



UNIVERSITY OF DELAWARE

CENTER FOR COMPOSITE MATERIALS

Celebrating 50 Years



Third Annual Review - NASA University Leadership Initiative

Composite Manufacturing Technologies for Aerospace Performance at Automotive Production Rates

AGENDA

Date:	October 25, 2023	Location:	Center for Composite Materials, University of Delaware
Time (EST)		Presenter	
8:15	Welcome and Introduction to ULI	NASA, Ms. Jegley and Dr. Datta	
Session 1: ULI Overview and Highlights			
9:20	Education/Workforce Highlights	UD-CCM, Prof. Gillespie	
9:00	Overview of UAM Market	UD-CCM, Prof. Gillespie and SU, Prof. Mensah	
9:40	Break	Joby, Mr. Geriguis	
Session 2: Mechanics and Properties of Aligned Short Fiber Composites			
10:00	Unidirectional Tensile Strength: Role of Resin Plasticity, Residual stress, Interfacial Debonding and Friction	UD-CCM, Prof. Gillespie	
10:15	Process Induced Fiber Waviness and Residual Stress	UD-CCM, Mr. Chen, Dr. Simacek	
10:40	Fatigue Performance of Cross-ply Laminates	UD-CCM, Dr. Parambil	
11:00	Self-healing Interphases: Vitrimers	SU, Mr. Tetteh, Prof. Mensah, Prof. Li	
Session 3: Processing of Aligned Short Fiber Composites			
11:20	Advances in Fiber Alignment for Thin Ply Preforms	UD-CCM, Dr. Niknafs, Prof. Gillespie	
11:45	Constitutive Models, Forming Limits and New Capabilities	UD-CCM, Dr. Cender	
12:15	Lunch		
Session 4: Part Process Development			
12:45	Joby Forming Development	Joby, Mr. Geriguis, and UD-CCM, Dr. Yarlagadda, Dr. Tierney	
1:15	Spirit Forming Development	Spirit, Tymes and UD-CCM, Dr. Yarlagadda	
1:40	Automated Tape Placement of Highly Steered TuFF Tapes	UD-CCM, Mr. Fuessel, Mr. Bogetti, Prof Gillespie, and Dr. Cender	
Session 5: Q/A Session with Attendees			
2:00	CCM Lab Tour, Posters and Demonstrations		
2:00	EAC Closed Meeting;	Chair, Mick Maher	
3:00	End of Q/A Session, Lab Tour and EAC Meeting		
3:00	Travel to Application and Technology Transfer Laboratory (ATTL)		
3:20	ATTL Tour TuFF pilot facility and forming cell demonstrations		
3:20	EAC Closed Meeting (continued at ATTL)		
4:30	EAC Feedback	Chair, Mick Maher	
4:30	Discussion and Wrap-up	NASA, MS. Jegley	
5:00	Adjourn		