

# Dr.K. RAMAJEYATHILAGAM

Department: **Aeronautical Engineering**

Designation: Sr Professor

Qualification: **Ph. D**

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Research Interests: **Structural mechanics, FEM, impact, blast, Traumatic brain injury, Fatigue and fracture mechanics**



## SELECTED PUBLICATIONS:

1. C. Suresh and **K. Ramajeyathilagam**, "Large deformation behavior of thin mild steel rectangular plates subjected to underwater explosion loading under air and water backed conditions", Applied Ocean Research, 102, Aug2021, 102780 (Accepted)
2. P. Karthick and K. Ramajeyathilagam, "Numerical study of influence of target thickness and projectile incidence angle on ballistic resistance of GFRP composites" Materials Today Proceedings, 2021. (Article in press)
3. R.P. Suryapaba and **K. Ramajeyathilagam**, "Numerical investigation on the large deformation behavior of cylindrical shell subjected to underwater explosion", Applied Ocean Research, 101, Aug 2020, 102262
4. C. Suresh and **K. Ramajeyathilagam**, "Coupled fluid-structure interaction based numerical investigation on the large deformation behaviour of thin plates subjected to underwater explosion", International Journal of Vehicle Structures and Systems, India, 12(4), 2020, 436-442.
5. Pritam Ghosh and **K. Ramajeyathilagam**, Numerical Investigation on damage behaviour of circular composite laminate under low velocity impact", Materials Today Proceedings, 2020, DOI: 10.1016/j.matpr.2020.03.249
6. A P. Karthick and **K. Ramajeyathilagam**, "Numerical study of ballistic resistance on thin aluminium plate subjected to variable diameter projectile impacts", International journal of vehicle structures and systems, 12(1), 2020, 56-60
7. Shankar, S El-Borgi,, M. Ganapathi and **K. Ramajeyathilagam** , "Parametric instability of thick doubly curved CNT reinforced composite sandwich panels under in-plane periodic loads using higher order shear deformation theory" Journal of vibration and control, 2018, 1-24.
8. Anand Venkatachari and **K. Ramajeyathilagam** "Free vibration characteristics of thick doubly curved variable stiffness composite laminated shells using higher-order shear deformation theory", MATEC Web of Conferences 172, 03010 (2018) <https://doi.org/10.1051/mateconf/201817203010> ICDAMS 2018
9. Anand Venkatachari, S. Natarajan, **K. Ramajeyathilagam** and M. Ganapathi, "Assessment of certain higher-order structural models based on global approach for bending analysis of curvilinear composite laminates" Journal of Composite Structures, 118, 2014, 548-559.
10. A Shankar, S. Natarajan, M. Haboussi, **K. Ramajeyathilagam**, and M. Ganapathi, "Panel flutter characteristics of sandwich plates with CNT reinforced face sheets using an accurate higher-order theory" Journal of fluids and Structures, 50, 2014, 376-391.

**FUNDED PROJECTS:**

| S.No | Title of the Project   | Agency     | Amount (Rs. In Lakhs) | Status    |
|------|--|------------|-----------------------|-----------|
| 1    | Evaluation of numerical bird model parameters through dynamic test of bird projectile                              | GTRE, DRDO | 9.67                  | Completed |
| 2    | Simulation of Traumatic brain injury using finite element method   | HITS       | 5.8                   | Completed |
| 3    | Coupled fluid – structure interaction studies due to underwater explosion around submerged composite pressure hull | NRB, DRDO  | 39.6                  | Ongoing   |
| 4    | Estimation of shock levels and its impact on the underwater axisymmetric bodies due to water entry and pyro shock  | NSTL, DRDO | 6.65                  | Completed |

**Ph D GUIDED:**

1. Dynamic analysis of CNT reinforced composites sandwich plates and shells using finite element approach, 2018 – **Mr. A. Shankar**
2. Statics and dynamics of variable stiffness composite laminated plates and shells using higher order shear deformation theory, 2018 – **Mr. Anand Venkatachari**

**CONFERENCE / WORKSHOP ORGANISED**

| S.No | Name of the invited talk/ workshop                | Organizer     | Date & year  |
|------|---|---------------|--------------|
| 1    | Advances in Aircraft Structural Design (AASD2019) | HITS, Chennai | 28-30, Aug19 |

**JOURNAL REVIEWER / EDITORIAL BOARD:**

| S.No | Name of the Journal / conference   | Organizer | Date & year |
|------|--|-----------|-------------|
| 1    | International Journal : Ocean Engineering  | Elsevier  | 2021        |
| 2    | Reviewer for papers presented in NAFEMS Regional conference 2018 held at Bangalore for Springer verlag publication                   | NAFEMS    | July 2018   |
| 3    | Reviewer for papers presented in NAFEMS world Congress held at Sweden  | NAFEMS    | Aug 2017    |
| 4    | Editorial board member in the NAFEMS journal " International Journal Of Engineering Analysis, Simulation and Additive Manufacturing" | NAFEMS    | Regular     |