

## Compute Projects Supported by NCI in 2020–2021

Thousands of scientists every year receive allocations of computing time on the Gadi supercomputer, allowing them to conduct their nationally significant research. The computing resource at NCI is allocated through several different schemes, notably the National Computational Merit Allocation Scheme (NCMAS), the primary merit-based scheme which allocates computing resources across the major Australian High-Performance Computing facilities; the Collaborator Share; the Australasian Leadership Computing Grants (ALCG), the leading scheme for the most ambitious Australian computational science; the Merit Flagship Allocations; and through individual contracts with commercial organisations. Researchers can access computing resources from multiple schemes, most frequently through a combination of NCMAS and Collaborator Share from their home institution. See the section Meritorious Access to NCI on page 24 of the NCI 2020–2021 Annual Report for more information on the allocation schemes.

This table outlines the total allocation per Lead Chief Investigator for the 2020-21 period, separated out by research project. The computing resource is measured in thousands of Service Units (kSU). One Service Unit is approximately equivalent to the work of one Gadi compute core for half an hour.

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Prof Evatt Hawkes, University of NSW	81,337	50,000	<u>50,000</u>	Extreme scale simulations of combustion for low-emissions gas turbine systems
		27,101	8,000	Direct Numerical Simulations of Turbulent Combustion
		4,236	-	Direct Numerical Simulations of Turbulent Combustion
Prof Andrew Hogg, The Australian National University	75,340	48,400	-	The Dynamics of the Southern Ocean
		17,940	9,345	Extratropical Variability
		9,000	9,000	Modelling the Southern and Global Ocean at High Resolution
Dr Terry O’Kane, CSIRO	65,965	65,965	-	The AUStralian community ocean model ReAnalysis project (AURA)
A/Prof Christoph Federrath, The Australian National University	62,200	62,200	13,000	Interstellar Turbulence, the Formation of the First Stars, Magnetised Clouds, Supernova Explosions, and Proto-planetary Discs
Dr George Opletal, CSIRO	58,601	58,601	-	AI-Driven Materials Design
Dr Richard Matear, CSIRO	57,038	45,000	<u>45,000</u>	A large ensemble of decadal climate forecasts to make Australia more climate resilient
		12,038	-	Climate and Resilience Services Australia Research
Dr Daohua Bi, CSIRO	51,957	51,957	-	ACCESS - AOGCM
Prof Matthew England, University of NSW	51,164	51,164	22,000	Past, present and future climate variability and change in the Southern Hemisphere

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Mr Anthony Rafter, CSIRO</b>	50,492	50,492	-	Regional-Scale Seasonal Prediction Over Eastern Australia and the Coral Sea
<b>A/Prof Chris Power, University of Western Australia</b>	49,500	45,000	<u>45,000</u>	Towards more realistic modelling of supermassive black hole jets in galaxy formation simulations
		4,000	-	GADGET3 Porting, Scalability and Production Computing on Raijin
		500	500	Low-Mass Galaxies as Testbeds of Dark Matter and Galaxy Formation
<b>Dr David Lee, Bureau of Meteorology</b>	45,000	45,000	-	BoM ESM Numerical Weather Prediction research and development at NCI
<b>Dr Yuan-Sen Ting, The Australian National University</b>	44,576	44,576	12,500	3D magneto-hydrodynamical stellar modelling and 3D non-equilibrium radiative transfer
<b>Dr Simon Marsland, CSIRO</b>	38,000	38,000	<u>38,000</u>	Global Climate Modelling with the Australian Community Climate and Earth System Simulator - ACCESS
<b>Dr Peter Steinle, Bureau of Meteorology</b>	37,360	37,360	-	Strategic Radar Enhancement Project
<b>Prof Derek Leinweber, University of Adelaide</b>	34,760	32,760	11,400	Electromagnetic Structure of Matter
		2,000	-	Electromagnetic Structure of Matter - e31 Ancillary Project
<b>A/Prof Megan O'Mara, The Australian National University</b>	29,300	19,300	2,800	Modelling the dynamics of the cell membrane
		10,000	-	Using large-scale molecular dynamics for rational drug design
<b>Dr Yuan Mei, CSIRO</b>	27,650	27,550	-	Molecular simulation of critical minerals in ore-forming fluids
		100	-	The fate of critical metals in deep Earth fluids: insights from molecular simulations
<b>Dr Wendy Sharples, Bureau of Meteorology</b>	27,500	27,500	-	Water Information Services
<b>Prof Sean Smith, The Australian National University</b>	25,900	23,400	-	Materials for Sustainable Energy Applications
		2	2,500	Computational Nanomaterials Science and Engineering
<b>A/Prof Ben Corry, The Australian National University</b>	19,150	19,150	1,550	Simulation studies of biological and synthetic channels
<b>Dr Gary Brassington, Bureau of Meteorology</b>	19,000	19,000	-	BLUElink3 – Bureau

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Salvy Russo, Royal Melbourne Institute of Technology</b>	18,946	10,931	-	ARC Centre of Excellence in Exciton Science
		6,000	-	CoE Exciton Science
		1,225	400	Prediction of the Properties of Materials and Nanomaterials
		790	-	RMIT Discretionary and Startup Allocations
<b>Prof Mark Krumholz, The Australian National University</b>	17,890	17,890	7,000	Star Formation and Feedback in a Turbulent Interstellar Medium
<b>Dr Ravichandar Babarao, Royal Melbourne Institute of Technology</b>	16,604	14,125	-	CO2 conversion in catalytic MOFs
		2,479	500	Porous materials for the capture and release of oxygen
<b>Prof Michelle Coote, The Australian National University</b>	16,100	10,100	-	Computer-aided Chemical Design of Catalysts and Control Agents
		6,000	6,000	Computer-aided Chemical Design of Catalysts and Control Agents
<b>Prof Alan Mark, University of Queensland</b>	15,978	10,750	-	Targeting structural transitions in the COVID fusion protein
		5,228	2,400	From molecules to cells Understanding the structural and dynamic properties of cellular components at an atomic level.
<b>A/Prof Rhodri Davies, The Australian National University</b>	15,800	15,800	1,700	Revealing the 4-D Evolution of Earth's Engine
<b>Prof Christoph Arns, University of NSW</b>	15,565	15,565	7,000	Multi-scale multi-physics modelling for geostorage applications
<b>Dr Fei Ji, Other Australian Government Department</b>	15,020	15,000	-	DPIE Production
		20	-	NSW Government Climate Data
<b>Dr Claudio Cazorla, University of NSW</b>	13,526	7,957	-	Rational design of novel multiferroic materials for energy harvesting and energy efficiency
		5,569	600	Nano-structured multifunctional materials for solid-state cooling (continuation project)
<b>Prof Dietmar Mueller, University of Sydney</b>	12,402	12,402	3,250	Geodynamics and evolution of sedimentary systems
<b>Prof Toby Allen, Royal Melbourne Institute of Technology</b>	11,725	11,670	1,250	Mechanisms of ion channel function and modulation.
		55	-	Simulating the potassium channel activation cycle.

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Benjamin Galton-Fenzi, Australian Antarctic Division</b>	11,327	5,000	5,000	Antarctic systems and future change
		2,092	-	Research, development and production computing for Antarctic Climate & Ecosystems CRC under the ACE-CRC/AGP/AAD-NCI partnership
		2,020	-	Research, development and production computing for the Australian Antarctic Division under the ACE-CRC/AGP/AAD-NCI partnership
		1,652	-	Research, development and production computing for the Antarctic Gateway Project under the ACE-CRC/AGP/AAD-NCI partnership
		563	-	Modelling of the interaction between Antarctica and the Southern Ocean
<b>Prof Alexander Heger, Monash University</b>	11,170	11,170	2,450	3D Simulations of Core-Collapse Supernovae and their Progenitors
<b>Dr Hardip Patel, The Australian National University</b>	11,144	7,250	3,000	The National Centre for Indigenous Genomics
		2,334	-	Biodev NCIG
		1,560	-	AusARG - Australian Amphibians and Reptiles Genomics
<b>Prof Catherine Stampfl, University of Sydney</b>	10,300	9,450	4,250	First-Principles Investigations of Processes and Properties in Catalysis, Coatings, and Devices
		850	-	First-Principles Investigations of Processes and Properties in Catalysis, Coatings, and Devices
<b>Dr Piotr Koniusz, CSIRO</b>	9,759	9,759	-	Robust spatio-temporal statistical learning in computer vision
<b>Prof Michael Ford, University of Technology, Sydney</b>	9,581	9,181	-	Designing and Building Novel 2D Hybrid Materials
		400	400	Nanostructured Materials for Energy Efficiency Applications
<b>Dr Thomas Nordlander, The Australian National University</b>	9,424	9,424	-	3D radiative transfer and hydrodynamics
<b>Prof Irene Yarovsky, Royal Melbourne Institute of Technology</b>	9,353	9,353	3,500	Theoretical Investigation of novel materials for industrial and biomedical applications
<b>Prof Jason Evans, University of NSW</b>	9,345	4,251	-	Regional climate modelling
		3,719	3,150	Regional Climate Modelling in Australia
		1,375	750	Heatwaves

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
A/Prof Nikhil Medhekar, Monash University	8,996	4,690	-	CoE FLEET
		4,306	2,225	Enabling Functional Properties of Nanoscale Materials using Atomistic Simulations
Dr Justin Freeman, Bureau of Meteorology	8,800	8,700	-	Ensemble Ocean Forecasting
		100	-	NLP for Data Intelligence
Dr Oliver Hofmann, University of Melbourne	8,600	7,200	-	VCCC Pilot Project
		1,400	-	UMCCR Project - 2020Q3
Prof Julio Soria, Monash University	8,475	8,275	4,000	Investigations of transitional and turbulent shear flows using direct numerical simulations and large eddy simulations
		200	<u>200</u>	High-fidelity direct numerical simulation of high Reynolds number turbulent thermal boundary layer flow with distributed high energy heat sources - an analog for high-fidelity simulations of bushfires
A/Prof Ben Thornber, University of Sydney	8,322	8,322	2,750	Compressible Turbulent Mixing
Dr Manolo Per, CSIRO	8,305	8,305	-	Development and Application of Quantum Monte Carlo methods
SITOC Griffith Young, Bureau of Meteorology	8,300	4,295	-	Seasonal Prediction Systems and Science
		4,005	-	Data assimilation for seasonal prediction
A/Prof Vincent Wheatley, University of Queensland	8,264	8,264	4,250	Scramjet-based Access-to-Space and Planetary Entry
Dr Emlyn Jones, CSIRO	8,213	8,213	-	Coastal Ocean Data Assimilation
A/Prof Rajib Rahman, University of NSW	8,163	8,163	4,000	Multiscale Multiphysics Simulations of Silicon Quantum Information Processing Units
Prof Brian Smith, La Trobe University	7,650	7,650	-	Biomolecular modelling
APS6(IT02) Francois Delage, Bureau of Meteorology	7,500	7,500	-	Climate Change Science and Processes
Prof Simon Ringer, University of Sydney	7,300	7,300	2,500	Exploring structure-property correlations in advanced materials: Nexus between computational simulation and atomic resolution microscopy
A/Prof Yansong Shen, University of NSW	7,271	7,271	-	Multi-scale studies of gas-solid reactive flows

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Balazs Csaba, Monash University</b>	7,185	7,185	250	Cornering supersymmetry with GAMBIT
<b>A/Prof Ekaterina Pas, Monash University</b>	7,022	7,022	3,400	Large-scale calculations for selection and design of materials for applications in Catalysis, Renewable Energy and Medical Engineering
<b>Dr Akshay Shanker, University of NSW</b>	6,945	5,654	-	Retirement eggs and retirement baskets
		866	-	Zero carbon electricity market dynamics with storage
		425	-	Semi-structural estimation and behavioural economics
<b>NCI Internal (System, Training, Development)</b>	6,613	6,613	-	NCI Internal Projects
<b>Prof Malcolm Sambridge, The Australian National University</b>	6,600	6,600	-	Unleashing the power of data: the next generation of geophysical inference
<b>A/Prof Matthew Cleary, University of Sydney</b>	6,550	4,638	-	3D Rotating Detonation Engines
		1,910	-	High-speed compressible reacting flows for propulsion and power
		2	-	Start-up Scheme for soot formation modelling validation in 3D turbulent flame
<b>Prof Julian Gale, Curtin University of Technology</b>	6,500	6,500	6,500	Atomistic Simulation for Geochemistry and Nanoscience
<b>Prof Katrin Meissner, University of NSW</b>	6,464	6,464	2,050	Abrupt climate change events in the past, present and future
<b>Prof Richard Sandberg, University of Melbourne</b>	6,295	6,295	5,000	High-fidelity simulations of turbulent flows in power generation and transport
<b>Prof Debra Bernhardt, University of Queensland</b>	6,251	6,251	3,000	New materials, structures and fluids for catalysis, battery technologies and sensors.
<b>Prof Michael Inouye, Other Australian Research Institute</b>	6,000	6,000	-	Structure-based Drug Discovery
<b>Dr Andrew Dowdy, Bureau of Meteorology</b>	5,750	5,750	-	Climate Hazards projection products
<b>Dr Adrian Pudsey, Royal Melbourne Institute of Technology</b>	5,721	5,721	3,350	Aerothermodynamics of High Speed Flight and Enabling Technologies
<b>Dr Bernadette Sloyan, CSIRO</b>	5,330	5,330	250	CSHOR Indo-Pacific Interbasin Exchange

