

## 1. Introduction

Welcome to CEMIT - the UNC Charlotte Ignite Center for Environmental Monitoring and Informatics Technologies for Public Health. CEMIT was founded in July of 2023. This is our inaugural newsletter!

CEMIT is a multidisciplinary entity which brings together personnel from four UNC Charlotte colleges:

- The College of Computing and Informatics
- The Lee College of Engineering
- The College of Science
- The College of Humanities & Earth and Social Sciences

External to UNC Charlotte the Center includes participants from:

- The University of Arkansas for Medical Sciences
- The Pollution Detectives, LLC
- Rowan Cabarrus Community College

## 4. CEMIT logo

CEMIT partnered with Ms. Cynthia Frank of the College of Arts + Architecture to create a logo for the Center. Cynthia posed the challenge as an exercise for her fall 2023 Graphic Design (ARTG 3128) class. Based on inputs provided by Dr. Du describing the mission and vision of the Center, the class generated 16 candidate designs. These 16 candidate designs were then shared with the Center's participating faculty for their inputs. The design by Ms. Franchesca Gatti (BFA '25) was selected and revised and the final logo is:



The logo underscores CEMIT's focus on the environment and its importance to human health. The circular shape represents the Earth. The binary numbers on the outer circumference of the graphic represent the ASCII characters for C E M I T, the chosen acronym for the Center. This also depicts the significant role of analytics in the Center.

## 2. Kickoff Meeting

The Center held its kickoff meeting on November 15, 2023. Attendees were divided up into four concurrent groups to assess and identify potential priority projects. These groups focused on Biosensors, Metagenome, Metabolome and Exposome; Data Analytics and Informatics; and Remediation.



## 5. Other Activities

CEMIT has ongoing conversations with local/regional organizations to build collaborations.

- Public Health Department Director in Mecklenburg County
- Public Health Department Director in Cabarrus County

## 6. Proposal Submission

CEMIT submitted the following:

- Letter of Intent to UNC Charlotte's Division of Research proposing creation of an Environmental Health Core Facility on the North Carolina Research Campus in Kannapolis. The LOI has been accepted and the full proposal is due by April 15, 2024.
- Proposal to the NCIInnovation program to commercialize nanosensors for detecting pesticides.

## 3. New Grant Funding

Faculty affiliated with CEMIT have received the following grants.

- **R01EB035083**  
NIH National Institute of Biomedical Imaging and Bioengineering  
**Title:** Development of point-of-care mobile health technology to reduce heat and pesticides-induced farmworker health disparity  
**Lead organization:** UNC Charlotte  
**Contact PI:** Dr. Jun Wang  
**Total award amount:** \$1.9M  
**Other CEMIT faculty:** Xiuxia Du, Babak Parkhideh
- **STTR Phase II: R42ES032388**  
NIH National Institute of Environmental Health Sciences  
**Title:** Development of an integrated smartphone-nanosensor platform for onsite biomonitoring of exposure to pesticides  
**Lead organization:** NanoDiagnostic Technology, LLC  
**Contact PI:** Dr. Jun Wang  
**Subaward to UNC Charlotte:** \$540K
- **North Carolina Collaboratory**  
**Title:** On-Mask Covalent Capture and Detection of SARS-CoV-2  
**Lead Organization:** UNC Charlotte  
**Contact PI:** Dr. Terry Xu  
**Total award amount:** \$1.6 million  
**Other CEMIT faculty:** Jun Wang

## 7. Contacts

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If you have questions or items you'd like to submit for inclusion on the CEMIT website or in future newsletters, please reach out to us. Thank you for reading!