



American Chemical Society Wichita Section Spring 2024 Newsletter

Section Meeting

Monday, 29 April, 7:00 PM

Wichita State University
Wichita, KS

Meal (optional)

6:00 PM

Dinner will be served in the Santa Fe Trail Room (room number 233) on the second floor of Rhatigan Student Center at Wichita State University. Dinner buffet will include taco with ground beef and shredded chicken, fresh fried tortilla chips, and different toppings. The cost of the meal is \$10 for regular members and non-regular members (visitors), and free for students who also register and attend the presentation. Directions and a campus parking map can be found at: <https://www.wichita.edu/services/parking-1/parking-maps.php>

Please RSVP by Monday, 15 April to Paul Rillema at paul.rillema@wichita.edu.

Meeting

7:00 PM

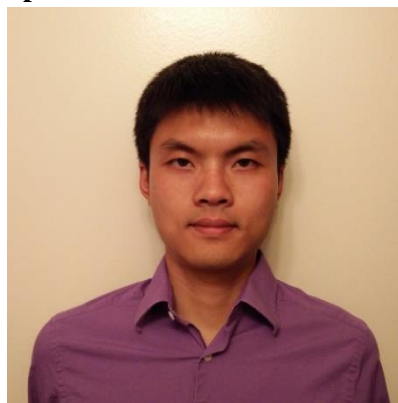
Keynote Speakers Dr. Cuncong Zhong, Associate Professor at the Department of Electrical Engineering, University of Kansas, Lawrence, KS

Title: Recent Advances in Cancer Therapeutics Empowered by Machine Learning

Abstract

Cancer used to be a deadly disease that significantly threatened people's lives for centuries. Fortunately, our ability to treat cancer has improved drastically, leading to a significant increment in cancer patient survival rate. Machine learning has played an important role in recent advances in cancer therapeutics, for example in cancer genomics data analytics, early diagnosis, personalized treatment, and cancer vaccine development. In this talk, I will introduce two ongoing projects in my lab. The first project attempts to use machine learning to identify human gut microbiota features for immunotherapy outcome prediction. The second tries to develop an AI model to automatically parse biomedical literature and extract data analytics pipeline. Finally, I will also try to review other important applications of machine learning in cancer therapeutics.

Speaker Bio



Associate Professor at the Department of Electrical Engineering
University of Kansas, Lawrence, KS

Dr. Cuncong Zhong is currently an Associate Professor at the Department of Electrical Engineering and Computer Science, University of Kansas (KU). His primary research interests include genomics and bioinformatics. Prior to joining KU, he received his postdoctoral training at the J. Craig Venter Institute (JCVI). At JCVI, he developed a suite of computational methods for metagenomics and metatranscriptomics analysis and applied these approaches for better understanding of the human microbiome. Dr. Zhong obtained his Ph.D. in Computer Science from the University of Central Florida in 2013, where he developed algorithms for studies of non-coding RNA structure and genomics.

Chair's Message

Dear Wichita Local Section Members,

On behalf of the ACS Wichita Local Section Executive Committee, it is my honor to extend a warm welcome to all of you as we start another year of collaboration and teamwork with a common goal in mind.

In December 2023, we had the section-wide elections. The newly elected officers include Dr. James Titah from Table College (Chair, Elect), Dr. Kayla Eschliman from Friends University (Secretary), Dr. Jennifer Settle (Treasurer) and Dr. Paul Rillema from Wichita State University (Councilor) with the other office positions remained unchanged. Please join me in welcoming the new officers while appreciating the continuing officers for their invaluable service.

Among the many events the Wichita Local section carried out last year, the most noteworthy was the two-day Strategic Planning Retreat facilitated by Drs. Nigel Sanders and Wayne Jones. The SP retreat was held on the 10th and 11th of September, 2023 at the Hyatt Place, Wichita State University, funded by the ACS Committee on Local Section Activities. During the SPR, thirteen members of the Wichita local section collaborated and developed vision and mission statements for the Wichita local section, in addition to identifying three major goals: Engagement, Outreach, and Education, and nine strategies to reach the said goals. A realistic project timeline was set forth for the implementation of the goals, with champions identified to lead each strategy.

Our new Vision statement, 'Build and empower a community to enhance lives through Chemistry', and our new Mission statement, 'Connect members and the community through education and resources sharing to promote chemistry and enhance the lives of all people' will be in our minds with all our future activities. I hope you all will engage with the WLS and the larger community in your capacity to make this mission and vision a success.

Our first social gathering of 2024 was held on March 23rd, Saturday at the Sedgwick County Zoo (more information on the newsletter). Furthermore, Wichita Section held the US National Chemistry Olympiad (USNCO) 2024, which was coordinated by Dr. James Titah at Tabor College. We had 15 candidates who wrote the local chemistry Olympiad exam and 10 students will be selected to write the national exam in April 2024.

As the 2023 fiscal year ends, it's time for the ACS Wichita Local Section (L.S.) awards banquet. I cordially invite you all to the awards banquet on Monday April 29th, at the Rhatigan Student Center (RSC), Wichita State University in Wichita, KS. At the event, we will recognize and award certificates to many Outstanding Students from various colleges and universities within the Wichita Local Section's geopolitical jurisdiction. Please join me in recognizing and congratulating all of our outstanding students for their hard work, dedication, and their passion for chemistry.

At this year's awards banquet, our keynote speaker is Dr. Cuong Zhong, Associate Professor at KU, and his talk is titled 'Recent Advances in Cancer Therapeutics Empowered by Machine Learning'. Dr. Zhong earned his Ph.D. in Computer Science, University of Central Florida. Among his research interests are Computational Biology, Biological big data and precision medicine and Functional non-coding RNA.

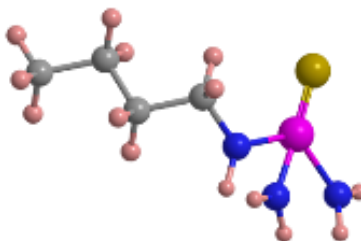
I hope to see you at the awards banquet on April 29th!

Truly,

Manjula Koralegedara

Chair, ACS Wichita Local Section

Molecule of the Week



N-(n-Butyl)thiophosphoric triamide (NBPT)

N-(*n*-Butyl)thiophosphoric triamide (NBPT) is a specialty fertilizer additive. It was first reported in 1956 by Margot Goehring and Kurt Niedenzu at the University of Heidelberg (West Germany). The authors described processes for making phosphoramidate² [PO(NH₂)₃], as well as alkylated amides of orthophosphoric acid and thiophosphoric acid, including NBPT.

NBPT has been used successfully in agriculture for more than 20 years. A 2018 review by Heitor Cantarella and coauthors at the Agronomic Institute of Campinas and other Brazilian institutions described the compound's effectiveness but suggested that formulations be improved to lengthen the period of urease inhibition and to increase shelf life.

2024 Section Executive Committee

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Wichita Section Web Site

<https://communities.acs.org/t5/Wichita-Local-Section/gh-p/wichita-ls>