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Dr Rob Patterson, University of NSW	5,288	5,188	-	Materials discovery and theoretical development for advanced photovoltaic cells and nanomaterials in renewable energy
		100	-	Fundamental processes in advanced photovoltaic devices
Mr Dan Sandiford, University of Tasmania	5,280	5,278	-	Modelling the tectonic evolution of ocean gateways
		2	-	Modelling flexure and faulting of the lithosphere at subduction zones
Dr Adrian Sheppard, The Australian National University	5,231	4,731	-	Understanding petrophysical and multiphase flow properties of rock through experiment, 3D imaging and modelling
		500	500	X-ray micro-tomography to probe the structure and properties of complex and hierarchical materials
A/Prof Serdar Kuyucak, University of Sydney	5,132	4,000	-	Molecular Dynamics Simulations of Ion Channels and Transporters
		1,132	500	Free Energy Simulations of Ion Channels and Transporters
Dr Alison Kirkby, Geoscience Australia	5,060	5,060	-	Magnetotelluric inversions for AusLAMP
Prof Geoffrey Bicknell, The Australian National University	4,950	4,950	-	Astrophysical Jets and Winds and their Interactions with the Ambient Medium
Dr Pat Scott, University of Queensland	4,932	4,932	1,000	Effective and simplified dark matter global fits with GAMBIT
Dr Jade Powell, Swinburne University of Technology	4,800	4,800	-	Simulations of the explosion of an 18 solar mass star
Dr Kenji Shimizu, Commercial Organisations	4,800	4,800	-	RPS Group Computing
DR Harvey Ye, Bureau of Meteorology	4,700	4,700	-	Weather and Environmental Prediction Specialised Forecasting Systems (WEPSFS)
Mr John Wilford, Geoscience Australia	4,700	4,700	-	Data mining and geostatistical modelling for geoscience applications
Mr Simon Oliver, Geoscience Australia	4,695	3,040	-	DEA Operations and code repositories (Public and private)
		1,600	-	DEA Development and Science (GA internal)
		55	-	Marine Operations and Processing

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Dr Xuebin Zhang, CSIRO	4,631	3,123	-	Downscaling future climate change from CMIP5 climate models with an eddy-resolving ocean model
		1,508	-	sea-level rise
Prof Jared Cole, Royal Melbourne Institute of Technology	4,520	4,520	900	The materials science of transport and decoherence in quantum devices.
Dr Terry Frankcombe, UNSW Canberra	4,520	4,520	400	Efficient chemical dynamics in gas phase, solid phase and heterogeneous systems
Prof Suresh Bhatia, University of Queensland	4,460	4,460	2,350	Interfacial Barriers for the Transport of Nanoconfined Fluids
Dr Judy Hart, University of NSW	4,446	3,950	600	Design and development of new inexpensive photoactive and catalytic materials for efficient hydrogen production and carbon dioxide reduction
		496	-	Materials for energy conversion and storage
Dr Bishakhdat Gayen, University of Melbourne	4,360	4,360	4,360	The role of convection and turbulent mixing in ocean circulation
Prof Michelle Spencer, Royal Melbourne Institute of Technology	4,348	4,348	900	Modelling Nanoscale Materials for Sensing and Device Applications
Tracie Barber, University of NSW	4,220	4,220	-	CFDMECH
Prof Mark Thompson, Monash University	4,206	4,206	2,250	Transition, stability and control of bluff body flows
Dr Callum Shakespeare, The Australian National University	4,200	4,200	1,050	Wave-eddy-mean flow dynamics
Dr Angus Gray-Weale, Bureau of Meteorology	4,005	4,005	-	Data assimilation for seasonal prediction
Dr Aaron Ludlow, University of Western Australia	4,000	4,000	-	Keeping galaxy formation simulations cool by suppressing numerical heating
Prof Justin Borevitz, The Australian National University	3,850	3,850	-	Linking Genotype, Phenotype and Landscape to improve Plant Energy
Dr Jingming Duan, Geoscience Australia	3,840	3,840	-	Magnetotelluric data inversion
Dr Timothy Trudgian, UNSW Canberra	3,806	3,806	250	Verifying the Riemann hypothesis to a new record height
Mr Craig Arthur, Geoscience Australia	3,800	3,800	-	Severe Wind and Coastal Inundation Modelling



Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Cheong Xin Chan, University of Queensland</b>	3,749	3,749	1,250	Comparative and Evolutionary Genomics of Microbes from Diverse Environments
<b>Dr Rey Cheng Chin, University of Adelaide</b>	3,718	3,718	1,500	Numerical simulations of rough wall turbulence: A control's approach
<b>Dr Junming Ho, University of NSW</b>	3,700	3,700	2,000	Accelerating the Design of Novel Catalysts and Drugs through Computational Chemistry
<b>Dr Ming Zhao, University of Western Sydney</b>	3,700	3,700	-	Fundamental and applied studies of fluid-structure interaction through numerical simulations
<b>Prof Hugh Blackburn, Monash University</b>	3,663	3,663	1,900	Simulation of Transitional and Turbulent Flows for Engineering Applications
<b>Dr Haibo Yu, University of Wollongong</b>	3,641	3,641	1,000	Computer simulations of molecular systems and computer-aided molecular design
<b>Mr Leon Majewski, Bureau of Meteorology</b>	3,600	3,600	-	Remotely sensed observations for Earth system modelling
<b>Dr Oleg Tretiakov, University of NSW</b>	3,593	3,593	250	Thermoelectric Figure of Merit of Dirty Topological Insulators
<b>Dr Sebastien Allgeyer, The Australian National University</b>	3,580	3,080	-	Earth deformation and mass transport
		500	500	Earth deformation and mass transport
<b>A/Prof Matthew Hole, The Australian National University</b>	3,480	3,480	250	Computational Applications in Equilibrium and Instabilities of Advanced Plasma Confinement Geometries
<b>Prof Aijun Du, Queensland University of Technology</b>	3,450	3,450	3,450	Nanomaterials for Energy, Nanoelectronics and Environmental Applications: Contribution from Modelling towards Rational Design
<b>Dr Nicholas Williamson, University of Sydney</b>	3,370	2,495	-	Stratified boundary layers in riverine environments
		875	875	Transition and turbulence in low and high temperature natural convection
<b>Dr Balthasar Indermuehle, CSIRO</b>	3,289	3,289	-	Using Himawari 8 realtime data for severe weather protection and tropospheric ducting prediction
<b>Prof Elizabeth Ritchie-Tyo, UNSW Canberra</b>	3,240	3,240	250	Tropical Cyclone Studies
<b>Prof LiangChi Zhang, University of NSW</b>	3,204	3,204	800	An integral approach for the defect-free fabrication of high-integrity systems
<b>Dr Daniel Chung, University of Melbourne</b>	3,200	3,200	2,300	Direct numerical simulation of wall-bounded and buoyancy-driven turbulent flows

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Dr Evelyne Deplazes, University of Technology, Sydney	3,200	2,450	250	Towards realistic models of permeability and pore formation in biological membranes
		750	250	Tapping into nature's pharmacy cabinet - molecular simulations to facilitate peptide-derived pharmaceuticals
Dr Babak Hejrani, Geoscience Australia	3,000	3,000	-	Tomography Data Processing
Dr Warren Kaplan, Garvan Institute of Medical Research	2,997	1,380	-	Garvan - Genomic Cancer Medicine - David Thomas
		1,150	-	Garvan - Human Comparative and Prostate Cancer Genomics - Vanessa Hayes
		372	-	Garvan Genome Pilot
		80	-	Garvan - Immunogenomics - Chris Goodnow
		12	-	MoST Molecular Screening Trial
		2	-	Garvan - Powell Group - Joseph Powell
		1	-	Garvan - Tumour Progression - Alex Swarbrick
Dr Patrick Burr, University of NSW	2,973	2,973	500	Hydrogen-induced materials degradation
Dr Fangbao Tian, UNSW Canberra	2,937	2,937	-	Numerical study of fast gait transitions in fish swimming using deep reinforcement learning
Dr Michael Breedon, CSIRO	2,882	2,882	-	The adsorption of molecules onto surfaces found in energy storage devices
Dr Christopher Leonardi, University of Queensland	2,865	2,865	500	Direct numerical simulation of particle-laden fracture flows for geoscientific applications
Dr Yan Jiao, University of Adelaide	2,773	2,773	1,250	Design Electrocatalysts Materials for Clean Energy Conversion by DFT
Ms Caroline Lai, DHI	2,730	2,400	-	DHI-027
		200	-	DHI-035
		130	-	DHI-032
Dr Alain Protat, Bureau of Meteorology	2,700	2,700	-	Radar Science and Nowcasting
Prof Steven Sherwood, University of NSW	2,693	2,693	1,125	Rethinking atmospheric physics to resolve climate enigmas
Prof Sean Li, University of NSW	2,692	2,692	-	Accelerate Functional Material Designs Using Artificial Intelligence
Dr Seojeong Lee, University of NSW	2,685	2,685	-	Joint Labour Supply and Retirement of Australian Couples
Dr Martin Cope, CSIRO	2,680	2,680	-	Future Air Quality Projection

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Daryl Essam, University of NSW</b>	2,663	2,663	-	Combining neural networks with evolutionary algorithms for medical image segmentation
<b>Dr Duncan Sutherland, UNSW Canberra</b>	2,624	2,624	-	Physics based simulations of wild fire behaviour
<b>Dr Mohsen Talei, University of Melbourne</b>	2,605	2,605	1,750	Developing predictive tools for cleaner combustion
<b>Prof Leo Radom, University of Sydney</b>	2,602	2,452	1,850	Structural and Mechanistic Chemistry
		150	-	Structural and Mechanistic Chemistry
<b>A/Prof John Young, UNSW Canberra</b>	2,577	2,577	950	Fluid-Structure Interactions in Biological and Biomedical Systems
<b>Prof Tiffany Walsh, Deakin University</b>	2,560	2,000	2,000	Development and application of nano interfacial simulations
		560	-	Molecular simulation of carbon fibre composites
<b>Dr Martin Singh, Monash University</b>	2,499	2,499	1,350	Understanding climate change and variability using idealised and comprehensive climate models
<b>Prof Eduardo Eyra, The Australian National University</b>	2,460	1,900	-	Unveiling the complexity of genomes and transcriptomes with nanopore sequencing
		550	550	A comprehensive characterisation of the genetic and epigenetic variation of the ribosomal DNA during malignant transformation
		10	-	Profiling and optimisation of reference-free transcriptomics
<b>Dr Hongtao Zhu, University of Wollongong</b>	2,392	1,323	-	Polycrystal Plasticity FEM Simulation of Severe Plastic Deformation (SPD) Techniques
		1,069	250	Carbon Based Tribofilm to improve Engine Performance
<b>Prof Vanessa Hayes, University of Sydney</b>	2,333	1,183	382	Establishing a Genomic Signature for High-Risk Prostate Cancer
		1,150	-	Garvan - Human Comparative and Prostate Cancer Genomics - Vanessa Hayes
<b>Dr Maxim Nikurashin, University of Tasmania</b>	2,320	2,320	2,320	Turbulence and mixing in the Southern Ocean
<b>A/Prof Elizabeth Krenske, University of Queensland</b>	2,216	2,216	500	Computational Investigations of Molecular Structure and Reactivity
<b>Prof Orsola De Marco, Macquarie University</b>	2,179	2,179	-	Common envelope interaction and stellar outbursts in the era of time-domain Astrophysics

