

Daniel Paul

Current and permanent Address

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EDUCATION

Direct Ph.D. [Integrated M.S. (by research) and Ph.D.] July 2020
Department of Aerospace Engineering Thesis defended
Indian Institute of Technology Madras, Chennai, Tamil Nadu, India
THESIS TITLE - *Energy absorption characteristics of glass fibre-reinforced composites with syntactic foams*
GUIDE - Prof R Velmurugan, IIT Madras
CGPA 9.3/10

Bachelor of Engineering [B.E.] April 2014
Department of Aeronautical Engineering
Jeppiaar Engineering College (Affiliated to Anna University, Chennai)
Chennai, Tamil Nadu, India
CGPA 9.09/10

Higher Secondary School Certificate [12th grade] April 2010
Santhosha Vidhyalaya Higher Secondary School
Dohnavur, Tamilnadu, India
Percentage 95.4%

WORK DONE DURING Ph.D.

Title: **Energy absorption characteristics of glass fibre-reinforced composites with syntactic foams**

Compression and impact studies on glass microballoon-filled hollow GFRP tubes

- **Quasi static compression analysis** of hollow glass fibre-reinforced polymer (GFRP) tubes filled with varying volume fractions of glass microballoons (GMB) and validation using an energy-based model.
- **Drop-weight impact tests** on the tubes using a digital image correlation (DIC)-based data acquisition system.

Ballistic impact analysis on syntactic foam/GFRP sandwich plates

- **Ballistic impact studies** on the sandwich plates using ogival metal projectiles. The sandwich plates had GFRP skins and syntactic foam cores.
- Thorough analysis of the penetration of the projectile through the samples using an analytical model.

Development of two-stage gas gun

- Development, fabrication, and optimization of a two-stage gas gun to study ballistic impact.

COURSES DURING Ph.D.

- Composite Structures
- Impact Mechanics
- Engineering Plasticity
- Experimental Stress Analysis

SKILLS ACQUIRED

- Fabrication and testing of composite structures
- Development of various test setups (Eg. two-stage gas gun)
- Analysis of composite structures

SOFTWARE SKILLS

- MATLAB
- AutoCAD, LS-DYNA and ABAQUS

ACHIEVEMENTS AND SCHOLARSHIPS

- Achieved **second rank** in the state during undergraduate studies in the department.
- Qualified **Graduate Aptitude Test in Engineering (GATE-2014)** with an All India Rank of 187 in Aerospace Engineering.
- Received **research assistantship** from Ministry of Human Resources and Development (MHRD), Government of India during Ph.D.

PERSONAL DETAILS

Date of birth	: 18 th July 1992
Gender	: Male
Marital status	: Single
Nationality	: Indian
Languages known	: English, Tamil and Hindi