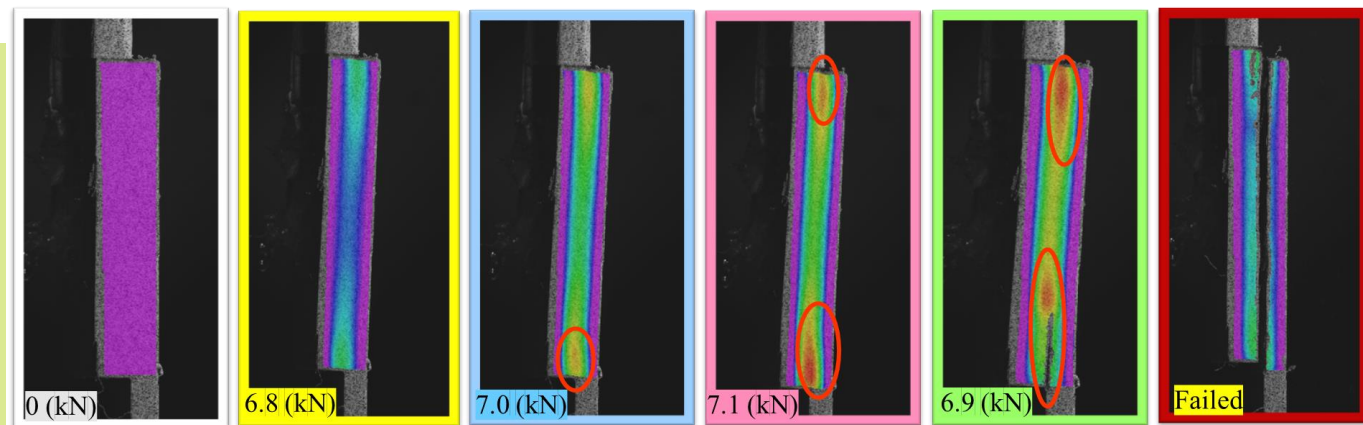




I am a research scholar in the Mechanical and Aerospace Engineering Department at Indian Institute of Technology Hyderabad. My area of specialization is composite structures. Before joining this institute as Ph.D. student in 2018, I was working in DRDO Kanpur as junior research fellow. I have done graduation (B.Tech) in Aeronautical Engineering from Feroze Gandhi Institute of Engg. & Tech., Rae Bareli in May 2014. This website documents my interests, passion and the work that I have done so far..

My research interests include composite material characterization, composite joints damage evolution, and failure behavior under different loading conditions experimentally and numerically, and I am also working on the new joint configurations for composite structures in order to address the shortcoming of existing joints configuration to get the joint certify for primary structures of aircraft application.

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### Experimental setup

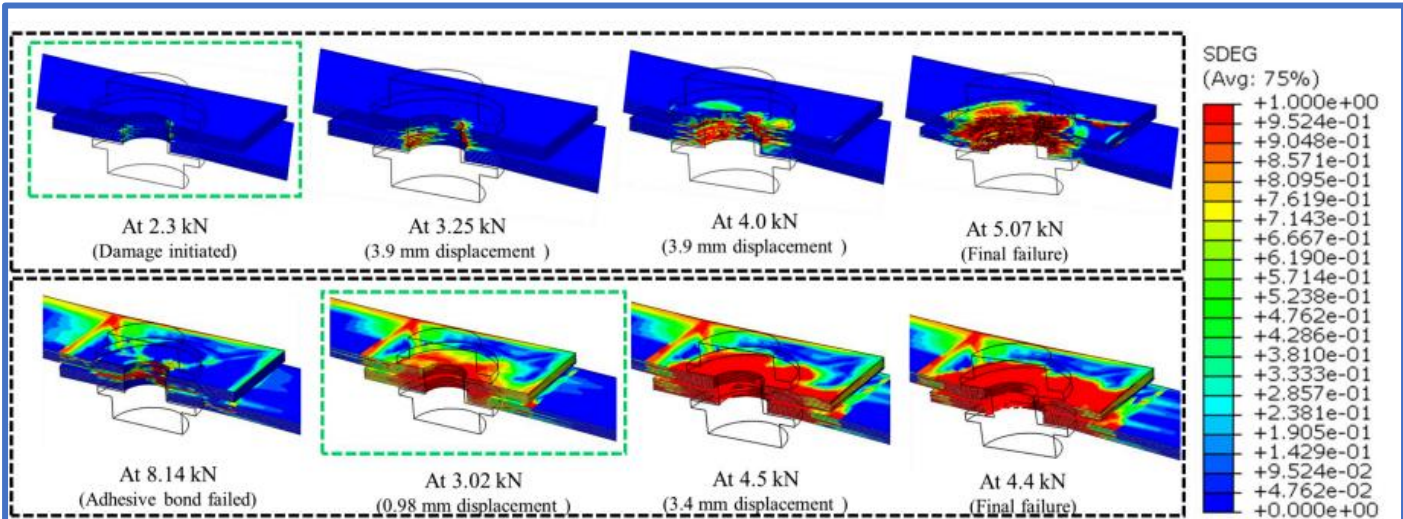
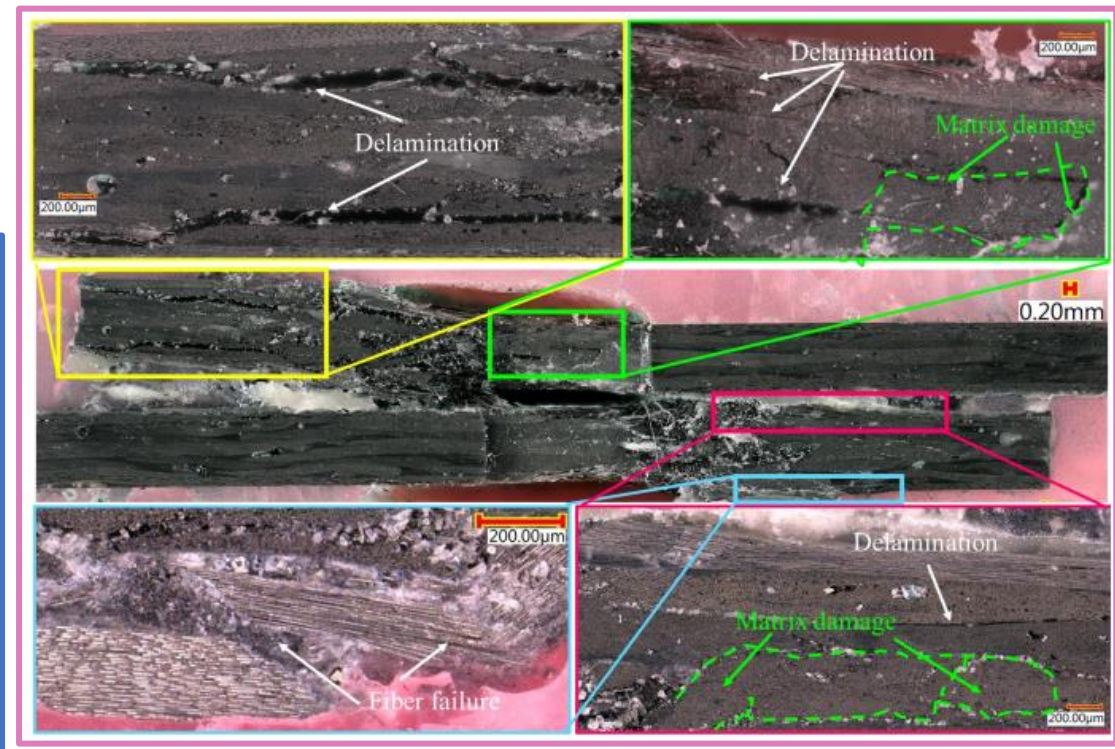
- Digital image correlation technique, Acoustic Emission, and instrumented bolts, etc.