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Prof Kiet Tieu, University of Wollongong	2,154	2,154	250	Project title: Computational Study of the Tribological Properties of Layered Metal Hydroxides
Dr Thomas Plantard, University of Wollongong	2,143	2,143	-	Security Analysis of Lattice-based Cryptosystems
Dr Gareth Vio, University of Sydney	2,130	2,130	-	Fluid-Structure Interaction using higher Order CFD
Research Scientist Peter Oke, CSIRO	2,121	2,121	-	Bluelink developments
Dr Thi Ta, University of Wollongong	2,105	2,105	250	Molecular Dynamics Simulation of Aqueous Triblock Copolymer Lubricants in Metal Forming Applications
Prof Andrew Neely, UNSW Canberra	2,082	2,082	750	Fluid-thermal-structural interactions for high-speed flight and propulsion
Dr Aman G. Kidanemariam, University of Melbourne	2,075	2,075	1,000	Direct numerical simulation of turbulent shallow flows with deformable free-surface
Prof Barry Pogson, The Australian National University	2,060	2,060	-	A computational approach to enable precision control of drought resilience
Mr Steven Wilson, Victor Chang Cardiac Research Institute	2,058	1,280	-	VC Dunwoodie
		440	-	VC - Graham
		160	-	VC Ho
		105	-	VC Fatkin
		40	-	VC Giannoulatou
		30	-	VC Harvey
		2	-	VC - Vandenberg
		1	-	VC Structural Biology
Dr Md Anower Hossain, University of NSW	2,047	2,047	-	Modelling of Crystalline and Amorphous Transition Metal Oxides as Carrier-Selective Passivating Contacts for Crystalline Silicon Solar Cells
Prof Con Doolan, University of NSW	2,008	2,008	-	Aeroacoustics of low and high Mach number flows
A/Prof Amir Karton, University of Western Australia	2,000	2,000	2,000	High-level quantum chemistry: From theory to thermochemical and biochemical application
Dr Wei Wen, University of NSW	1,998	1,998	-	Joint Analysis of Imaging and Genomic Data to Study the Structure and Function of Human Brain
Dr Shev Macnamara, University of Technology, Sydney	1,900	1,900	-	Severe Thunderstorms and Tornadic Events Over Australia: Climatology and Case Studies

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Gregory Sheard, Monash University</b>	1,889	1,889	1,000	Two-dimensionalisation of MHD turbulence and ultimate horizontal convection regimes
<b>A/Prof Michael Kirkpatrick, University of Sydney</b>	1,850	1,600	-	Surface driven mixing of thermally stratified riverine flows
		250	250	Thermal Stratification and Destratification Processes in Meandering Rivers
<b>Prof Kerry Hourigan, Monash University</b>	1,840	1,840	1,000	Advanced Modelling of Fluid-Structure Interactions
<b>Prof Federico Maggi, University of Sydney</b>	1,830	1,830	450	Global soil and water resource in a changing climate
<b>Dr Robert Womersley, University of NSW</b>	1,830	1,830	-	Computation and optimization of energy, packing, covering and worst case error for point configurations on manifolds
<b>A/Prof Zhe Liu, University of Melbourne</b>	1,820	1,820	1,300	Integrated Computational Materials Engineering for Energy Materials
<b>Dr Andrew Christofferson, Royal Melbourne Institute of Technology</b>	1,811	1,471	-	Understanding the redox reaction mechanisms of E. coli nitroreductases
		340	340	Multiscale computational investigation of materials and biological components for health and commercial applications
<b>Mr Andrew Driscoll, Australian Commercial Organisation</b>	1,800	1,800	-	DHI-031
<b>Prof Rongkun Zheng, University of Sydney</b>	1,800	1,400	-	Low dimensional magnetism and superconductivity
		400	400	Understanding the growth-structure-property relationships in functional materials from density-functional theory calculations
<b>A/Prof Ha Bui, Monash University</b>	1,762	1,244	650	Micromechanics of internal soil erosions and field-scale applications
		518	250	Understanding the micromechanical origin of liquefaction in silty soils using advanced computational approach
<b>Prof Nicole Stanford, University of South Australia</b>	1,750	1,750	1,750	A first principles approach to understanding real engineering materials
<b>Dr Dietmar Dommenges, Monash University</b>	1,725	1,725	1,100	Global scale decadal climate variability in a ACCESS hierarchy of climate models
<b>Dr Lars Goerigk, University of Melbourne</b>	1,725	1,725	1,100	Theoretical and Computational Quantum Chemistry Including Development of Computational Methods and Computational Materials Science

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Dr Martina Lessio, University of NSW	1,700	1,200	-	Computational Design of Metal-Organic Frameworks for Heavy Metal Removal from Water
		500	500	Computational Design of Metal-Organic Frameworks for Heavy Metal Removal from Water
Dr Martin Jucker, University of NSW	1,695	1,695	920	Atmospheric and oceanic processes and dynamics
Prof Maria Forsyth, Deakin University	1,690	1,690	1,125	Computational investigation of new selective transport materials
Prof Rahman Sheik, University of NSW	1,679	1,679	-	Ion-tuned water flooding
Prof Jozef Syktus, University of Queensland	1,616	1,616	-	The capacity of forests to protect regional climate under global warming: science and policy implications
Prof Ian Dance, University of NSW	1,603	1,603	250	Computational Bio-inorganic and Supramolecular Chemistry
Dr Colin Jackson, The Australian National University	1,600	1,600	500	Computational Structural Biology and Protein Engineering
Dr Dan Andrews, The Australian National University	1,590	1,590	-	Computational identification of medically-relevant, personal genetic variation from the largest volumes of human genome sequences.
Mr Richard Miller, Macquarie University	1,585	841	-	Piloting Environment. Faculty of Science and Engineering, Macquarie University
		312	-	MRI Image Processing
		180	-	Enhanced Oil Recovery
		109	-	Studies on High-impact Weather, Climate Variability and Systems Dynamics
		78	-	Machine Translation
		65	-	Deep Learning for BioMedical Image Processing
Dr Fabio Capitanio, Monash University	1,578	1,578	1,050	4-D Numerical Models of Plate Tectonics on Earth and other planets
Prof Lei Wang, University of Wollongong	1,575	1,575	-	Exploring National Treasure: Automatic Photo Search for the Large Collection of National Archives of Australia
Prof Aibing Yu, Monash University	1,535	1,535	750	Simulation and Modelling of Particulate Systems
Prof Joe Hope, The Australian National University	1,500	1,500	-	Deep Quantum: an exploration of many-body quantum mechanics at the lower limits of temperature and energy

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Mr Anastasios Eleftheriadis, Victoria University</b>	1,475	690	-	Bushfire CRC PhD and MPhil Students
		500	-	Mahdi Ghiji Project 01
		80	-	Game Insight Group
		60	-	ACARA NAPLAN Benchmark Analysis
		50	-	Anti-viral drugs for the control of COVID-19
		20	-	ARC Linkage Project: Deep Mining neurological abnormalities from brain signal data
		20	-	Molecular dynamic simulation of liposomal nano-particle: a structural and stability study
		20	-	The Effect of the Block: Investigating the Effect of Introducing Block Mode on Student Satisfaction
		20	-	Research Services
15	-	Development of a Short-range firebrand landing model		
<b>Prof Chris McConville, Deakin University</b>	1,471	1,471	-	Understanding the redox reaction mechanisms of E. coli nitroreductases
<b>Claire Trenham, CSIRO</b>	1,471	1,461	-	Coastal and ocean modelling for a current and future climate
		10	-	Climate Resilient Enterprise mission
<b>A/Prof Craig O'Neill, Macquarie University</b>	1,457	832	-	dfss
		625	625	Towards a geodynamics millenium run
<b>Prof Francois Aguey-Zinsou, University of NSW</b>	1,454	1,454	-	A multiscale resolution strategy for hydrogen storage and production applications
<b>Dr Liangzhi Kou, Queensland University of Technology</b>	1,450	1,450	800	Two dimensional ferroelectric catalysts for Water splitting and CO2 reduction
<b>Prof Susan Clark, Garvan Institute of Medical Research</b>	1,450	1,450	500	Computational analysis of Epigenome diversity and inheritance patterns
<b>Mr Asger Gronnow, Other International</b>	1,412	1,412	-	The effect of the Galactic halo magnetic field on gas condensation and accretion
<b>Dr Yun Wang, Griffith University</b>	1,400	1,400	1,000	Understanding the properties of the electrode/solution interface in the electrochemical cell
<b>Dr Louis Moresi, The Australian National University</b>	1,375	1,375	1,375	Instabilities in the convecting mantle and lithosphere
<b>Dr Nicolas Flament, University of Wollongong</b>	1,375	1,375	750	4D relationships between supercontinents and mantle convection

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Stephen Bartlett, University of Sydney</b>	1,360	1,360	400	Quantum error correction simulation
<b>Prof Graham Heinson, University of Adelaide</b>	1,350	1,350	750	3D Geophysical Imaging for the Australian Lithospheric Architecture Magnetotelluric Project (AusLAMP)
<b>Dr Robyn Schofield, University of Melbourne</b>	1,330	1,330	1,150	Atmospheric composition & chemistry modelling on global, regional & local scales
<b>Prof Ravi Jagadeeshan, Monash University</b>	1,286	1,286	450	Sticky polymers in flow: Nexus between microscopic and macroscopic dynamics
<b>A/Prof Susanna Guatelli, University of Wollongong</b>	1,280	1,280	750	Development of Monte Carlo simulation tools for bio-medical physics applications
<b>Dr Daniel Lester, Royal Melbourne Institute of Technology</b>	1,250	1,250	-	The Tensorial Rheology of Strong Colloidal Gels
<b>Mr Patrick Sunter, Bureau of Meteorology</b>	1,200	1,200	-	Extended Hydrological Prediction modelling
<b>Dr Ashley Ruitter, UNSW Canberra</b>	1,185	1,185	1,150	Formation channels of thermonuclear supernova progenitors and white dwarf transients
<b>Dr Xue Feng Dong, University of Wollongong</b>	1,182	1,182	-	A fundamental understanding of processing limits in blast furnace ironmaking leading to optimisation of productivity through innovative management of raw material quality
<b>Dr Andrew Hung, Royal Melbourne Institute of Technology</b>	1,172	1,172	500	Developing New Treatments for Pain
<b>Prof Andrew Ooi, University of Melbourne</b>	1,165	1,165	250	Understanding the Development of Cardiovascular Diseases Using Advanced Tools in Computational Fluid Dynamics and Artificial Intelligence
<b>A/Prof David Wilson, La Trobe University</b>	1,160	690	690	Quantum Chemical Molecular Properties
		470	-	Computational Study of Novel Molecular Properties
<b>Prof Jian-Feng Nie, Monash University</b>	1,136	957	500	Simulation of dislocation gliding and its interaction with solutes in hexagonal close-packed metals and alloys using potentials from deep learning
		179	-	Structures and stability of solute aggregate and segregation in advanced Mg alloys
<b>Mrs Claire Carouge, University of NSW</b>	1,135	1,135	200	Terrestrial modelling within the Centre of Excellence regionalizing land surface processes



Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Steven Armfield, University of Sydney</b>	1,130	1,130	-	Stability and Transition of Conjugate Natural Convection Boundary Layers
<b>Dr Richmond Lee, University of Wollongong</b>	1,112	1,112	350	Computationally-Guided Catalysis & Molecular Design
<b>Dr Alpesh Malde, Griffith University</b>	1,100	1,100	250	Development and Applications of Computational Methods in Drug Design
<b>Prof Anatoli Kheifets, The Australian National University</b>	1,100	1,025	500	Time-space resolved photoelectron emission
		75	-	Application of a TDDFT solver to analyse resonances in high harmonic generation in solids.
<b>Dr Anthony George, University of Technology, Sydney</b>	1,100	1,100	-	Role of dominant motions in the catalytic mechanism of cathepsin L protease.
<b>Dr Jong-Leng Liow, UNSW Canberra</b>	1,100	1,100	-	Modelling of hydrocyclone behaviour
<b>Dr Ryan Armstrong, University of NSW</b>	1,097	1,097	-	MUTRIS: Unconventional Resources
<b>Prof Daniel Price, Monash University</b>	1,088	1,088	-	Star and planet formation, black hole accretion and common envelope evolution
<b>Dr Yan Ding, Royal Melbourne Institute of Technology</b>	1,074	969	-	Study on the Improved Large Eddy Simulations for Methodologies for Predicting Trailing Edge Noise
		105	-	Study on Atherosclerosis Progression Computational Modelling of Atherosclerotic Lesion Formation, Growth and Rupture
<b>Dr Shane Keating, University of NSW</b>	1,072	1,072	500	Consequences of ocean wave modulation on fundamental air-sea turbulent fluxes
<b>A/Prof David Huang, University of Adelaide</b>	1,070	1,070	500	Multi-scale modelling of soft condensed matter in functional materials
<b>Dr Ivo Seitenzahl, UNSW Canberra</b>	1,069	1,069	850	Hydrodynamical explosion simulations and radiative transfer for thermonuclear and core-collapse supernovae
<b>Dr Amanda Barnard, The Australian National University</b>	1,050	1,050	-	Computational Science and Applied Machine Learning
<b>Dr Jingxian Yu, University of Adelaide</b>	1,030	1,030	250	Spin-selective Electron Transfer in Chiral Peptides
<b>Prof Alexander Babanin, University of Melbourne</b>	1,025	1,025	-	Metocean projects, University of Melbourne

