

 CARBON FIBRE NETWORK					
RESEARCH IN CARBON FIBRE - BY INSTITUTION AND FIELD OF RESEARCH (Victoria)					Updated: November 2013
Institution	Researcher	Contact	Department / Faculty	Field of Research	Key Word Search
Monash University	A/Prof. Frank Collins	frank.collins@monash.edu	Department of Civil Engineering	Cement composites containing carbon fibres and carbon nanotubes that deliver significantly improved strength and durability. Stronger, lighter structures are viable. Less cement (& steel	Cement Composites
Monash University	Prof. Xiao-Ling Zhao	xiao.ling.zhao@monash.edu	Department of Civil Engineering	Carbon fibre reinforced polymers for strengthening steel beams and aluminium sections used in civil structures.	Steel Beams
Monash University	Prof. Malek Bouazza	malek.bouazza@monash.edu	Department of Civil Engineering	Carbon fibre composites for ground anchors used in civil structures such as dams.	Ground Anchors
Monash University	Dr Yu Bai	yu.bai@monash.edu	Department of Civil Engineering	Long-term performance of carbon fibre composites (CFRP) and CFRP strengthened steel structures under harsh environments.	Steel Structures
Monash University	A/Prof. Bill Wong	bill.wong@monash.edu	Department of Civil Engineering	Reinforcement of concrete members with carbon fibre reinforced polymer under environmental and high temperature effects on rehabilitated concrete structures using these composites.	Concrete Structures
Monash University	Ehsan Bafekrpour	ehsan.bafekrpour@monash.edu	Department of Materials Engineering	Optimizing mechanical properties, composition, and microstructure of Carbon Fiber Reinforced Composites (CFRCs)	CFRC properties
Monash University	Prof. George Simon	george.simon@monash.edu	Deputy Dean Engineering	Carbon fibre reinforced polymers (CFRPs) and the benefits of incorporating nanoclays into these composites to improve their mechanical properties.	Nanoclays in CFRPs
Monash University	Prof. Rhys Jones	rhys.jones@monash.edu	Dept. of Mechanical and Aerospace Engineering	The Monash centre of Excellence on Structural Mechanics conducts fundamental and applied research in carbon fibre composite structures.	Structural Mechanics
Monash University	Prof. Rhys Jones	rhys.jones@monash.edu	Dept. of Mechanical and Aerospace Engineering	Development and application of composite doublers to ensure the structural integrity of rail bridges. This research is being undertaken in conjunction with the US National Centre for Education and Research on Corrosion and Materials Performance (NCERCMP) and V/Line.	Rail Bridges
Monash University	Prof. Rhys Jones	rhys.jones@monash.edu	Dept. of Mechanical and Aerospace Engineering	The effect of growth of delamination and disbonds in composite aircraft wings. This research is undertaken in conjunction with DSTO, the US National Institute for Aviation Research (NIAR), the Naval Research Laboratory (NRL) and Imperial College.	Aircraft wings
Monash University	Prof. Rhys Jones	rhys.jones@monash.edu	Dept. of Mechanical and Aerospace Engineering	Development of test methodologies and analysis tools for delamination damage in composites and nano-composites. This research is being undertaken in conjunction with EMPA (Swiss Federal Laboratories for Materials Science and Technology) and Montanuniversitaet Leoben (Austria) as part of the European Structural Integrity Societies Panel ESIS TC4.	Delamination Damage
Monash University	Prof. Bijan Shirinzadeh	bijan.shirinzadeh@monash.edu	Dept. of Mechanical and Aerospace Engineering	Robotics and Mechatronics Research Laboratory (RMRL) has established an advanced "Robotic fibre placement research facility for fabrication of composite components". RMRL conducts fundamental research in automated process planning, trajectory generation, sensory-based control, and error measurements and compensation for automated tow placement on complex contoured tools, to develop strategies for composite component manufacture for aerospace, automotive, and many other applications and sectors.	Robotic Fibre Placement
Monash University	Dr Wenyi Yan	wenyi.yan@monash.edu	Dept. of Mechanical and Aerospace Engineering	Mechanics of composite structures, plasticity, fracture and fatigue of materials, contact mechanics, wear.	Mechanics of Composites Structures
Monash University	Dr Wenyi Yan	wenyi.yan@monash.edu	Dept. of Mechanical and Aerospace Engineering	Project 2.1 Systems for Crashworthiness (01/07/2010 – 30/06/2015) We are developing a damaging model for numerically simulating the damage responses of a composite structure due to severe loadings, such as impact. (funded by the CRC for Advanced Composite Structures)	Systems for Crashworthiness
