



Professor B. Gangadhara Prusty

See:

<http://www2.mech.unsw.edu.au/content/staff/Prusty.cfm?ss=4>
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School of Mechanical & Manufacturing Engineering
University of New South Wales (UNSW)

Education:

1988 Master of Engineering (Structures): National Institute of Technology, Rourkela, India
2001 Doctor of Philosophy (Structures): Indian Institute of Technology, Kharagpur, India
2008 Graduate Certificate in University Learning & Teaching, The University of New South Wales

Employment:

1988-1990 Site Engineer, Planning and Design Cell, NIT, Rourkela, India

1990-2001 Lecturer / Senior Lecturer / Assistant Professor, NIT, Rourkela, India
2001-2004 Lecturer, Australian Maritime College, Launceston, Tasmania
2005-2007 Lecturer, School of Mechanical and Manufacturing Engineering, The University of New South Wales
2007-2010 Senior Lecturer
2011-2014 Associate Professor
2014- Professor

Visiting Appointments:

Nov-Dec 2010 Visiting Professor and EMSHIP scholar, University of Liege, Belgium

Awards and Scholarships:

1992 & 1993 Santok Singh Gold Medal of Orissa Engineering Congress for best Structural Engineering paper in the year
1997 ER. M. N. JENA Gold Medal and Running Shield and Santok Singh Gold Medal of Orissa Engineering Congress for best paper
1998-2001 Ministry of Human Resources & Development, Govt. of India scholarship for pursuing PhD at I.I.T., Kharagpur, India
2004 AMC Council award for High Achievement in Scholarship (Research)
2010 Vice-Chancellor's Teaching Excellence Award, UNSW
2010 Australian Learning & Teaching Council (ALTC) Citation for Outstanding Contribution to Student Learning
2010 "Lecturer of the Year" awarded by MECHSOC, UNSW

Professional Societies:

Engineers Australia, Member
Royal Institute of Naval Architects (RINA), Member
Australian Association for Engineering Education (AaeE), Member
Associate Member, EMSHIP (Erasmus Mundus European Masters Course in Ship Design)

Teaching Areas:

Mechanics of Solids
Engineering Mechanics
Finite Element Methods
Composite Structural Mechanics

Research Interests:

Linear and non-linear finite element analysis of stiffened structures
Mechanics and ultimate failure analysis of laminated composite and sandwich structures
Functionally graded materials
Laminated composites in marine and mining environment
Fracture mechanics of composite structures

Professional Interests and Consulting:

Cooperative Research Centre for Advanced Composite Structures (CRC-ACS) of Australia
Associate Member, EMSHIP

Program Committee Member, PACIFIC IMC series of conference
Consultant, UNSW Global Pty Ltd
Academic-In-Charge, Mechanics of Solids Laboratory, School of Mechanical and Manufacturing Engineering, UNSW

Selected Publications:

MULCAHY L and PRUSTY BG, "Flexible composite hydrofoils and propeller blades", RINA Transactions Part B — International Journal of Small Craft Technology (IJSCT) (in press, accepted 18th March 2011).

SUL J, PRUSTY BG and RAY T, "Surrogate-assisted optimization to predict the low cycle fatigue life of short fibre composites at elevated temperatures", Composites Part: B (Engineering) (in press, accepted Feb 2011).

MAN M and PRUSTY BG, "Neural network modelling for composite damage behaviour using a continuum approach", Composite Structure, Vol 93, pp 383-391 (2011).

RAJU, PRUSTY BG, KELLY DW and LYONS D, "Failure characterisation of L-bend curved composite laminates", RINA Transactions Part B — International Journal of Small Craft Technology (IJSCT), Vol 152, pp 91-103 (2010).

RAJU, PRUSTY BG, KELLY DW, LYONS D and PENG GD, "Progressive failure analysis of top hat stiffeners for keel structures", Ocean Engineering, Vol 37, pp 1180-1192 (2010).

MULCAHY L, PRUSTY BG and GARDINER C, "Hydroelastic tailoring of flexible composite propellers", Ships and Offshore Structures, Vol 5(4), pp 359-370 (2010).

SUL J, PRUSTY BG and PAN JW, "A fatigue life prediction model for Chopped Strand Mat GRP at elevated temperatures", Fatigue & Fracture of Engineering Materials & Structures, Vol 30(8), pp 513-521 (2010).

DJUKIC LP, HERSZBERG, WALSH WRI, SCHOEPPNER GA, PRUSTY BG and KELLY DW, "Contrast enhancement in visualisation of woven composite tow architecture using a MicroCT scanner. Part 1: Fabric coating and resin additives", Composites Part A: Applied Science and Manufacturing, Vol 40(5), pp 553-565 (2009).

DJUKIC LP, HERSZBERG, WALSH WRI, SCHOEPPNER GA and PRUSTY BG, "Contrast enhancement in visualisation of woven composite tow architecture using a MicroCT scanner. Part 2: Tow and preform coating", Composites Part A: Applied Science and Manufacturing, Vol 40, pp 1870-1879 (2009).

SUL J and PRUSTY BG, "Investigation on the fatigue life modelling of CSM-GRP laminates at elevated temperatures", World Journal of Engineering, Vol 6(3) (2009).

PRUSTY BG, "Free vibration and buckling response of hat stiffened composite panels under general loading", International Journal of Mechanical Sciences, Vol 50, pp 1326-1333 (2008).

MIKULIK Z, KELLY DW, PRUSTY BG and THOMSON RS, "Application of a fracture mechanics-based methodology for predictions of the flange disband in composite stiffened panels", Composite Structures, Vol 85, pp 233-244 (2008).

MIKULIK Z, KELLY DW, PRUSTY BG and THOMSON RS, "Prediction of initiation and growth of single level delamination in a novel composite test specimen using fracture mechanics", International Journal of Fracture, Vol 149, pp 119-141 (2008).

OJEDA R, PRUSTY BG, LAWRENCE N and THOMAS G, "A new approach for the large deflection finite element analysis of isotropic and orthotropic plates with arbitrary stiffeners", Finite Elements in Analysis and Design, Vol 43(13), pp 989-1002 (2007).

STEADEAK H and PRUSTY BG, "Post-fire fatigue performance of E-Glass/Polyester CSM composite laminates", Fatigue & Fracture of Engineering Materials & Structures, Vol 31, pp 723-733 (2007).

YIHUAI H and PRUSTY BG, "Structural condition monitoring of oil tankers — A review", *Ships & Offshore Structures*, Vol 2(4), pp 371-377 (2007).

YIHUAI H and PRUSTY BG, "Computer-aided maintenance of ship machinery system", *The Journal of Harbin Engineering University*, Vol 27, Suppl. December 2006 (2007).

MIKULIK Z, PRUSTY BG, THOMSON RS and KELLY DW, "Application of fracture mechanics-based methodologies for predictions of skin-to-stiffener debonding in a composite panel", *NDT.net — The e-Journal of Nondestructive Testing*, ISSN:1435-4934, Vol 11(12), December (2006).

OJEDA R, LAWRENCE N, THOMAS GA and PRUSTY G, "Geometrically non-linear analysis of composite stiffened and sandwich structures using the finite element method", *Mechanics of Advanced Materials and Structures (Special Edition)*, pp 203-208, ISSN 1537-6494 (2006).