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Alberto Peruzzo, Royal Melbourne Institute of Technology</b>	1,020	1,020	-	RMIT Node, ARC Centre of Excellence for Quantum Computation and Communication Technology
<b>Dr Neha Gandhi, Queensland University of Technology</b>	1,015	1,015	765	Shading Light on Biomolecules of DNA Repair pathways and their Interactions via Computational Modelling
<b>Dr Ross Brodie, Geoscience Australia</b>	1,000	1,000	-	Airborne Electromagnetics (AEM) Inversion
<b>Mr Samuel Sauvage, Bureau of Meteorology</b>	1,000	1,000	-	Australian Fire Danger Rating Prototype
<b>Dr Christian Wolf, The Australian National University</b>	990	990	-	SkyMapper and the Southern Sky Survey
<b>Dr Rosemarie Sadsad, University of Sydney</b>	967	967	-	Sydney University Bioinformatics Testing and Development
<b>Ms Chloe Burns, The Australian National University</b>	960	960	-	Agent Based Microsimulation of Infectious Disease Outbreaks
<b>Prof Robert Stranger, The Australian National University</b>	930	880	-	Computational studies of the Mn/Ca cluster in Photosystem II and its relevance to bio-mimetic Hydrogen generation catalysts
		50	-	DFT and TD-DFT Studies of Organometallic and Metal Cluster Systems
<b>Prof Klaus Regenauer-lieb, University of NSW</b>	928	928	250	Tyree X-Ray Facility
<b>Prof George Zhao, University of Queensland</b>	921	921	250	Atomistic Simulation on the Design of Efficient Carbon Materials for Sodium-Ion Batteries
<b>Prof Igor Bray, Curtin University of Technology</b>	920	920	800	Atomic Collision Theory
<b>Prof Erik Meijering, University of NSW</b>	915	915	-	Deep Neural Network Architecture Search for Biomedical Image Analysis
<b>Prof Luming Shen, University of Sydney</b>	910	910	500	Modelling high strain rate responses of unsaturated porous media
<b>Prof Santiago Badia, Monash University</b>	904	904	550	Leveraging parallel h-adaptive and variational space-time unfitted methods for the high-fidelity heat transfer analysis of metal additive manufacturing
<b>Dr Abhnil Prasad, University of NSW</b>	885	885	285	The effects of tropical convection on Australia's climate
<b>Prof Hrvoje Tkalic, The Australian National University</b>	882	880	-	Studying the Earth's interior using global correlation wavefield
		2	-	Secure storage of seismic data

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Jiankun Hu, University of NSW</b>	881	881	-	Big Data Security
<b>Mr Miguel Angel Gonzalez Bolivar, Macquarie University</b>	880	880	-	Common envelope evolution during thermal pulsing AGB phase
<b>Prof Jason Sharples, University of NSW</b>	863	863	720	Modelling and simulation of dynamic bushfire propagation
<b>Dr Md Zakir Hossain, The Australian National University</b>	860	860	-	Deep learning for facial expression and/or emotion recognition
<b>Dr Sang Lee, University of South Australia</b>	860	860	860	Novel whole-genome approaches to capture the latent genetic architecture of complex traits
<b>Prof Kevin Walsh, University of Melbourne</b>	850	850	800	South Pacific High-resolution Climate Model Simulations
<b>Prof Martin Lambert, University of Adelaide</b>	850	850	250	Unveiling the physics of unsteady turbulent flows by using direct numerical simulation
<b>Dr Marcus Doherty, The Australian National University</b>	840	840	-	First principles innovation of solid-state quantum technologies
<b>Dr Larry Croft, Deakin University</b>	815	815	-	Fish/Invertebrate Genomics
<b>Mr Neil Symington, Geoscience Australia</b>	800	800	-	High-performance Computational Groundwater Science
<b>A/Prof Ting Liao, Queensland University of Technology</b>	800	800	800	Computational Design of Two-Dimensional Hybrids Based Nanomaterials for Sustainable Energy Application
<b>Dr Trevor Allen, Geoscience Australia</b>	800	800	-	EQRM
<b>A/Prof Mark Cowley, Children's Cancer Institute</b>	780	780	500	Comprehensive investigation of noncoding biology in high-risk paediatric cancers
<b>A/Prof Alister Page, University of Newcastle</b>	775	775	775	Quantum Chemical Modelling of Nanoscale Chemical Processes
<b>Prof Yun Liu, The Australian National University</b>	770	770	-	Materials Design for Hydrogen Storage
<b>Dr Yuguang Wang, University of NSW</b>	751	751	-	Cosmic Microwave Background Analysis
<b>Dr Justin Leontini, Swinburne University of Technology</b>	750	750	750	Oscillatory flows in complex geometries
<b>Prof Quan Wang, University of Melbourne</b>	730	730	-	Statistical post-processing of ACCESS precipitation forecasts

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Adam Trevitt, University of Wollongong</b>	727	727	500	Computational Investigation of the Chemistry of Reactive Intermediates
<b>Dr Michael Kuiper, CSIRO</b>	726	726	-	Computational modelling of virus - host interactions.
<b>Dr Gaetan Burgio, The Australian National University</b>	719	474	-	ANUMAS 2021 new project -- Burgio
		75	-	Uncovering novel phage-bacteria interactions by mining metagenomics datasets
		70	-	Inferring core gene co-expression network modules in Plasmodium-infected tissues
		50	-	Using computational pipelines to uncover novel CRISPR proteins
		50	-	Inferring core gene co-expression network modules in Plasmodium-infected liver and a genome-wide repertoire of host and parasite transcription factor-gene associations
<b>Dr Melrose Brown, UNSW Canberra</b>	705	705	500	Physics of the interactions between high-speed craft and their environment
<b>Prof Tom Gedeon, The Australian National University</b>	705	705	-	Deep learning from psychophysiological data
<b>Dr Gajan Suthokumar, University of NSW</b>	697	697	-	Efficient Bayesian Inference for Intractable Likelihood Problems
<b>Dr Robert Salomone, University of NSW</b>	697	697	-	Efficient Bayesian Inference for Intractable Likelihood Problems
<b>Dr John Pye, The Australian National University</b>	688	688	-	Modelling of high-temperature concentrating solar thermal energy systems
<b>Dr Alejandro Montoya, University of Sydney</b>	680	430	-	Molecular Modelling of Reactive Materials
		250	250	Advanced Computational Chemistry Research for Chemical Engineering Process Improvement
<b>Dr Eric Poon, University of Melbourne</b>	680	680	-	Predicting heart attack with computational biomechanics
<b>Dr Lyndal Henden, Macquarie University</b>	666	666	-	Detecting STRs in Australian Motor Neuron Disease patients
<b>Dr Flora Salim, Royal Melbourne Institute of Technology</b>	660	660	-	Deep learning of time-series and spatio-temporal data
<b>Prof Mark Humphrey, The Australian National University</b>	660	660	-	DFT and TD-DFT Studies of Organometallic Systems

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Naomi McClure-Griffiths, The Australian National University</b>	660	660	-	Simulating the Build-up of Magnetic Fields in High Velocity Clouds
<b>Prof John Miners, Flinders University</b>	650	400	400	Structural dynamics of human drug metabolising UDP-glycosyltransferases: Characterisation of the molecular basis of substrate and inhibitor binding
		250	250	The structural basis for selective and cooperative ligand binding by human drug and chemical metabolising cytochrome P450 enzymes: Application of molecular dynamics
<b>Prof Marc Wilkins, University of NSW</b>	648	348	-	High Performance Computing Analysis of Genome Sequences
		300	-	Characterising co-infecting respiratory viruses in COVID-19 patients using comprehensive virome capture sequencing
<b>Dr Paul Zulli, University of Wollongong</b>	641	641	-	Productivity and Campaign Life Improvements Through Development of Numerical Models of the Ironmaking Blast Furnace
<b>Prof Jie Yang, Royal Melbourne Institute of Technology</b>	635	635	-	Buckling of Functionally Graded Multilayer Graphene Nanocomposites
<b>Dr Simon Watt, UNSW Canberra</b>	633	320	-	Chaotic mixing in competitive reactions
		313	-	Modelling and simulation of overdominance in genetic variation
<b>Prof Albert Van Dijk, The Australian National University</b>	630	580	250	National biodiversity trends and accounts
		50	-	ANUMAS 2021 new project -- Dijk
<b>Dr Timothy Duignan, University of Queensland</b>	625	625	250	Predicting electrolyte solution properties through ion pairing calculations.
<b>Mr Matthew Boarder, La Trobe University</b>	620	620	-	Molecular Dynamics of Protein Targets Linked to Infectious, Diabetic and Age-Related Diseases
<b>Dr Tamar Greaves, Royal Melbourne Institute of Technology</b>	617	617	-	A Molecular Dynamics exploration of ionic liquid properties and interactions with polymeric materials
<b>Prof Dewei Chu, University of NSW</b>	601	601	-	Tailoring Ion Transport through Cathode/Coating Interfaces in Lithium ion Battery

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Santosh Shrestha, University of NSW</b>	601	601	-	Computation of electronic, optical and phonon properties of transition metal nitrides and oxynitrides to investigate hot carrier solar cell absorber properties
<b>Dr Joseph Horvat, University of Wollongong</b>	600	600	250	Blue shift of terahertz absorption lines for molecular crystals
<b>Dr Matthew Garthwaite, Geoscience Australia</b>	600	600	-	InSAR research to measure surface deformation of the Australian continent
<b>Prof Robert Park, University of Sydney</b>	598	598	250	Eliminating the burden of rust diseases in agriculture and forestry
<b>Dr John Taylor, CSIRO</b>	595	595	-	Scalability of convolutional encoder-decoders
<b>Dr Ryosuke Hirai, Monash University</b>	595	595	-	Common-envelope evolution of massive stars
<b>Dr Colette Kerry, University of NSW</b>	594	594	-	Advancing dynamical understanding in the East Australian Current Optimising the ocean observation and prediction effort
<b>Prof Moninya Roughan, University of NSW</b>	594	594	-	Advancing dynamical understanding in the East Australian Current Optimising the ocean observation and prediction effort
<b>A/Prof Timothy Garoni, Monash University</b>	594	594	250	Design, analysis and application of Monte Carlo methods in statistical mechanics
<b>Prof Meredith Jordan, University of Sydney</b>	586	586	450	Molecular Interactions
<b>Dr Jiayu Wen, The Australian National University</b>	580	330	-	Single-cell RNA-seq for discovering cell-type-specific gene expression patterns and gene regulatory landscape
		250	-	ANUMAS 2021 new project -- Wen
<b>Dr Fiacre Rougieux, University of NSW</b>	568	568	-	Overcoming the impact of defects for high-efficiency solar cells
<b>Prof Lloyd Hollenberg, University of Melbourne</b>	555	555	250	Quantum Computer Device Simulations
<b>Mr. Peter Briggs, CSIRO</b>	548	548	-	The Australian Continental Carbon Budget
<b>Dr Vanessa Haverd, CSIRO</b>	548	548	-	The Australian Continental Carbon Budget
<b>Prof Ivan Cole, Royal Melbourne Institute of Technology</b>	545	545	-	Study on the airflow phenomena on the respiratory system
<b>Prof Katherine Belov, University of Sydney</b>	545	545	450	Establishing an immunogenetic ark for Australian threatened species

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Sascha Eisenträger, University of NSW</b>	545	545	-	Transient Analysis using Explicit Time Integrators and the Scaled Boundary Finite Element Method
<b>Dr Nevena Todorova, Royal Melbourne Institute of Technology</b>	540	540	-	Theoretical studies of bimolecular interactions under non-equilibrium conditions
<b>Dr Chris Escott, University of NSW</b>	536	536	-	Silicon MOS quantum computation
<b>Dr Serena Lee, Griffith University</b>	520	520	-	Large-scale flexible mesh modelling (Australia, Pacific, Southern Ocean)
<b>Mr Javad Mohammadpour, Macquarie University</b>	519	519	-	(jm7) Simulation of nanofluids in microchannel heat sinks
<b>Dr Raj Das, Royal Melbourne Institute of Technology</b>	515	335	-	Architected Materials
		160	-	Understanding Cranial Injury- Developing bio-simulant human gunshot cranium model by using mesh free (SPH) method
<b>Prof Cheng Lu, University of Wollongong</b>	507	507	-	Deformation mechanism of 'gradient' materials
<b>Dr Ivan Maksymov, Swinburne University of Technology</b>	505	505	-	Atom-photon interactions in biologically relevant media
<b>Prof Jeffrey Reimers, University of Technology, Sydney</b>	504	504	504	Modelling of Chemical Systems Including Molecular Excited States, Photosynthesis, and Molecular Electronics Applications
<b>Prof Mark Hoffman, University of NSW</b>	502	502	-	Design using genetic algorithms
<b>Dr Anna Ukkola, The Australian National University</b>	500	500	500	Will an improved land surface model enhance seasonal prediction of drought?
<b>Prof Brian Yates, University of Tasmania</b>	500	500	500	Designing Better Catalysts
<b>Dr Claire Vincent, University of Melbourne</b>	500	500	500	Clouds, rain and Climate: Mapping a hierarchy of cloud and rainfall processes to our global climate system.
<b>Prof Gavin Huttley, The Australian National University</b>	500	300	-	Huttley lab compute
		150	-	ANUMAS 2021 new project -- Huttley
		50	-	Statistical modelling of genetic variation
<b>Prof Ian Young, University of Melbourne</b>	500	500	500	Global and regional projections of ocean wave climate over the 21st century

