2015 Resource Allocation Competition Awards

Institution	Researcher	Project title	Total allocation core years	Total allocation GPU years	Total allocation storage (TB)
Acadia University	Richard Karsten	Site Characterization for Tidal Energy in Nova Scotia	172.8	0	0
Baycrest Centre for Geriatric Care	Tomáš Paus	Toronto Trans-generational Brain & Body Database TTBBD	57.6	0	45
Brock University	Stuart Rothstein	A quantum Monte Carlo study of the charge carriers in conducting organic polymers	223	0	0
Brock University	Ping Liang	Systematic characterization of genome structural variants via large-scale analyses of personal genome data	92	0	0
Brock University	Thad Harroun	Coarse-grained large-scale simulation of a lipopolysaccharide membrane	40	5	0
Carleton University	Rowan Thomson	Advancing computational radiotherapy physics	161	0	0
Centre for Addiction & Mental Health	Mallar Chakravarty	Imaging-genetics using neuroanatomical phenotypes for neuropsychiatric disoders	360	0	50
CHU Ste-Justine	Jacques Michaud	Centre de génomique pédiatrique du CHU Sainte-Justine	0	0	28
Concordia University	Marius Paraschivoiu	Aerodynamic Simulations of Vertical Axis Wind Turbines	180	0	0
Concordia University	Ali Dolatabadi	Numerical Simulation of Multiphase Flows	395	0	5

Concordia University	Amin Hammad	Performance Analysis of Simulation-based Multi-objective Optimization of Construction Processes Using High Performance Computing	40	0	1
Concordia University	Guillaume Lamoureux	Computer modeling of metals in proteins	327	0	3
Concordia University	Gilles Peslherbe	Applications of Quantum Chemistry and Molecular Dynamics Simulations to Materials, Solvation and Biophysics	454	0	10
Dalhousie University	Christopher Beaumont	Modelling the three-dimensional dynamics of geologic systems: deformation of sub-sea salt and the exhumation of rocks from deep within the earth.	198	0	0
Dalhousie University	Katja Fennel	Biogeochemical simulations of coastal marine environments	136	0	16
Dalhousie University	Randall Martin	Computational Resources to Interpret Satellite Observations of Atmospheric Composition for Air Quality and Climate Applications	720	0	301
Dalhousie University	Julie LaRoche	Assessing the metabolic diversity of marine microbiomes through a targeted metagenomics/metatranscriptomic approach	175	0	8

École Polytechnique	Alain Rochefort	Propriétés électroniques et structurales de matériaux électroactifs	333	0	0
École Polytechnique	Remo Masut	Étude de l'impact de l'incorporation de terres rares sur les performances piézoélectriques d'un alliage à base de nitrure d'aluminium	0	0	8
École Polytechnique	François Bertrand	Modélisation des écoulements de fluides et de solides pour des procédés du génie chimique	318	0	0
École Polytechnique	Eric Laurendeau	Unsteady Aerodynamics of Full-Aircraft Configurations with Control Surfaces	166	0	0
Hospital for Sick Children	Michael Wilson	Multi-species analysis of transcription factor binding sites	0.9	0	4
Hospital for Sick Children	Jason Lerch	Using Medical Imaging to Understand the Relationship Between Genetics, Development and Disease	0	0	21
Hospital for Sick Children	John Rubinstein	Electron cryomicroscopy of macromolecular machines	284	0	0
Hospital for Sick Children	John Parkinson	Functional Interrogation of Microbiomes in Health and Disease	582	0	0
Hospital for Sick Children	Régis Pomès	Large-Scale Computational Studies of Biomolecular Structure and Function	8000	5	505
Institut National de la Recherche Scientifique	Steve MacLean	Simulations of extreme laser light source interaction with matter	1350	0	60
Laurentian University	Chris Jillings	DEAP-3600 Analysis and Simulation	187	0	420

Laurentian University	Ralf Meyer	Molecular-Dynamics Simulations of Materials on Intel Xeon Phi Processors	0	7	3
McGill University	Eric Galbraith	Quantifying the global marine ecosystem	301.5	0	0
McGill University	Bruno Tremblay	Vertical ocean heat and nutrient flux in the Arctic Ocean with application to Arctic climate change	84	0	10
McGill University	Srikar Vengallatore	Design of Resonant Nanomachines for Applications in the Classical and Quantum Regimes	139.5	0	0
McGill University	Daniel Kirshbaum	Large-eddy simulation of topographically forced convective clouds	49.5	0	3
McGill University	Peter Bartello	Atmospheric and oceanic mixing by rotating stratified turbulence	216	0	0
McGill University	Gil Holder	South Pole Telescope Data Analysis and Simulations	103.5	0	0
McGill University	Siva Nadarajah	Unstructured High-Order Schemes for LES and Adjoint-Based Optimization of Multistage Turbomachinery	270	0	0
McGill University	Sylvain Baillet	The role of nested oscillations in shaping long-range coupling in the human brain.	126	0	0
McGill University	Yi Huang	High performance computing and analysis for the Earth radiation energy budget research	55	0	180