Monash University	Dr Wenyi Yan	wenyi.yan@monash.edu	Dept. of Mechanical and Aerospace Engineering	Project 3.1 Robust Composite Repairs (01/07/2010 – 30/06/2015) We are investigating the damage tolerance of two types of repairs, scarf and step-lap repairs, for composite structures. (funded by the CRC for Advanced Composite Structures)	Robust Composite Repairs
Monash University	Prof. Wing Kong Chiu	wing.kong.chiu@monash.edu	Dept. of Mechanical and Aerospace Engineering	Failure of composites, fatigue of composites and health monitoring of composite structures.	Failure of Composites

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Swinburne University	Prof. Riadh Al-Mahaidi	ralmahaidi@swin.edu.au	Civil Engineering - Centre for Sustainable Infrastructure	Steel structures and CFRP	Steel structures and CFRP
Swinburne University	Prof. Riadh Al-Mahaidi	ralmahaidi@swin.edu.au	Civil Engineering - Centre for Sustainable Infrastructure	Concrete structures and CFRP	Concrete structures and CFRP
Deakin University	Assoc. Prof. Bronwyn Fox	bronwyn.fox@deakin.edu.au	Centre for Material and Fibre Innovation	carbon fibre manufacture	carbon fibre manufacture
Deakin University	Assoc. Prof. Bronwyn Fox	bronwyn.fox@deakin.edu.au	Centre for Material and Fibre Innovation	surface treatment of fibres	Surface treatment
Deakin University	Assoc. Prof. Bronwyn Fox	bronwyn.fox@deakin.edu.au	Centre for Material and Fibre Innovation	three dimensional preforms for complex composite components	preforms for composites
Deakin University	Assoc. Prof. Bronwyn Fox	bronwyn.fox@deakin.edu.au	Centre for Material and Fibre Innovation	out-of-autoclave cure of composites	out-of-autoclave
RMIT University	Prof. Chun Wang	chun.wang@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Improve damage tolerance design and rapid damage detection of carbon fibre wheels. This an ARC-Linkage project supported by Carbon Revolution. The research is conducted in partnership with Deakin University, University of Miami and Teledyne International.	Automotive composites
RMIT University	Prof. Chun Wang	chun.wang@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Advanced flush repair to dissimilar composite materials. This strategic research collaboration between RMIT University and Boeing Australia, funded by the ARC-Linkage program, aims to develop new composite repair concepts and validated tools to designing repairs for dissimilar composite material systems.	Composite repair
RMIT University	Professor Adrian Mouritz Prof. Chun Wang	chun.wang@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Optimised self-healing composites. This is an ARC-Linkage project supported Boeing Research and Technology Australia. The main aim is to optimise the architecture and spatial configuration of self-healing micro-vessels to minimise the adverse effects of the self-repair system on composite structural properties.	Self-healing composites
RMIT University	Prof. Chun Wang	chun.wang@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Towards autonomous safety prognostics: integrating in situ damage imaging and Predictive Modelling. The ARC-Discovery project explores new concepts in the area of structural safety prognostics, focusing on the important case of impact damage in fibre composites. Outcomes include new predictive models for residual strength and fatigue life, and new algorithms for in-situ imaging.	Safety prognostics
RMIT University	Prof. Chun Wang	chun.wang@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Over-heating damage of carbon fibre composites in aircraft applications. Aircraft structures and engine components are susceptible to incipient heat damage. This project, funded by DSTO and DGTA.	Overheating damage of carbon fibre composites
RMIT University	Prof. Chun Wang	chun.wang@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Advanced composite repairs to aircraft primary structures. This is a project funded by CRC-ACS.	Composite repair
RMIT University	Prof. Chun Wang	chun.wang@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Structural health monitoring and prognostics, funded by CRC-ACS	Structural health monitoring
RMIT University	Dr Stefanie Feih	stefanie.feih@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Bio-inspired carbon fibre / metal sandwich structures	Sandwich structures
RMIT University	Dr Stefanie Feih	stefanie.feih@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Strength loss / mass loss of carbon fibres during fire exposure	Fire exposure
RMIT University	Prof. Adrian Mouritz	adrian.mouritz@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Through-thickness reinforcement of laminates and sandwich composites using carbon fibre pins and tows	Composite toughening
RMIT University	Prof. Adrian Mouritz	adrian.mouritz@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Self-healing of carbon fibre composites	Composite repair