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Iwan Cornelius, Australian Commercial Organisation</b>	500	500	-	Amentum Production Computing
<b>A/Prof Jenny Fisher, University of Wollongong</b>	500	500	500	Unravelling the effects of atmospheric chemistry on climate using state-of-the-art 3-D chemical transport modelling
<b>Prof Liang Cheng, University of Western Australia</b>	500	500	500	Optimising design and operation of offshore oil and gas facilities using numerical modelling
<b>Dr Marian-Andrei RizoIU, University of Technology, Sydney</b>	500	500	-	Tracking disinformation campaigns across social media
<b>Prof Richard O'Hair, University of Melbourne</b>	500	500	500	Catalysis and Organometallic Chemistry
<b>Dr Simon Illingworth, University of Melbourne</b>	500	500	500	Reduced-order models of wall-bounded turbulence
<b>Dr Vassili Kitsios, CSIRO</b>	500	500	500	Ensemble Kalman filter estimation of turbulent mixing parameters in global climate models of CMIP complexity
<b>Dr Yi Du, University of Wollongong</b>	500	500	500	Simulation on atomic and electronic structures of 2D materials
<b>Prof Yuantong Gu, Queensland University of Technology</b>	500	500	500	Large-scale atomistic simulations for the design of high-performance nanocomposites
<b>Dr Matthew Chamberlain, CSIRO</b>	495	495	-	ACCSP Dynamical Ocean Downscaling of Climate Change Projections
<b>Dr Warren Jin, CSIRO</b>	491	491	-	High resolution seasonal climate forecast
<b>Dr Xiuwen Zhou, University of Queensland</b>	485	485	250	Rational design of light-emitting plastics for next generation lighting and displays
<b>Dr Maryam Ghodrat, UNSW Canberra</b>	467	361	250	CFD Simulation of fire-wind interaction and its effect on buildings in bushfire prone areas
		106	-	An improved numerical tool for bushfire modelling
<b>Prof Aaron Schindeler, University of Sydney</b>	461	461	-	Virtual screening of natural compounds for antiviral activity
<b>Prof Buyung Kosasih, University of Wollongong</b>	450	450	-	Fluid dynamic phenomena affecting the liquid coating quality in the jet stripping line
<b>A/Prof Ivan Kassal, University of Sydney</b>	450	450	450	Charge and energy transport in disordered functional materials
<b>Dr Matthew Field, The Australian National University</b>	450	450	-	Developing Bioinformatics Capability to Diagnose Infectious Diseases using Clinical Metagenomics



Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Su Nguyen, La Trobe University</b>	450	450	-	Evolutionary Learning for Decision Analytics (ELDA)
<b>Dr Mark Baldry, University of Sydney</b>	449	449	-	Modelling the dynamics of nonthermal plasma reactors for surface functionalisation and nanoparticle synthesis
<b>Prof Brendan McKay, The Australian National University</b>	440	440	-	Extremal graph theory and Ramsey theory
<b>Leo Lymburner, Geoscience Australia</b>	440	440	-	AGDC Experimental (External)
<b>Prof Qing-Hua Qin, The Australian National University</b>	440	440	-	Topology Optimisation of Mechanical Metamaterials and Multifunctional Materials
<b>Prof Thomas Welberry, The Australian National University</b>	440	440	-	Computation of X-Ray Diffraction Patterns for 3D Model Systems
<b>Dr Peng Wang, University of Wollongong</b>	435	435	-	Towards next-generation Meta Learning
<b>Dr Xi Li, The Australian National University</b>	430	430	-	Canberra Clinical Genomics; translating the latest research findings into personalised medicine
<b>Dr Carlos Velasco, Bureau of Meteorology</b>	425	425	-	STEPS: Short-term high-resolution rainfall ensembles
<b>Dr Nicole Rijs, University of NSW</b>	416	416	-	Computed electronic structure of molecules relevant to self assembly and catalysis
<b>Dr Matthew McGee, Monash University</b>	414	414	250	Comparative lifespan genomics in fishes
<b>Dr Diego Molla-Aliod, Macquarie University</b>	410	188	-	Transfer Learning for Question Answering
		131	-	Deep learning experiments for text summarisation
		51	-	MREs Project: Sequential Transfer Learning for Biomedical Summarisation for a Small Dataset
		40	-	COMP4093 - Summarisation of biomedical text
<b>Prof Karen Wilson, Royal Melbourne Institute of Technology</b>	410	410	-	Nanostructured solid acid catalysts for sustainable chemical manufacturing
<b>Dr Gerald Pereira, CSIRO</b>	403	403	-	Digital design of bespoke mixers
<b>Prof Cedric Simenel, The Australian National University</b>	400	400	-	Microscopic Studies of Nuclear Dynamics

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>A/Prof Gholamreza Haffari, Monash University</b>	400	400	-	Deep Learning to Learn with Limited Supervision
<b>Mr Guillaume Jolly, Australian Commercial Organisation</b>	400	400	-	Trampo CFD Pilot Project
<b>Dr Iwan Jensen, Flinders University</b>	400	400	400	Exact Enumerations in Statistical Mechanics and Combinatorics
<b>Dr Siyuan Tian, The Australian National University</b>	400	400	-	ANUMAS 2021 new project -- Tian
<b>Dr Tim Pugh, Bureau of Meteorology</b>	400	400	-	Unified Model porting
<b>Tracy Bailey, Other Australian Government Department</b>	400	400	-	ARPANSA Pilot Project
<b>Dr Victoria Timchenko, University of NSW</b>	400	400	-	CFD studies for Renewable Energy applications including natural ventilation and energy storage
<b>Prof David Pontin, University of Newcastle</b>	396	396	-	Implications of magnetic flux cancellation for the heating of the Sun's corona
<b>Dr Shamila Haddad, University of NSW</b>	382	382	-	Using WRF for urban climate simulations and heat island mitigation in Australia
<b>Dr Kejun Dong, University of Western Sydney</b>	380	380	250	Particle-scale numerical study on screening processes (subproject from ARC Hub for Computational Particle Technology)
<b>Prof Khalid Moinuddin, Other Australian Research Organisation</b>	380	380	-	Bush fire CRC Project 01
<b>Prof Timothy Barrows, University of Wollongong</b>	379	379	250	WRF downscaling of 20CRv3
<b>Dr Leonard Hamey, Macquarie University</b>	377	154	-	3D Medical Image Segmentation
		108	-	Malware Detection in an Adversarial Environment
		100	-	Affect Recognition from Video
		15	-	Multi-modal machine learning for clinical decision support
<b>Mr Timothy Womersley, DHI</b>	370	370	-	DHI-033
<b>Dr Reuben Kirkham, Monash University</b>	369	369	250	Navigation-Documentation Simulations

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Prof Xiao Hua Wang, UNSW Canberra</b>	367	367	-	Oceanic Nepheloid Layers and Their Role in Coastal Oceanography
<b>Dr Fabio Luciani, University of NSW</b>	354	354	-	Systems immunology at the single-cell level
<b>Dr Philip Nakashima, Monash University</b>	353	353	-	Revealing the Electronic Structure of Metals, Alloys, Functional Ceramics and Thermoelectric Materials using Quantitative Convergent-Beam Electron Diffraction
<b>A/Prof Hanna Suominen, The Australian National University</b>	352	100	-	Our Health in Our Hands: Big Data Program
		75	-	Early Detection of Diabetes through Big Data, Machine Learning and Wearable Sensors
		75	-	Machine Learning for Control System Development in a Multiple Input Artificial Pancreas System
		52	-	Ontology Learning for Diabetes Management using Natural Language Processing & Machine Learning Techniques
		50	-	Improving methods of diagnosis and prognostication in Multiple Sclerosis and Parkinson's Disease through objective testing and machine learning
<b>Dr Ripon Chakraborty, UNSW Canberra</b>	351	351	-	Integrating Optimisation Approaches in Cyber Security
<b>A/Prof Aaron Oakley, University of Wollongong</b>	350	350	-	Dynamics of DNA Clamps and Clamp Loaders
<b>Dr Michael Pereira, Deakin University</b>	350	350	-	Wear simulation using DEM and FEM
<b>Dr Christopher Chapman, CSIRO</b>	347	347	-	Ocean Atmosphere Coupled Processes
<b>Dr Khandis Blake, University of NSW</b>	335	250	250	Using Big Twitter Data to Understand Global Patterns in Men's Rights Activism and Misogyny Online
		85	-	Using Big Twitter Data to Understand Global Patterns in Eating Disorders and Gendered Hate Speech Online
<b>Dr Loïc Thibaut, University of NSW</b>	335	335	-	A theoretical basis for metrics of natural selection and intolerance scores to genetic variation
<b>Prof Hussein Abbass, UNSW Canberra</b>	334	334	-	Trusted Autonomy Group
<b>Prof Robert Brooks, University of NSW</b>	332	332	-	Inequality and attitudes on social media

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Murat Tahtali, UNSW Canberra</b>	328	328	-	Imaging Through the Atmosphere, L-SPECT simulation and reconstruction
<b>Dr Fatemeh Salehi, Macquarie University</b>	326	250	250	Spray droplet characterisation
		76	-	Parametric study of Fast Pyrolysis Process
<b>Dr Haytham Fayek, Royal Melbourne Institute of Technology</b>	319	215	-	Deep Learning of Reusable Hierarchical Distributed Representations [GPU]
		104	-	Deep Learning of Reusable Hierarchical Distributed Representations
<b>Dr Marta Yebra, The Australian National University</b>	319	319	250	Protecting Australia from catastrophic bushfires
<b>Dr Alireza Valizadeh, DHI</b>	315	315	-	DHI-034
<b>Dr Jayasinghe Jayasinghe, University of NSW</b>	313	293	-	Higher order moments to attack random encryption countermeasures
		20	-	Training DNN using High Dynamic Range Approximate Multiplier
<b>Prof Chennupati Jagadish, The Australian National University</b>	308	308	-	Nanostructured optoelectronic devices: new materials and applications
<b>Dr Merlinda Kay, University of NSW</b>	308	308	250	Australian Solar Resource Assessment and Forecasting
<b>Prof Sylvester Abanteriba, Royal Melbourne Institute of Technology</b>	301	301	-	Study on Improved Large Eddy Simulation Methodologies for Predicting Trailing Edge Noise
<b>Dr Negin Nazarian, University of NSW</b>	300	300	200	Urban canopy parameterization in mesoscale modeling to represent urban overheating and air quality
<b>Prof Phil Cummins, The Australian National University</b>	300	300	-	Geohazard Modelling for the Asia-Pacific Region
<b>Dr Tim Gould, Griffith University</b>	300	250	250	HPC-enabled rational design of energy storage materials
		50	-	A roadmap for the inclusion of weak forces in structural prediction
<b>Prof Xiaoke Yi, University of Sydney</b>	300	300	-	Integrated photonic simulation based on COMSOL and Lumerical
<b>Dr Xiong Liu, University of Wollongong</b>	300	300	-	Molecular dynamics simulation of fracture behaviour in nanocrystalline fcc structures
<b>A/Prof Koushik Venkatesan, Macquarie University</b>	296	271	-	Theoretical evaluation of phosphorescent excimers
		25	-	Theoretical and experimental evaluation of Phosphorescent Excimers