McGill University	Celia Greenwood	Development of statistical analysis methods for genetic and genomic data	38	0	0
McGill University	David Straub	Effects of near-inertial motion on larger scale ocean circulation	63	0	60
McGill University	Kirk Bevan	Computational Design of Nanoelectronic Materials	108	0	3
McGill University	Jacek Majewski	Next Generation Sequencing Applications in Human Health	150	0	300
McGill University	Tomi Pastinen	High-throughput assessment of genetic and epigenetic population variation	36	0	190
McGill University	Nicolas Moitessier	Development of computational methods for drug discovery	58	0	0
McGill University	Erwin Schurr	Host genetics of mycobacterial disease	0	0	17
McGill University	Sangyong Jeon	Hard and Soft Probes of Quark Gluon Plasma in Relativistic Heavy Ion Collisions	1160	0	260
McGill University	Guillaume Bourque	Large-scale processing and sharing of genomic and genetic data	942	0	620
McGill University	Hong Guo	Quantum transport modeling of nanoelectronic devices	2030	0	0
McGill University	Ioannis Ragoussis	Optimization of single cell exome and genome sequencing technology	218	0	108
McGill University	Nada Jabado	Discovery of genetic alterations in pediatric brain tumors	0	0	85

McGill University	Claudia L. Kleinman	Computational approaches for cancer genomics	0	0	50
McGill University	Victoria Kaspi	Large-Scale Searches for Radio Pulsars, RRATs and Fast Radio Bursts	324	0	10
McGill University	Constantin Polychronakos	A genome-wide search for exonic polymorphisms that affect translational efficiency	0	0	4
McGill University	Man Kong Yau	Improving the forecasting of precipitation	135	0	60
McGill University	Timothy Merlis	Atmospheric circulations and climate change	45	0	9
McGill University	Nikolas Provatas	Computational Modeling of Microstructure Evolution in Non-Equilibrium Processes in Metal Alloys	527	0	24
McGill University	Jaime Palter	Ocean circulation changes, radiative feedbacks and transient climate change	47	0	1
McGill University	Jun Song	Nanoscale Mechanics and Physics of Defects in Materials	2071	0	8
McGill University	Gregory Mark Lathrop	Data analysis and interpretation for large-scale genomics projects	269	0	290
McGill University	Yajing Liu	Earthquake rupture dynamics models in tectonic and glaciated environments	55	0	18
McGill University	Jeffrey Bergthorson	High Fidelity Simulations of Pollutants Formation in Turbulent Reacting Flows For Model Development	204	0	0
McGill University	Alain Dagher	Neuro-behavioral model of weight gain	2	0	0

McGill University	Luc Mongeau	Aero-Acoustics & Bio-Engineering Simulations Using Advanced Numerical Methods and High Performance Computing	148	20	0
McGill University	Wagdi Habashi	Multi-physics Analysis and Design of Aerospace Systems	779	0	0
McGill University	Shirin Enger	Monte Carlo track structure applications in microdosimetry and radiation response	127	0	0
McMaster University	Ralph Pudritz	Simulating the formation of star clusters in galaxies	175	0	0
McMaster University	Paul Ayers	Tools for Modelling Molecular Structures and Reactivity	310.5	0	0
McMaster University	Hugh Couchman	MUGS2	360	0	0
McMaster University	James Wadsley	Molecular Cloud Formation in Galactic Discs	576	0	0
McMaster University	Alison Sills	Sizes of Globular Clusters in a Variety of Galactic Tidal Fields	59	0	2
McMaster University	Giuseppe Melacini	Molecular Dynamics Simulation of Biomolecular Complexes Controlling Eukaryotic cAMP-Signaling	163	0	0
McMaster University	Erik Sorensen	Computational Quantum Materials	1100	0	0
McMaster University	Stephen Tullis	Wind turbine aerodynamics	44	0	10
McMaster University	Jeffrey Hoyt	Molecular Dynamics Simulations of Interfaces and Phase Transformations in Metals and Alloys	83	0	0
Memorial University of Newfoundland	Erika Merschrod	Optical response of sensor films	72	0	0