### Numerical study

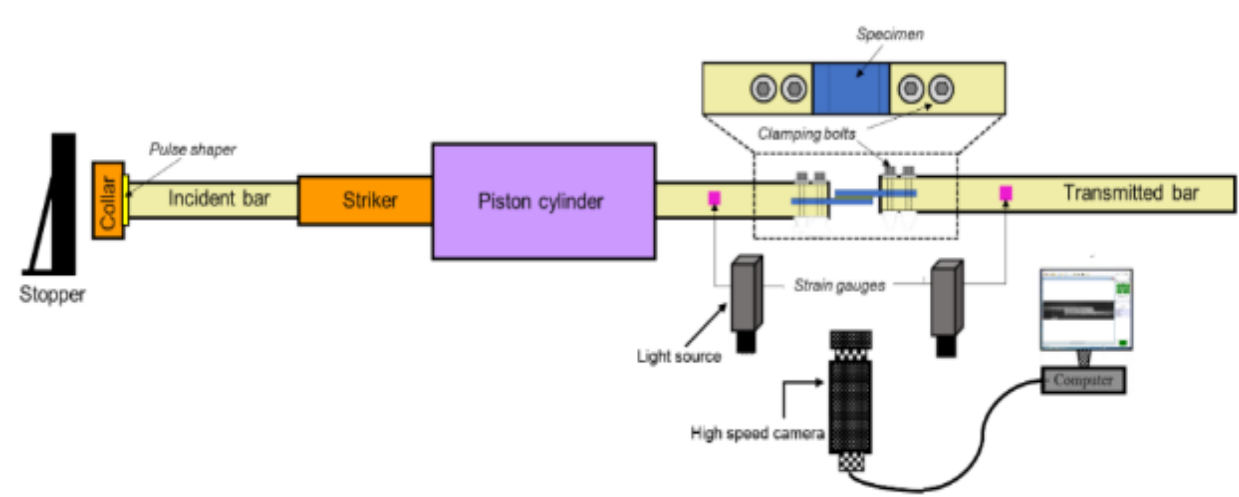
- Abaqus with user defined progressive damage models and cohesive zone model

### Fractography

- Keyence digital microscope and scanning electron microscope



Static loading	Quasi static tensile loading at 0.5 mm/min speed
Fatigue loading	Tension-tension (R=0.1) fatigue loading with 5 Hz frequency
Different strain rate loading	High and intermediated loading speed using SHPB experimental test set-up



## List of publications including Journal and conferences:

### Journals:

- 1) I.Paliwal, M.Ramji, “A detailed study on the damage evolution and failure assessment of single-lap hybrid joints in CFRP laminates under tensile loading”, Composite structures.

### Conferences:

- 1) “Damage assessment of CFRP composite laminate having multiple interacting open holes”. 65th Conference of Indian Society of Theoretical and Applied Mechanics (ISTAM 2021) · Dec 6, 2020
- 2) “A FEA based study on the damage behavior of CFRP hybrid joint under tensile loading” 3rd International conference of Structural Integrity conference and exhibitions (SICE2020) · Dec 19, 2020
- 3) “Effect of stacking sequence of CFRP composite laminates on the single lap hybrid joint strength under tensile loading” 24th International Conference on Composite Structures (ICCS 2021, University of Porto, Portugal, 14 -18 June 2021