

Spring Meeting

Program Highlights:

Stephen Kennedy, Carleton College, Senior Acquisitions Editor for MAA Books

Two Heads Are Better Than None

Every question in probability has seventeen plausible answers. The sixteen incorrect answers always occur to you before the correct one. In this talk a very simple question of probability—If I intend to flip a coin until I see two consecutive heads, when, if ever, should I expect to stop?—leads to a morass, a muddle and then one seeming miracle. We'll resolve the muddle and explain the miracle and, in true mathematical fashion, leave ourselves with a new unresolved puzzle.

Nigel Boston, UW-Madison

Unusual Applications of Algebra to Engineering

Algebra has of late found increasingly many applications to electrical engineering and computer science. I shall briefly describe what are now fairly standard applications to coding theory and cryptography (to ensure accurate and secure data transmission) and then move on to more recent applications to things like face recognition, recommender systems (such as Netflix), and optimization problems such as in robust control theory.

M Matchett Wood, UW-Madison

From Primes to Particles

Prime numbers are the basic building blocks of the integers, and the study of primes and how they combine to form integers is one of the most foundational topics in mathematics. We explain recent breakthroughs in applying ideas from number theory and the study of how prime numbers combine to form integers to gain new understanding of symmetries in spaces of particles. If we pick a random integer, the probability that it is square-free is $\frac{6}{\pi^2}$. If we ask for the probability that two random integers are relatively prime, the answer is also $\frac{6}{\pi^2}$. Our work uses this coincidence to uncover surprising things about the topology of spaces of particles, which in fact we can prove, though we do not entirely understand the mechanism behind yet. This talk will present the ideas at a general conceptual level without technical details. This is joint work with Benson Farb and Jesse Wolfson.

Map

A UW-Milwaukee campus map can be found at <http://uwm.edu/locations/>.

Parking

See the parking map here: <http://uwm.edu/parking/parking-map/>

The most convenient garage is the EMS Garage (Lot #23), which is \$1.50 per hour. The next most convenient place to park is the Cunningham Lot (Lot #20), which is \$1.00 per hour.

On Friday, participants may park on the east side of N Cramer St. There is two-hour meter parking (controlled by City of Milwaukee) from 8:00am-6:00pm. There is no parking on the west side of Cramer.

On Saturday, metered parking on the east side of Cramer is enforced from 8:00am-12:00pm, but there is unlimited free parking on the west side.

Lodging Information

Hampton Inn & Suites

176 W Wisconsin Ave, Milwaukee WI 53203

Phone: (414)271-4656

(20 rooms)

Reservations: Use group code SMERF.

Direct link to book rooms [here](#).

Blocked until: April 7, 2017.

Rate: \$109 per night + tax.

Complimentary hot breakfast buffet daily from 6am to 10am.

Free WiFi throughout the hotel.

Indoor swimming pool and Jacuzzi.

Fitness Center and complimentary access to Gold's Gym.

Parking:

- Valet parking \$27 per car per night, which includes unlimited in/out privileges.
- Self-parking is also available at a fee of \$14 per day; however, this option does not offer unlimited in/out privileges.

Fairfield Inn & Suites by Marriott Milwaukee Downtown

710 N. Old World Third Street, Milwaukee WI 53203

Phone: (414)224-8400

(20 rooms)

Reservations:

<http://cwp.marriott.com/mkefd/maaspringmeetng>

Mention MAA Wisconsin Spring Meeting.

Blocked until: March 21, 2017.

Rate: \$ 117 per night + tax.

Complimentary breakfast.

Fitness Center.

Free Wi-Fi.

Parking: self-park \$18 per night, valet-park: \$21 per night

Knickerbocker on the Lake

1028 E Juneau Ave, Milwaukee, WI 53202

Phone: (414) 276-8500

(20 rooms)

Reservations: Mention MAA Conference participant.

Blocked until: April 1, 2017.

State Rate: \$90.00 per night + tax.

No breakfast provided.

Parking: \$18 per night.

Courtyard Milwaukee Downtown,

300 W. Michigan Street, Milwaukee, WI 53203,

Phone: (414)291-4122

(25 rooms)

Reservations: (800)228-9290; mention University of

Wisconsin Milwaukee Room Block

Direct link to book rooms [here](#).

Blocked till: April 7, 2017.

Rate: \$110 per night +tax.

Complimentary breakfast. Parking: \$24.