Memorial University of Newfoundland	Jahrul Alam	The validation of a new wavelet based multiscale modelling approach for atmospheric turbulence	140	0	0
Memorial University of Newfoundland	Travis Fridgen	Structures, Energetics, and Reactions of Gaseous Self Assembled Ionic Complexes such as Guanine Quartets and Quadruplexes Stabilized by Metal Cations	43	0	0
Memorial University of Newfoundland	Valerie Booth	Structural Models for Lung Surfactant Protein B	218	0	1
Memorial University of Newfoundland	Christopher Rowley	Simulation and Method Development for Biophysical Chemistry	1200	0	0
Memorial University of Newfoundland	Paris Georghiou	Computational studies on calixarene host-guest bindings.	12	0	0
Memorial University of Newfoundland	Entcho Demirov	Model simulations of decadal and mutlidecadal climate dynamics of the Subpolar North Atlantic Ocean	73	0	3
Mount Sinai Hospital	Laurence Pelletier	Quantitative Genomics, Proteomics and Cell Biology.	0	0	0
Nova Scotia Agricultural College	Hossain Farid	Early immune response of mink to infection by the Aleutian mink disease virus	14	0	0
Ouranos	Anne Frigon	Un ensemble de simulations climatiques régionales à très haute résolution pour le Québec et pour la communauté scientifique internationale	345	0	75

Perimeter Institute for Theoretical Physics	Luis Lehner	Modeling General Relativistic Astrophysics: Neutron Stars and Black Holes	409	0	15
Queen's University	Art McDonald	DEAP and other SNOLAB Particle Astrophysics	0	0	0
Queen's University	Tucker Carrington	Refining a potential surface for methane and computing a rovibrational spectrum of CH5+	27	0	0
Queen's University	Nicholas Mosey	Simulations of Molecules and Materials Under High Stresses	362	0	0
Queen's University	Tomas Babak	Characterizing regulatory drivers of cancer and major depressive disorder	35	0	10
Queen's University	Ugo Piomelli	Numerical simulations of turbulent flows	645	0	120
Queen's University	Peter Davies	Molecular dynamics studies of protein-water interactions and protein-inhibitor complexes	11	0	0
Royal Military College of Canada	Xiaohua Wu	Very-large-scale, data-intensive direct numerical simulation of aeronautical fluid mechanics problems	407	0	100
Ryerson University	Seth Dworkin	Parallel Simulation and Model Development for Combustion Generated Soot Particle Emissions	3000	0	0
Saint Mary's University	Kai Ylijoki	Electronic Structure and Reactivity Studies of Novel Metalloclusters	5	0	0
Simon Fraser University	George Kirczenow	Theoretical Studies of Nanoscale Systems	270	0	0
Simon Fraser University	Peter Borwein	IRMACS	150	0	0

Simon Fraser University	Michael Eikerling	Computational Modeling of Electrochemical Materials for Energy Conversion and Storage	134.4	0	0
Simon Fraser University	Anoop Sarkar	Machine Learning for Statistical Machine Translation from Large Scale Data	12	0	30
Simon Fraser University	Noham Weinberg	Theoretical studies of kinetic effects of high pressure	109	0	15
Simon Fraser University	Mirza Faisal Beg	Early Detection of Alzheimer's and discrimination from other dementias using high dimensional morphometric features	336	0	350
Simon Fraser University	Fiona Brinkman	Public health and environmental monitoring genomics and metagenomics	164	0	60
Simon Fraser University	Glen Tibbits	Molecular dynamics simulation of cardiac troponin	355	0	0
Université de Montréal	Rémy Sauvé	Identification d'agents potentiateurs des canaux ioniques CFTR et KCa3.1 par criblage virtuel de banques de petites molécules	63	0	0
Université de Montréal	Normand Mousseau	Simulations de systèmes complexes : des matériaux aux protéines amyloïdes	639	0	0
Université de Montréal	Yoshua Bengio	Deep Learning Algorithms	200	10	26

