



CICI Industrial Advisory Board (IAB)

Fall 2023 Meeting

December 7-8, 2023



UNIVERSITY
OF MIAMI



TEXAS A&M ENGINEERING
EXPERIMENT STATION

NC STATE UNIVERSITY





Objective

Provide updates on the research agenda and discuss on going and future collaborative projects for the Center for the Integration of Composites into Infrastructure (CICI).

Center Participants

University of Miami (UM)

Dr. Antonio Nanni, Site Director
Dr. Francisco De Caso, Managing Director

West Virginia University (WVU)

Dr. Hota GangaRao, Site Director
Dr. Rakesh Gupta
Dr. Ruifeng Liang
Dr. Yoojung Yoon
Dr. Chao Zhang

Texas A&M University (TAMU)

Dr. Anand Puppala, Site Director
Dr. Nripojyoti Biswas, Managing Director

North Carolina State University (NCSU)

Dr. Rudi Seracino, Center Director
Dr. Greg Lucier
Dr. Jason Patrick
Dr. Kara Peters
Dr. Mark Pankow

National Science Foundation (NSF)

Dr. Prakash Balan, Program Director
Mr. Stephen McGregor, Evaluator

Industry Advisory Board (IAB)

Dr. Vijaya Gopu, Chair
Mr. John Busel, Vice-Chair

Virtual Attendance Zoom Link:

<https://tamu.zoom.us/j/98844177826>

One tap mobile

+13462487799, 98844177826# US (Houston)

+17193594580, 98844177826# US

Questions

Contact:

Dr. Anand Puppala at: anandp@tamu.edu
979-458-6346 (CVEN) & 979-317-1204 (CIR)

Dr. Nripojyoti Biswas at: nripojyoti.biswas@tamu.edu
682-367-0145 (Cell)

Dr. Jianxin Huang at: j.x.huang@tamu.edu
979-721-1774 (Cell)

Ms. Katie Carroll (Parking): katiecarroll@exchange.tamu.edu



Center for Integration of Composites into Infrastructure

PART 1: Thursday, December 7, 2023

10:00 AM – 6:00 PM CST

Join Zoom Meeting Access:

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Agenda (CST)

Center for Infrastructure Renewal (CIR), RELLIS Campus

10:00 AM

Meet at CIR, Snacks and Coffee

CIR Training Room 1107

10:30 AM

Visit to crash testing facility in Rellis (Tentative and this is not yet confirmed)

12:00 PM

Lunch

1:00 PM

Welcome (Dr. Puppala) and Self-Introductions

Texas A&M University (Project Numbers 1 to 4)

Chair: Dr. Puppala

2:00 PM

University of Miami (Project Numbers 5 to 8)

Chair: Dr Nanni (Dr. Francisco and Dr. Alvaro will lead)

3:00 PM

Snack and Coffee

3:15 PM

CICI Technical Presentations continued (see Table 1 for program) West Virginia University (Project Numbers 9 to 12)

Chair: Dr. Gangarao

4:15 PM

NC State University (Project Numbers 13 to 15)

Chair: Dr. Seracino

5:00 PM

Industrial Presentation (Two from TAMU side)

5:30 PM

Close of Technical Session and Announcements (Dr. Puppala)

6:00 PM

Reception with Poster Session and Dinner Buffet at CIR



Table 1. Technical Presentations Thursday, December 7, 2023

#	Time & Thrust Area*	Title	Presenter
1:00 pm – 2:00 pm		TAMU Site; <i>Session Chair:</i> Anand Puppala	
1	A, B	Evaluating the Performance of Fiber-Based Concrete Mixes for Various Applications	Krishneshwar Ramineni, Akash Tanshetti,
2	C, E	Application of Geofoam for Thermal Encapsulation of Foundations	Hiramani Chirmauriya, Clay Caldwell
3	A	Design and Testing of IFI Geosynthetic Products	Krishneshwar Ramineni
4	C, D	Performance of Pavement Sections with Wicking Geosynthetics	Nripojyoti Biswas, Avinash Gonnabathula
2:00 pm – 3:00 pm		UM Site; <i>Session Chair:</i> Antonio Nanni	
5	C, D	Using Machine Learning and Artificial Intelligence to implement FRP in infrastructure: Areas of Opportunity	Nima Khodadadi
6	A, C, D, E	Composites for Infrastructure Applications: Designing a Reinforced Concrete Building	Zahid Hussain
7	A, C, D	Solutions for the Implementation of Composites Through Experimental Testing and Design: PART A: Slab-on-Ground (SOG) PART B: Push-off test PART C: Compressive behavior of GFRP bar	A: Hossein Roghani (new guide dev) B: Camilo Vega C: Amin Mirdarsoltany
8	A, C, D	Propelling the use of FRP Composites with Meaningful Standards and Guidelines: PART A: Guide for Field Inspection PART B: Design and Selection of FRP pultruded elements	A: Jesus Ortiz B: Ehsan Harati
3:15 pm – 4:15 pm		WVU Site; <i>Session Chair:</i> Hota Gangarao	
9	C, D	Enhancing Load Capacity of FRP Pedestrian Bridges	PV Vijay and Chao Zhang
10	A, B	Design Optimization of FRP Composite Jacketing for Tank Cars under Impact and Fire: Simulation	Eduardo Sosa
11	B, C	Evaluation of Wildfire Protection Methods for Composite Utility Structure Materials	Ray Liang and Siddhant Sitoula
12	A, D	Responses of Composite Structural Components and Systems	Hota Gangarao
4:15 pm – 5:00 pm		NCSU Site; <i>Session Chair:</i> Rudi Seracino**	
13	C	Repair of Precast Concrete Dapped End Beams	M. Qambar
14	B, C	Creep of Precast Sandwich Panels with CFRP Wythe Connectors	G. Lucier

15	C, D	Design and Assessment of Disturbed Regions Reinforced with FRP Bars	T. Brodbeck
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**Thrust Areas Designations:*

A - Materials Development and Characterization, Manufacturing, Recycling; B- Durability and Aging;

C - Design Implementation and Evaluation; D - Codes, Specifications and Guide;

E - Maintenance, Repair Methodologies/Damage Detection

***The presentation schedule might change in the future for the NCSU team.*



Center for Integration of Composites into Infrastructure

PART 2: Friday, December 8, 2023

8:30 AM – 12:00 PM CST

Join Zoom Meeting Access:

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Agenda (CST)

CIR Training Room 1107

- 8:30 AM Coffee and Snacks
- 9:00 AM Visit to CIR Laboratories and Hyper Velocity Impact (HVI) facility – Demo is planned
- 10:00 AM CICI Center update (Dr. Hota)
- 10:30 AM IAB Meeting (Dr. Gopu)
- 11:30 AM CICI Future planning (All)
Phase III graduation
Next IAB meetings
- 11:30 AM Closing remarks (Dr. Puppala)

Boxed lunch provided.