineering Building 334   |                                |                             |
| 8:20 - 8:30     | Welcome   |                                |                             |
| Marian Hall 251 | Dr. Kenith Britt, Chief Operating Officer and Chancellor, Marian University     |                                |                             |
| 8:30 - 9:30     | Matt Boelkins, Grand Valley State University                                    |                                |                             |
| Marian Hall 251 | Interactive, Accessible, Free, and More: how open-source textbooks are changing |                                |                             |
|                 | the teaching and learning of mathematics. (§, §§)                               |                                |                             |
| 9:30 – 10:00    | Break & Conference Photo  |                                |                             |
|                 | Atrium of Witchger Engineering Building   |                                |                             |
|                 | Witchger Engineering  | Witchger Engineering           | Witchger                    |
|                 | Building 223  | Building 351                   | Engineering Building        |
|                 | Moderator: Tyler Billingsley,   | Moderator:                     | 361                         |
|                 | Rose-Hulman   |                                |                             |
| 10:00 - 10:20   | Section NExT Panel  | Haseeb Kazi, Trine             | Student Activity            |
|                 | Panelists:  | <b>Shaheer A. Kazi,</b> Angola | Workshop                    |
|                 | Matt Boelkins (Grand Valley   | Middle School, <b>Nabeeha</b>  |                             |
|                 | State University),  | <b>H. Kazi,</b> Angola High    | Lagrange's Study of         |
|                 | Naama Lewis (Marian),   | School                         | Wilson's Theorem            |
|                 | Amish Mishra (Taylor),  |                                |                             |
|                 | Olga Scrivner (Rose-Hulman)   | Understanding,                 | Led by <b>Haris Skiadas</b> |
|                 |   | Addressing, and                | (Hanover) &                 |
|                 | Recent Technological  | Overcoming Math Phobia         | Godfred Yamoah              |
|                 | Advances and the Changing   | (§, §§)                        | (Trine)                     |
| 10:30 – 10:50   | Classroom   | David Housman, Goshen          |                             |
|                 |   | College                        |                             |
|                 |   | _ , ,                          |                             |
|                 |   | Probability a group            |                             |
| 44.00 44.00     |   | element is pivotal (§)         |                             |
| 11:00 – 11:20   | Matt DeLong, Zach Gates,  | Michael Xue, Vroom             |                             |
|                 | James Highbaugh, Sarah  | Laboratory for Advanced        |                             |
|                 | Klanderman, Naama Lewis,  Marian  | Computing, Indianapolis        |                             |
|                 |   | Introducing Feynman's          |                             |
|                 | Transforming a Calculus Sequence Through a Shared                               | integral method (§)            |                             |
|                 | Vision—Active Learning,   | integral method (9)            |                             |
|                 | Mastery Grading, and OERs   |                                |                             |
|                 | (§, §§)   |                                |                             |
| 1               | (3, 33)   |                                |                             |

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| Saturday, April 6 (cont.)                           |  |   |  |  |  |
|---|--|---|--|--|--|
| 11:30 – 12:45                                       | Lunch  |   |  |  |  |
|   | Dining Commons   |   |  |  |  |
|   |  |   |  |  |  |
| 12:30 – 1:30  | Poster Session   |   |  |  |  |
|   | Atrium of Witchger Engineering Building                                  |   |  |  |  |
| 4.20 2.20   |  |   |  |  |  |
| 1:30 – 2:30   | Talea L. Mayo, Emory University  |   |  |  |  |
| Marian Hall 251                                     | Weathering the Storm: Using Math to Understand Climate Change Impacts on |   |  |  |  |
|   | Hurricane Storm Surge Risk   |   |  |  |  |
| Contributed Talks                                   |  |   |  |  |  |
|   | Witchger Engineering   | Witchger Engineering Building 351               |  |  |  |
|   | Building 223   | Moderator: Josh Holden, Rose Hulman             |  |  |  |
|   | Moderator:   | ,   |  |  |  |
| 2:30 - 2:50   | Kai-Chun Lin**, Rose-  | Edward Vogel, Rose-Hulman                       |  |  |  |
|   | Hulman   | Recap of Mathematics and Art Residency at Rose- |  |  |  |
|   | Tight frame and discrete   | Hulman  |  |  |  |
|   | structures (§)   | (§, §§)   |  |  |  |
| 3:00 – 3:20   | Steven Lippold, Taylor   | Michael Karls, Ball State University            |  |  |  |
|   | University   | Cooking a turkey (§, §§)                        |  |  |  |
|   | Permutation-like matrices  |   |  |  |  |
|   | (§)  |   |  |  |  |
| 3:30 – 4:30   | Business Meeting   | ICMC Solutions Workshop                         |  |  |  |
|   | Marian Hall 251  | Witchger Engineering Building 351               |  |  |  |
|   |  |   |  |  |  |
|   |  |   |  |  |  |
| General Adjournment. See you at MathFest in August! |  |   |  |  |  |
|   |  |   |  |  |  |

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