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>A/Prof Ruta Gupta, Other Australian Government Department</b>	296	296	140	Bringing Head and Neck Cancer to the 21st Century
<b>Dr Ali Hadigheh, University of Sydney</b>	295	250	250	2D and 3D Vision-Based Structural Health Monitoring for Defect Detection
		45	-	Using machine learning for structural health monitoring
<b>Ms Silvia Ceccacci, Macquarie University</b>	292	292	-	Control of boundary-layer separation using surface roughness
<b>Dr Yingyan Zhang, Royal Melbourne Institute of Technology</b>	290	290	-	High-performance polymer composites reinforced by carbon-based nanomaterials
<b>Dr Tao Zou, The Australian National University</b>	285	220	-	ANUMAS 2021 new project -- Zou
		65	-	Covariance-Mean Regression Analysis with Heterogeneous Similarity Matrices
<b>Mr Joseph Copt, Garvan Institute of Medical Research</b>	281	230	-	Garvan Data Relocation
		50	-	NCI and Garvan collaboration to develop a Genomics Pipeline
		1	-	OneScreen Program
<b>Zhigang Lu, Macquarie University</b>	281	281	-	Differentially Private Machine Learning
<b>Dr Emily Wong, Victor Chang Cardiac Research Institute</b>	276	276	-	VC Wong - Gene regulation
<b>Dr Philip Taylor, The Australian National University</b>	276	276	-	The COCKATOO Simulations
<b>Dr Josephine Brown, University of Melbourne</b>	275	275	-	ACCESS ESM1.5 simulation of mid-Holocene for PMIP4 and CMIP6
<b>Ms Na Liu, Macquarie University</b>	272	195	-	Detecting Adversarial Samples in NLP
		77	-	Detecting Adversarial Examples in Language Using Influence Functions and K-Nearest Neighbors
<b>Dr Yu Lin, The Australian National University</b>	272	272	-	Large Graph Models and Analysis in Genome Assembly
<b>Prof PG Ranjith, Monash University</b>	271	271	-	Molecular dynamics simulation of surfactant behavior at gas/liquid interface
<b>Prof Sebastian Sardina, Royal Melbourne Institute of Technology</b>	271	271	-	Plan De-Binding & Re-Binding in IPC domains
<b>Prof Peter Rayner, University of Melbourne</b>	270	270	250	Multi-scale atmospheric composition: climate and chemistry (MSAC-CAC)

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Gregory Wilson, CSIRO</b>	269	269	-	Electronic Structure of Organic/Inorganic Dyes for Photovoltaic Applications
<b>Prof Geraint Lewis, University of Sydney</b>	263	263	-	Cosmological Probes of Evolving Dark Energy
<b>Mr Raghvendra Sharma, Australian Commercial Organisation</b>	260	260	-	SoilCarbon Pilot Project
<b>Dr Susann Beier, University of NSW</b>	260	260	-	Coronary Atlas
<b>Dr Sophie Calabretto, Macquarie University</b>	258	258	-	Absolute versus convective instabilities in three-dimensional boundary layers
<b>Dr Elena Atroshchenko, University of NSW</b>	256	256	-	Numerical methods in acoustics
<b>Prof Peter Gill, University of Sydney</b>	255	255	250	Development and application of new quantum chemistry algorithms
<b>Dr Junfang Zhang, CSIRO</b>	254	254	-	Surface reaction and diffusion controlled kinetic model of adsorption
<b>Dr Anna Herring, The Australian National University</b>	250	250	250	Understanding pore-scale displacement mechanisms relevant to geologic CO <sub>2</sub> sequestration using multiphase lattice-Boltzmann models
<b>Prof Bram Hoex, University of NSW</b>	250	250	250	Modelling of Transition Metal Oxide Materials for Energy Harvesting and Conversion
<b>Dr Chenghua Sun, Swinburne University of Technology</b>	250	250	250	Computer-Aided Materials Design for Clean Energy
<b>Dr Chloe Leach, University of Melbourne</b>	250	250	250	Victorian Coastal Monitoring Program (VCMP)
<b>Dr Daniel Harrison, Southern Cross University</b>	250	250	250	Modelling solar radiation interventions for coral bleaching mitigation
<b>Dr Jatin Kala, Murdoch University</b>	250	250	250	Can land surface radiation management reduce the intensity of heat waves?
<b>Prof Joss Bland-Hawthorn, University of Sydney</b>	250	250	250	Galactic seismology: what triggered the disc-crossing waves in the Milky Way?
<b>Dr Kenneth Duru, The Australian National University</b>	250	250	-	WaveQLab3D: A peta-scale wave propagation and dynamic earthquake rupture solver
<b>Prof Marc Parlange, Monash University</b>	250	250	250	Turbulence structure of extreme winds in hurricanes
<b>A/Prof Maziar Arjomandi, University of Adelaide</b>	250	250	250	Turbulent boundary-layer control strategies

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Prof Michael Richardson, Macquarie University	250	250	250	Human-AI: Developing Artificial Agents for Multiagent and Human-AI Teaming
Dr Petra Heil, Australian Antarctic Division	250	250	250	Tracking changes in Arctic and Antarctic sea-ice motion
Prof Ricardo Mancera, Curtin University of Technology	250	250	250	Large scale molecular dynamics simulations of biomolecular systems
Dr Shibo Wang, Monash University	250	250	-	Aerodynamics of a Running Person
Dr Sudha Mokkaapati, Monash University	250	250	250	A flexible platform: Nanotechnology enabled compound semiconductor solar cells
Prof Ziqi Sun, Queensland University of Technology	250	250	250	Computational Design of Two-Dimensional Hybrids Based Nanomaterials for Sustainable Energy Application
Dr Peter Caccetta, CSIRO	249	249	-	Statistical Image Processing of Remotely Sensed Data
Yi Qin, CSIRO	244	244	-	Atmosphere remote sensing with new generation satellites
Dr Benjamin Schwessinger, The Australian National University	240	240	-	Identify, characterise, detect factors causing wheat disease epidemics
Dr Sinead Keaveney, University of Wollongong	237	116	-	Understanding nickel and palladium catalysed reaction mechanisms
		61	-	Development of a chemoselective C-F functionalisation procedure using palladium catalysis
		60	-	Development of a chemoselective C-F functionalisation procedure using palladium catalysis
Ms Shakila Tonni, Macquarie University	231	231	-	Adversarial Training-resistant Machine Learning models
Prof Emanuele Viterbo, Monash University	230	230	-	Performance Simulations for 5G Communication Systems
Prof Guan Yeoh, University of NSW	230	230	-	Multiphysics simulations for interdisciplinary engineering applications
Dr Haoyang Zhang, Queensland University of Technology	230	230	-	Developing More Accurate Object Detectors
Mr James Goodwin, Geoscience Australia	230	210	-	Geophysics
		20	-	External Geophysics Users

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Dr Lawrence Lee, University of NSW	230	230	-	Artificial synthesis of multi-subunit protein machines using synthetic DNA templates
Dr Marian Wong, University of Wollongong	228	228	-	Population genetic structure of fishes and crustaceans using SNPs
Prof Lexing Xie, The Australian National University	225	225	-	Promoting Fairness in Online Attention
Prof Shanqing Zhang, Griffith University	225	225	-	Design and Synthesis of Nanostructured materials for high performance batteries
Mr Md Palash Uddin, Deakin University	220	220	-	Federated Machine Learning
Dr Rippei Hayashi, The Australian National University	220	220	-	deciphering splicing code during development
Dr Vigleik Angelteit, The Australian National University	220	220	-	Ramsey number upper bounds
Prof Michael Ferry, University of NSW	218	218	-	Bulk metallic glasses
Dr Bin Lu, The Australian National University	215	215	-	The role of solar photovoltaics in a 100% renewable energy future
Prof Damien Batstone, University of Queensland	210	210	-	Simulation of anaerobic wastewater lagoons
Dr Matthew Moores, University of Wollongong	206	206	-	Sequential Monte Carlo algorithms for Bayesian inference in hyperspectral sensing
Dr Jonathan Tran, Royal Melbourne Institute of Technology	201	201	-	Modelling and Design of Boron Carbide Based Superhard Materials
Dr Felicity Rose, Other Australian Research Institute	200	200	-	Autism CRC - Production Data
Mr Hilbert Pelt, University of NSW	200	200	-	Windlab Limited
Dr Joel Pfeffer, University of Western Australia	200	200	-	Cosmological simulations of globular cluster formation in galaxy groups
Dr Juan Felipe Torres, The Australian National University	200	100	-	Mitigation of turbulent natural convective heat losses by an air curtain
		100	-	Transition from steady to chaotic flows in natural convection



Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Mr Nathaniel Bloomfield, University of Melbourne	200	200	-	Machine learning for biosecurity
Mr Nicholas Hannah, Other Australian Commercial Organisation	200	200	-	Double Precision Pty Ltd
Dr Vanessa Robins, The Australian National University	200	200	-	Persistent homology analysis of structural phase transitions
Dr Kiao Inthavong, Royal Melbourne Institute of Technology	195	195	-	Detailed analysis of fluid particle flows in the respiratory airway
Dr Shahram Karami, Monash University	195	195	-	Direct numerical simulation of particle-laden flows in a coaxial-jet
Dr Josh Milthorpe, The Australian National University	192	82	-	Dynamic and Distributed Task-Based Programming Model
		110	-	Chapel on accelerators
Dr Danh-Tai Hoang, The Australian National University	190	100	-	ANUMAS 2021 new project -- Hoang
		90	-	Deep transfer learning for cancer diagnosis
Prof Magdalena Plebanski, Royal Melbourne Institute of Technology	185	185	-	Bioinformatics for systems vaccinology, nanoparticle based vaccines and cancer biomarker research
Matt Paget, CSIRO	183	183	-	Data Cube Rangelands and Crop Mapping Applications
Dr David Cortie, University of Wollongong	181	181	-	Density functional theory for the next-generation of electronic materials
Dr Tianfang Wang, University of the Sunshine Coast	180	180	-	Bioinformatics, molecular dynamic simulation of biofunctional peptides and study of post-translational modifications of peptides using mass spectrometry
Prof Timothy Baldwin, University of Melbourne	180	180	-	Deep Language Understanding
Dr Michael Barlow, UNSW Canberra	178	178	-	Multi-Agent Swarm Modelling
Dr Vidhyasaharan Sethu, University of NSW	177	177	-	NN training - Speech
Dr Alice Johnstone, Royal Melbourne Institute of Technology	175	175	-	Analysis of coding-non-coding co-expression networks in plants

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Drew Parsons, Murdoch University</b>	175	175	175	Design of new biodegradable surfactants for rare earth metal recovery
<b>Dr Tu Le, Royal Melbourne Institute of Technology</b>	175	170	-	DFT-based machine learning models for efficient RAFT monomer selection
		5	-	Simulations of Fmoc functionalized peptides
<b>Dr Michael Lake, University of Technology, Sydney</b>	170	170	-	UTS Genomics Pilot/Test Project
<b>Dr Kai Yang, University of Sydney</b>	162	162	-	initial_CME
<b>A/Prof Peter Strazdins, The Australian National University</b>	160	120	-	Parallel Systems Course COMP4300
		40	-	Performance Analysis and Optimization of Large-scale Scientific Simulations
<b>Dr Sebastian Kurscheid, The Australian National University</b>	160	100	-	biodev queue: Critical Assessment of Massive Data Analysis (CAMDA 2019) - contest participation - "Investigating transcriptomic changes at the level of individual breast cancer tumours"
		50	-	Elucidating the organisational principals of genome architecture: the role of histone variants and architectural chromatin binding proteins
		10	-	Critical Assessment of Massive Data Analysis (CAMDA 2020) - contest participation - "Investigating transcriptomic changes at the level of individual breast cancer tumours"
<b>Prof Wei Gao, University of NSW</b>	159	159	-	Computational uncertainty mechanics and structural safety
<b>Dr Ali Ahrari, UNSW Canberra</b>	156	156	-	Evolutionary optimisation for dynamic and uncertain problems
<b>Dr Yuguo Yu, University of NSW</b>	155	155	-	Reliability assessments for sustainable artificial reef structures involving uncertainty
<b>Dr Nathan Bott, Royal Melbourne Institute of Technology</b>	150	150	-	Cardicola forsteri whole genome assembly
<b>Dr Qing Wang, The Australian National University</b>	150	150	-	Representation Learning for Large-Scale Networks
<b>Dr Robert Warren, Bureau of Meteorology</b>	150	150	-	Calibrated Thunder: Improving the Bureau's thunderstorm and severe weather forecasting service through novel post-processing and model guidance