RMIT University	Prof. Adrian Mouritz	adrian.mouritz@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Advanced textile composites using carbon tows	Manufacturing
RMIT University	Dr Akbar Khatibi	akbar.khatibi@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	New GLARE enhanced with nanoparticles	Material development
RMIT University	Dr Akbar Khatibi	akbar.khatibi@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Improving thermal conductivity of composite laminates using nanoparticles	Multifunctional composites
RMIT University	Dr Akbar Khatibi	akbar.khatibi@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Enhancing acoustic properties of structural composites	Sound, noise control
RMIT University	Prof Sabu John	sabu.john@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	HM in composite structures (CRC-ACS)	HM in composite structures
RMIT University	Prof Sabu John	sabu.john@rmit.edu.au	Sir Lawrence Wackett Aerospace Research Centre	Conformal antennas in composite structures (DMTC)	Conformal antennas in composite structures

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CSIRO	Dr Russell Varley	russell.varley@csiro.au	Materials Science and Engineering	New polymer matrices, self healing composites, computational methods. polymer network rheology self healing, chemistry, processing, modelling, new materials.	
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Thermoset Composite Welding (TCW). This patented manufacturing process allows rapid assembly of composite structures that eliminates adhesive bonding and fastening.	Composite assembly
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Composite Fitting Attachment (COFA). This patented manufacturing process allows fittings to be rapidly attached to composites structures.	Composite assembly
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Fire Performance Improvement using a barrier material (Fireshield) has been developed and commercialised. This is available for purchase from Regina Glass and allows significant improvement to the existing composite structure.	Fire performance
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Analysis Tools are available for commercialisation / licensing to optimise the efficiency of composites design and analysis (D-Opt)	Design analysis optimisation
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Manufacturing Cost Model software (M-Cost) is available for commercialisation / licensing to allow prediction of costs associated with composite manufacture in a production environment. Allows accurate estimation to aid in process improvement or business case development.	Manufacturing cost model
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Training courses are run in conjunction with Composites Australia. One-day introductory courses on composites design and analysis (A-Learn)	Training courses
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Expert advisory service is provided to all industries regarding various aspects of composite materials and manufacturing (A-Expert)	Expert advisory services
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Analysis and certification of high speed impact events involving composite and metal structures, such as bird strike (D-Bird), sharp edge and blunt impact (D-Impact), crash (D-Crash)	Impact crash analysis
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Design and Analysis Technology (ADAT) - Level 1; Design and analysis of composites; Level 2: Re-design and optimisation of existing component; Level 3: Impact / Crash analysis + certification	Design and Analysis
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Materials and Manufacturing Technology (AMMT) - Level 1: Recommend existing materials and manufacturing methods for people looking to composites, Level 2: Optimisation of current materials and manufacturing process; Level 3: New materials and process development and demonstration	Materials and Manufacturing
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Maintenance and Inspection Technology (AMIT) - Level 1: On-line help / Call support / Potential failure analysis; Level 2: On-site support, Detailed root cause analysis, risk mitigation / repair plan, preventative actions + report; Level 3: Managing / conducting repair + Certification of repair;	Maintenance and Inspection
ACS Australia	Dr. Paul Falzon	p.falzon@acs-aus.com	Business Development	Testing and Certification Technology (ATCT) - Level 1: Testing and characterisation of composite materials; Level 2: Qualification of materials; Level 3: Certification of materials	Testing and Certification
For more information contact: Ray Seddon, Network Manager by email: ray@compositesaustralia.com.au or T: +613 9429					
Note: this directory is a work in progress and is based on information supplied to Composites Australia by the researchers and research agencies.					