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Rust Turakulov, The Australian National University</b>	150	150	-	Migrate
<b>Dr Difei Deng, UNSW Canberra</b>	149	149	-	Rainfall Study Following the Landfall of Tropical Cyclones over Australia
<b>Dr David Chalmers, Monash University</b>	140	140	-	The dynamics of drug behaviour in the human body
<b>Mr Rana Salal Ali, Macquarie University</b>	138	138	-	Privacy Law and Ethics in Machine Learning as a Service - PLE-MLaaS
<b>Dr Boris Beranger, University of NSW</b>	135	135	-	Spatial Extremes
<b>Prof Marina Kennerson, University of Sydney</b>	135	135	-	Investigating the role of structural variation (SV) for inherited peripheral neuropathies
<b>Dr Varghese Swamy, Monash University</b>	135	135	-	First-Principles Modeling of Functional Titanium Dioxides and Hybrid Metalorganic Perovskites
<b>Mr Hasindu Gamaarachchi, Garvan Institute of Medical Research</b>	130	70	-	SLOW5: New file format for enabling pupulation scale nanopore data analysis
		60	-	GPU acceleration of nanopore methylation calling
<b>Prof Antonio Tricoli, The Australian National University</b>	125	75	-	Molecular Dynamic investigation of gaseous interaction with a dual layer gas sensor based on metal oxide-metal-organic framework
		50	-	Quantum Chemical Simulation of Biosensors for the detection of Diabetes and pneumonia via breath analysis
<b>Prof Bogdan Dlugogorski, Charles Darwin University</b>	125	125	125	Insights from Molecular Dynamics Modelling of Fuel-Surfactant-Aqueous Solution Interfaces
<b>ChiPok Cheung, Royal Melbourne Institute of Technology</b>	125	125	-	Fundamental investigation of the radiant heat signature of fire whirls
<b>Mr Kyle Drover, The Australian National University</b>	125	125	-	Studying genetic contributors to embryonic development via automated phenotyping.
<b>Dr Hamutal Mazrier, University of Sydney</b>	124	124	-	Developmental Neonatal Anomalies
<b>Dr Samitha Herath, Monash University</b>	122	122	-	Spatio-temporal knowledge transfer for human-action recognition
<b>Dr Sergiy Shelyag, Deakin University</b>	122	122	-	Blue-Green-Red Lanchester-like model for three-component competitive relationships
<b>Dr Haifei Zhan, Queensland University of Technology</b>	120	120	-	Statistical Learning Framework for the Carbon Nanofiber Design

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Mr Marcus Tree, DHI	120	120	-	DHI-025
Dr Timothy Lynar, UNSW Canberra	118	118	-	Simulation for the epidemiological approach to cyber security
Dr Sam Mallinson, University of NSW	116	116	-	Simulating bubbles in inkjet printer systems
Dr Erica Smith, University of New England	115	115	-	Anomalous Polymerization Rates of Moderately Hydrophilic Monomers in Water
Dr Jarny Choi, University of Melbourne	115	80	-	Wells CSCS
		35	-	Stemformatics
Dr Ben Hui, University of NSW	114	114	-	Model the potential impact of different gonococcal vaccine formulations and different target populations
Dr Thomas Tao Yang, The Australian National University	111	61	-	Econometrics analysis by Monte Carlo experiments - for start-up scheme
		50	-	ANUMAS 2021 new project -- Yang
Prof Adam Lee, Royal Melbourne Institute of Technology	110	110	-	Gold catalysed selective aerobic oxidation
Dr Maria Di Biase, University of Melbourne	110	110	-	Normative models of brain structure and function across the adult lifespan
Mr Michael Kelly, Macquarie University	110	110	-	Ant Mimicry Project
Dr Seher Ata, University of NSW	110	110	-	Computational study of bubble coalescence of two capillary-held air bubbles using Volume of Fluid (VOF) method
Prof Vitali Sintchenko, University of Sydney	110	110	-	Metatranscriptomic sequencing to enable precision public health
Dr Xiaotao JIANG, University of NSW	110	110	-	T4 Project for pregnant and baby gut microbiome
Dr Kei-Wai Kevin Cheung, NSW Research Institutions	109	109	-	Studies on High-impact Weather, Climate Variability and Systems Dynamics
Dr Mark Baird, CSIRO	109	109	-	eReefs Marine Modelling GBR1
Dr Md Shahriar Hossan, University of Wollongong	109	109	-	Step towards abundant energy for future - Analysis of energy loss in superconducting cables for ITER fusion reactor
Prof Akshat Tanksale, Monash University	105	105	-	Molecular dynamics investigation of catalytic surface and solvent interactions
Dr Laura McKemmish, University of NSW	105	105	-	Preliminary Calculations on Molecular Spectroscopy

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Mr Luke Cayanan, Macquarie University</b>	105	105	-	Words Paint a Thousand Pictures -- Applying Topic Models to Central Bank Corpora
<b>Othmar Korn, University of Queensland</b>	105	105	-	Stemformatics Pilot Project
<b>Prof Suresh Bhargava, Royal Melbourne Institute of Technology</b>	105	105	-	An investigation on the interaction of heavy metal ions (As and Hg) with Surface Enhanced Raman Spectroscopy materials
<b>Dr Dan Andrews, The Australian National University</b>	103	54	-	Computational pangenomics to curb pesticide resistance in <i>Helicoverpa armigera</i>
		25	-	Multi-Omics data analysis for the Phenomics Translation Initiative
		24	-	Identification of mouse genetic variation to investigate causes of sepsis
<b>A/Prof Bruce Ashford, University of Wollongong</b>	102	102	-	Head & Neck Cancer Genomics
<b>Dr Raymond Cohen, CSIRO</b>	101	101	-	Port Phillip Bay Coastal Hazard Assessment Project 2020 - Inundation Assessment Component
<b>A/Prof Wenyi Yan, Monash University</b>	101	51	-	Design optimisation, processing simulation and mechanical property prediction for additive manufacturing
		50	-	Optimization and structural analysis for additive manufacturing and maintenance
<b>Mr Ardeshir Baktash, University of Queensland</b>	100	100	-	Computational Study of CO2 Reduction
<b>Prof Daniel Ortiz-Barrientos, University of Queensland</b>	100	100	-	Pilot Project for CoE Plant Success
<b>Dr Foivos Diakogiannis, University of Western Australia</b>	100	100	-	Semantic Segmentation of very high resolution aerial images with deep learning
<b>Dr Hyeuk Ryu, Geoscience Australia</b>	100	100	-	Development of earthquake fragility model using OpenSees
<b>Mr Johannes Pottas, The Australian National University</b>	100	100	-	Structural and thermal modelling of components in concentrating solar power systems
<b>Prof Malin Premaratne, Monash University</b>	100	100	-	Computational framework for an Ab-initio Computer Model of an ultrafast SPASER

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Maurits Evers, The Australian National University</b>	100	100	-	Characterising changes in ribosomal DNA chromatin during malignant transformation
<b>Dr Pablo Larraondo, The Australian National University</b>	100	100	-	ANUMAS 2021 new project -- Larraondo
<b>Dr Prabhakar Ranganathan, Monash University</b>	100	100	-	Biology needs rheology.
<b>Ms Stephanie Palmer, The Australian National University</b>	100	100	-	Genomic Data Management and Analysis
<b>Dr Thomas Andrillon, Monash University</b>	100	100	-	High throughput analyses of sleep and sleep disorders
<b>Dr Tina Yang, Geoscience Australia</b>	100	100	-	Location Index project
<b>Dr Wei-Chung Chang, Monash University</b>	100	100	-	Single Cu Atom Dynamic Catalysis for NO Direct Conversion in High Silica LTA
<b>Mr Nick Wilson, Royal Melbourne Institute of Technology</b>	98	98	-	Quantum Modelling of Photo-Electrode Materials
<b>Dr Hongjun Chen, The Australian National University</b>	95	95	-	Bifunctional Electrocatalyst W, Mo, and Co-doped Co <sub>3</sub> O <sub>4</sub> Fractal for High-Performance Electrochemical Water Splitting
<b>Dr Xuefei Liu, University of NSW</b>	94	94	-	Optimisation of membrane module and separation processes in water/wastewater treatment process using numerical simulation approaches
<b>Dr Krishnan Murugappan, The Australian National University</b>	93	93	-	Bismuth Vanadium photoelectrochemical water splitting
<b>Dr Michael Walker, University of NSW</b>	91	60	-	Modelling the impact of PrEP rollout on STI prevalence and incidence in NSW
		31	-	Modelling the impact of COVID-19 on sexual behaviour and PrEP-use, and the flow-on effects to STI incidence.
<b>Dr Giuseppe Barca, The Australian National University</b>	90	90	-	Development of quantum chemistry algorithms exploiting heterogeneous computing
<b>Dr Janice Fullerton, University of NSW</b>	89	89	-	Neuroscience Research Australia Neurogenetics
<b>Dr Xiuping Jia, UNSW Canberra</b>	86	86	-	Information extraction with deep learning from multi-sensors and multi-temporal remote sensing imagery

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr George Bacskay, University of Sydney</b>	83	83	-	Spectroscopic and Thermochemical Properties of Small Molecules
<b>Dr Moeava Tehei, University of Wollongong</b>	83	83	-	Investigations into the density of states in Lanthanum Manganite Nanoparticles
<b>Dr Juntao Wang, University of Western Sydney</b>	81	81	-	Metagenomic analysis of cotton soil microbiome
<b>Cassidy Gallagher, Macquarie University</b>	80	80	-	MRes: Simulation of Pulmonary Drugs
<b>Dr Nicholas Deutscher, University of Wollongong</b>	80	80	-	Trace gas retrievals from solar FTIR
<b>Dr Graham Ball, University of NSW</b>	76	76	-	DFT and Ab Initio Studies of Inorganic and Organometallic Complexes and Drug DNA complexes
<b>Dr Priyank Vijaya Kumar, University of NSW</b>	75	75	-	A predictive, ab initio design of plasmonic-metal/semiconductor catalysts
<b>Dr Stephen Gould, The Australian National University</b>	75	75	-	Deep Declarative Networks Student Projects
<b>Dr Xuan Liang, The Australian National University</b>	75	75	-	On the Subbagging Estimation for Massive Data
<b>Dr Yizhak Ben-Shabat, The Australian National University</b>	75	75	-	Assembly Action recognition
<b>Dr Francis Hui, The Australian National University</b>	73	73	-	Analysis of marginal versus conditional approaches to analyzing correlated data
<b>Prof Andrea Morello, University of NSW</b>	72	72	-	Full configuration interaction simulations of exchange coupled donors in silicon in an effective mass theory framework
<b>Dr Anton Lord, University of Queensland</b>	70	70	-	Development of diagnostic algorithms to identify Zika and Dengue in mosquitoes
<b>Prof Gleb Beliakov, Deakin University</b>	70	70	-	Modelling dependencies in decision sciences and optimisation
<b>Dr Hamish Clarke, University of Wollongong</b>	70	70	-	Modelling wildfire risk
<b>Dr Kamyar Kildashti, University of Western Sydney</b>	70	70	-	Numerical investigation on structural performance of permanent formwork system

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>A/Prof Nick Cox, The Australian National University</b>	70	70	-	Accurate calculation of spin-flip transitions of multi-center manganese complexes and cofactors
<b>Xuhui Fan, University of NSW</b>	70	70	-	Machine Learning project on Random Forest models
<b>Mr Cameron Jack, The Australian National University</b>	68	50	-	Phenomics Translational Initiative Pathfinder
		18	-	ABC client informatics development
<b>Mr Paul Ryan, CSIRO</b>	68	3	-	Housekeeping (and Testing) Purposes on the NCI Facilities
		65	-	General Share for User Code Development and Testing
<b>Dr Neda Aboutorab, University of NSW</b>	67	67	-	Network and Index Coding for Wireless Communications
<b>Mr Ahsan Habib, Deakin University</b>	66	66	-	Time series analysis using deep learning techniques
<b>Dr Steven Manos, University of Melbourne</b>	66	66	-	GAP - Genomics of Australian Plants
<b>A/Prof Ahmad Jabbarzadeh, University of Sydney</b>	65	65	-	Multiscale Simulations of Polymeric Systems
<b>Ms Constanza Manassero, Macquarie University</b>	65	65	-	A reduced approach for probabilistic inversions of 3D magnetotelluric data
<b>Researcher Michael Moore, Geoscience Australia</b>	65	65	-	Mitigation of Site Specific Errors from Geodetic Time Series
<b>Dr Melissa Skidmore, CSIRO</b>	64	64	-	Small molecules for OLEDs (organic light emitting diodes).
<b>Dr Timothee Bonnet, The Australian National University</b>	63	63	-	Quantitative genetics of evolutionary-demographic dynamics.
<b>Prof Curt Wentrup, University of Queensland</b>	61	61	-	Theoretical calculations on reactive molecules, intermediates and prebiotic chemistry pathways
<b>Dr Claudia Correa, The Australian National University</b>	60	60	-	Data management and storage for DNA PromethION sequencer -Storage
<b>Dr Courtney Ennis, La Trobe University</b>	60	60	-	DFT and ab initio calculations of nitrile clusters and surfaces.
<b>Prof Duong Do, University of Queensland</b>	60	60	-	Novel Characterization of Porous Structure and Surface Chemistry of Carbon by means of Monte Carlo computer simulation
<b>Dr Jed Burns, University of Queensland</b>	60	60	-	Investigation of pathway bifurcations in organic reactions



Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Dr Mona Esmaeili Mahani, The Australian National University	60	50	-	A consensus approach to Seasonal Climate Forecasting (SCF)
		10	-	Global Frost Paradox: novel methods to examine extreme minimum temperature variability and trends
Prof Murray Batchelor, The Australian National University	60	60	-	DMRG Calculations on Zn-Symmetric and Non-Hermitian Spin Chains
Dr Salman Durrani, The Australian National University	60	60	-	Machine Learning in wireless communication networks
Dr Susan Wei, University of Melbourne	60	60	-	Augmenting Batch Reinforcement Learning with a Virtual World
Dr Hualin Zhan, The Australian National University	58	58	-	Ab initio study of defects in perovskite solar cell
Dr Binesh Puthen Veettil, Macquarie University	57	57	-	Microwave processing of semiconductor materials
Dr Christina Adler, University of Sydney	55	55	-	Oral microbiome and tooth decay in children
Mr Hassaan Saadat, University of NSW	55	55	-	Mixed-Precision Optimization for Energy Efficient Deep Learning Training using Approximation
Dr Sean Hodgman, The Australian National University	55	55	-	Helium Atomic Feshbach Resonances
Dr Daniel Winter, University of NSW	53	53	-	In silico design of PTM-mediated protein switches
Dr Ashish Sharma, University of NSW	52	52	-	Dynamical downscaling hydro-climatic simulations for water resources planning and management in a changing climate
Dr Asaph Widmer-Cooper, University of Sydney	51	51	-	Interactions and self-assembly of colloidal nanoparticles: Establishing design rules for creating new nano-structured materials
Dr Alexander Mikheyev, The Australian National University	50	50	-	Evolution of asexuality in stick insects
Baihua Fu, The Australian National University	50	50	-	Uncertainty Quantification for the GBR Catchment Water Quality Model
Dr Citsabehsan Devendran, Monash University	50	50	-	Piezoelectric-Acoustic Interactions within Acoustofluidic systems

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Mrs Fatemehsadat Saleh, The Australian National University	50	50	-	Video Action Anticipation
Jana Sperschneider, The Australian National University	50	50	-	Uncovering how rust fungi cause devastating plant diseases
Dr Janet Gardner, The Australian National University	50	50	-	Avian morphometrics and climate change
Ms Jin Teng, CSIRO	50	50	-	Victorian Water and Climate Initiative (VicWaCI) Hydroclimate Research (CSIRO)
Prof Mark Knackstedt, The Australian National University	50	50	-	Training Centre for Multiscale 3D Imaging, Modelling and Manufacturing
Emeritus Prof Michael Hutchinson, The Australian National University	50	50	-	Analysis and High Resolution Gridding of National Surface Climate Data
Dr Mitchell Black, Bureau of Meteorology	50	50	-	CaRSA Data Analysis
Dr Oleg Titov, Geoscience Australia	50	50	-	VLBI Correlator
Prof Paul Cally, Monash University	50	50	-	Numerical modelling of MHD and partial ionization effects in the solar atmosphere
Mr Ray Seikel, Swinburne University of Technology	50	50	-	TAO development
Dr Siva Karuturi, The Australian National University	50	50	-	Identification of Reaction Pathways at Solid-Liquid Interfaces Towards Efficient Energy Conversion
Dr Thalaiyasingam Ajanthan, The Australian National University	50	50	-	Learning Lightweight Neural Networks: Pruning and Quantization
Prof Thushara Abhayapala, The Australian National University	50	50	-	Computer Audition for Fourth Industry Revolution
Mr Zelio Fusco, The Australian National University	50	50	-	Plasmon dynamics at Atomistic scale
Dr Changlong Wang, Monash University	48	48	-	A geospatial model to assess regional economic-viability for mineral resource development and hydrogen production
Dr Martin Peeks, University of NSW	48	48	-	Design and characterisation of advanced organic materials

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Ms Farzaneh Boroumand, Macquarie University</b>	47	47	-	Tilted nonparametric regression
<b>Dr Erdinc Saygin, CSIRO</b>	46	46	-	Seismic Imaging of Earth-ST
<b>Dr Alban de Vaucorbeil, Deakin University</b>	45	45	-	Modelling the Additive Friction Stir Deposition process with the Material Point Method
<b>Dr Ashwin Unnikrishnan, University of NSW</b>	45	45	-	RNA Splicing analyses in malignant and healthy cells
<b>Dr Eleni Daskalaki, The Australian National University</b>	45	45	-	Leveraging the information from wearable devices for medical decisions
<b>Mr Joshua Soderholm, Bureau of Meteorology</b>	45	45	-	Radar Data Publication
<b>Dr Simon McClusky, The Australian National University</b>	44	44	-	Proposing a Deep Learning Approach for Extracting Earthquake Source Parameters from InSAR Observations
<b>Dr Tim McVicar, CSIRO</b>	44	44	-	Developing an Australian Landsat-MODIS Blending Infrastructure (ALMBI)
<b>Prof Robert Mahony, The Australian National University</b>	43	43	-	Innovation neural network research
<b>Dr Torsten Thomas, University of NSW</b>	43	43	-	Assembly of next-generation sequencing data for microbial metagenomes
<b>Dr Brendan Burns, University of NSW</b>	42	42	-	Shark Bay Metagenomics and Metatranscriptomics
<b>A/Prof Andriy Olenko, La Trobe University</b>	41	41	-	CMB and Earth data analysis
<b>Prof Richard Yang, University of Western Sydney</b>	41	41	-	Multiscale modelling of Advanced Engineering Materials and Structures
<b>Mr Simon Luo, University of Sydney</b>	41	41	-	ARC Training Centre in Data Analytics for Resources and Environments (DARE)
<b>Asim Adnan Eijaz, Macquarie University</b>	40	40	-	Spoofing Detection in Automatic speaker verification system (ASV)
<b>Dr Charles Foster, University of Sydney</b>	40	40	-	Mechanisms of placental nutrient transport using transcriptomics
<b>Dr Dimitri Lafleur, CSIRO</b>	40	40	-	Investigating Carbon Cycling in the Australian and Southern Ocean Region
<b>Dr Hanieh Poostchi, University of Sydney</b>	40	40	-	Slippery Slope Project
<b>Dr He Zhao, Monash University</b>	40	40	-	Enhance Robustness of Deep Learning on Big Data

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Dr Kenneth Chan, Other Australian Commercial Organisation</b>	40	40	-	AGRF Pilot Project
<b>Mr Paul Hendy, Australian Commercial Organisation</b>	40	40	-	Conflux Technology Pilot Project
<b>Dr Sara Vahaji, Deakin University</b>	40	40	-	nasal medicine delivery
<b>Dr Anastasios Polyzos, CSIRO</b>	39	39	-	Calculation of Reaction Co-ordinate for New Catalytic C-H Activation
<b>Dr Julian Berengut, University of NSW</b>	39	39	-	Electronic spectra of superheavy elements and highly-charged ions
<b>Prof Mark Johnson, Macquarie University</b>	39	39	-	Deep Learning for Natural Language Processing
<b>Dr Edward King, CSIRO</b>	36	36	-	National Remote Sensing Processing Facility
<b>Prof Margaret Lech, Royal Melbourne Institute of Technology</b>	35	5	-	Learning, competing, and decision-making machines
		30	-	Deep Emotional Intelligence
<b>Prof David Williams, The Australian National University</b>	33	33	-	Rotaxane Polymers
<b>Dr Louise Lu, The Australian National University</b>	33	33	-	Media coverage: evidence from the CEO-reporter relationship
<b>Dr Robert Luke, Macquarie University</b>	33	33	-	Binaural Listening
<b>Dr Zhiguang Qiu, University of Western Sydney</b>	32	32	-	Increasing global crop productivities by harnessing microbes in agricultural practices
<b>Dr Roger Bodman, CSIRO</b>	31	31	-	ACCSP and PACCSP
<b>Mr Aaron Chuah, The Australian National University</b>	30	30	-	Biodev GIL
<b>Prof Bofu Yu, Griffith University</b>	30	30	-	Blending rainfall nowcasts and numerical weather prediction
<b>Dr Chris Medcraft, University of NSW</b>	30	30	-	Quantum chemical calculations to support microwave spectroscopy
<b>Dr DukYong Choi, The Australian National University</b>	30	30	-	Simulation of Photonic Nanostructures
<b>Dr Feng Li, University of Western Sydney</b>	30	30	-	Metal Directed Assembly of Discrete Supramolecular Systems
<b>Dr Jorg Schluter, Deakin University</b>	30	30	-	Computational Fluid Dynamics

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
<b>Natasha Fernandes, Macquarie University</b>	30	30	-	Differentially Private Hashing Methods for Nearest Neighbour Search
<b>Dr Alireza Abbasi, University of NSW</b>	29	29	-	Dynamics of Science
<b>Dr Daniel Duke, Monash University</b>	28	28	-	HRMFoam scaling studies on Raijin
<b>Dr Daniel Preston, The Australian National University</b>	28	28	-	Self-assembled metallo-supramolecular systems
<b>Dr Trang Tran, Deakin University</b>	28	28	-	High-speed railway, the environment, and development
<b>Prof Andrew Eberhard, Royal Melbourne Institute of Technology</b>	26	26	-	Decomposition and Duality: New Approaches to Integer and Stochastic Integer Programming
<b>Dr Dario Strbenac, University of Sydney</b>	26	26	-	Comprehensive Genomic Profiling of Head and Neck Malignancies: In Search of Prevention and Treatment
<b>Dr Charles Gretton, The Australian National University</b>	25	25	-	Startup
<b>Mr Erfan Keshavarzian, University of Western Sydney</b>	25	25	-	CFD simulation of Pollutant dispersion
<b>Dr Hua Ying, The Australian National University</b>	25	25	-	Coral genomics
<b>Dr Marco Ernst, The Australian National University</b>	25	25	-	Ray tracing for bifacial photovoltaic system simulation
<b>Dr Mehrisadat Makki Alamdari, University of NSW</b>	25	25	-	Design and Optimization of Piezoelectric Energy Harvester for Bridge Health Monitoring
<b>Mr Sean Crosby, University of Melbourne</b>	25	25	-	Unimelb HPC testing
<b>Mr Wenju Cai, CSIRO</b>	24	24	-	Climate Change Impact on Southeast Queensland Water Supply
<b>Dr Arathi Arakala, Royal Melbourne Institute of Technology</b>	22	22	-	Fast matching and privacy evaluation in biometric spatial graphs
<b>Mr Christopher Russell, CSIRO</b>	22	22	-	Simulation of Wind and Solar Energy Sources
<b>Dr Dominic Glover, University of NSW</b>	21	21	-	UNSW iGEM team
<b>Dr Jaime Gongora, University of Sydney</b>	21	21	-	Population genetics of Platypus using whole genome methods
<b>Dr Stuart Prescott, University of NSW</b>	21	21	-	Complex fluids simulation and characterisation

Lead CI, Institution	Total Allocation in kSU	Project Allocation in kSU	NCMAS/ <u>ALCG</u> Allocation in kSU	Project Title
Prof Andy Pitman, University of NSW	20	20	-	Land Surface Science
Dr Craig Harrison, Geoscience Australia	20	20	-	Least-squares adjustment of the national geodetic network
Prof Jean Yang, University of Sydney	20	20	-	Bringing Head and Neck Cancer to the 21st Century
Dr Jessica Holien, Royal Melbourne Institute of Technology	20	20	-	Protein-Protein Interface Prediction for Mucinous Ovarian Carcinoma
Dr Kausala Mylvaganam, Macquarie University	20	15	-	Computational detection of Adenosine via Surface-Enhanced Raman Spectra
		5	-	Computational investigation of optical and photochemical properties of (i) biologically important systems and (ii) organo metallic systems.
Dr Liqi Han, University of Queensland	20	20	-	Parallel QuasiMC - a High Performance Light Simulator for Virtual Agriculture
Dr Mark Ziemann, Deakin University	20	20	-	Digital Expression Explorer 2: a growing resource of uniformly processed RNA sequencing data
Dr Megan McDonald, The Australian National University	20	20	-	GWAS of Zymoseptoria tritici
Nicholas Heath, Macquarie University	20	20	-	Optimisation of Numerically Modelling Rotating Wheel Geometries in CFD
Dr Shankar Kalyanasundaram, The Australian National University	20	20	-	Finite Element Modelling of Engineering Systems
Dr Simon Campbell, Monash University	20	20	-	Convective-Reactive Nuclear Burning and Turbulence Boundaries in Stars
Prof Thomas Haselhorst, Griffith University	20	20	-	Structural Biology of Glycointeractions and High-Throughput Glycomics Tools
Dr Xin Yu, University of Technology, Sydney	20	20	-	Self-supervised 6DoF object pose estimation
Dr Yun Shi, Griffith University	20	20	-	Molecular dynamics simulations of neuraminidase-inhibitor interactions
Prof Zhigang Chen, University of Queensland	20	20	-	High-performance Thermoelectric Materials Assisted with High-throughput Quantum Chemistry Calculations
Various Researchers	1,053	1,053	-	170 Projects – Small Allocations Not Specified
<b>Total Allocations</b>	<b>1,920,606</b>	<b>1,920,606</b>	<b>475,706</b>	