Université de Montréal	Paul Charbonneau	Simulation magnétohydrodynamique de la convection solaire	648	0	3
Université de Montréal	Laurent Lewis	Physical properties of advanced materials - from the atom to large-scale structures	151.2	0	0
Université de Montréal	Michel Côté	Calculs de structure électronique pour l'étude de matériaux quantiques	607.5	0	0
Université de Montréal	Pierre Lafaye de Micheaux	Statistical tools for imaging-genetics	72	0	0
Université de Montréal	Luis Barreiro	Mapping eQTLs that affect susceptibility to bacterial infections.	45	0	20
Université de Montréal	Philip Awadalla	Medical and Population Genomics	294	0	40
Université de Montréal	Patrick Cossette	Personalized medecine in Epilepsy	0	0	45
Université de Montréal	Guy Rouleau	High Throughput Sequencing	253	0	90
Université de Montréal	Daniel Sinnett	Genetic and genomic determinants of childhood leukemia	57	0	50
Université de Montréal	Guillaume Lettre	Next-generation DNA sequencing in cardiovascular diseases	0	0	120
Université de Montréal	Etienne Yergeau	Plant microbiome engineering	40	0	34
Université de Montréal	Joelle Pelletier	Simulating the dynamics of engineered beta-lactamase enzymes: expanding the NMR-accessible timescale	240	0	5
Université de Montréal	Timothée Poisot	Understanding the spatial dynamics of species interactions	0	0	0

Université de Montréal	Nazzareno D'Avanzo	Computational Studies of Ion Channels in Lipid Bilayers and Detergent Micelles	600	0	65
Université de Montréal	Jacques Drouin	Genetic and epigenetic mechanisms of gene regulation	0	0	5
Université de Montréal	Radu Iftimie	Molecular mechanism of acid-base reactions in chemistry and biochemistry	477	0	0
Université de Montréal	Marie-Pierre Dubé	Pharmacogenomics Research	145	0	0
Université de Montréal	Hervé Philippe	Phylogénomique des Eucaryotes et usage des codons chez les virus de Mammifères	1199	0	1
Université de Sherbrooke	Pierre Harvey	Polymers and molecular assemblies for photonic applications	209	0	0
Université de Sherbrooke	David Sénéchal	Quantum cluster methodes for strongly correlated solids	100	0	0
Université de Sherbrooke	Martin Aubé	Modélisation de la contribution et sensibilité à la pollution lumineuse pour plusieurs sites internationaux	90	0	0
Université de Sherbrooke	Alexandre Morin	Simulations Monte Carlo	130.5	0	1
Université de Sherbrooke	Elijah Van Houten	Elastography: Imaging Elastic Properties in Soft Tissue	72	0	0
Université de Sherbrooke	Noureddine Atalla	Modélisation de la réponse vibroacoustique et aéroacoustique de structures complexes multimatériaux	100	0	5

Université de Sherbrooke	Hugo Larochelle	Réseaux de neurones profonds pour données structurées	375	20	0
Université de Sherbrooke	André-Marie Tremblay	High temperature superconductors and other materials with strong electronic correlations	1428	0	3
Université de Sherbrooke	Claude Legault	Computational Organic Chemistry : Understanding the origin of selectivity	33	0	0
Université de Sherbrooke	Pierre Proulx	Mathematical modeling of multiphase reactors	0	0	1
Université de Sherbrooke	Claude Bourbonnais	Application du groupe de renormalisation aux propriétés électroniques et structurales des conducteurs organiques	30	0	0
Université de Sherbrooke	Pierre-Étienne Jacques	Genomics and Genetics data analysis	105	0	0
Université de Sherbrooke	Andre Dieter Bandrauk	Attosecond Science and Laser Contorl of Quantum Electronics	5280	0	100
Université de Sherbrooke	Armand Soldera	Regard moléculaire des phénomà¨nes mésoscopiques au sein de la matià¨re molle	324	0	11
Université de Sherbrooke	Pierre Lavigne	Étude du paysage conformationnel et énergétique du récepteur AT1 et de la liaison de ligands biaisés	0	0	0
Université de Sherbrooke	Maxime Descoteaux	Modern diffusion MRI pipelines evaluation	0	0	0
Université de Sherbrooke	Stéphane Moreau	Direct noise predictions for transport applications	2063	0	60
Université du Québec à Montréal	Laxmi Sushama	Regional climate modelling and process studies	878	0	320

Université du Québec à Montréal	Anne de Vernal	Arctic and subarctic environments under "warm" climate conditions	38	0	5
Université du Québec à Montréal	Alessandro Forte	Numerical Modelling of Thermal Convection in the Earth's Mantle	483	0	0
Université du Québec à Montréal	Pierre Gauthier	Application of data assimilation to model validation	81	0	45
Université Laval	Christian Gagné	Ingénierie de systèmes intelligents distribués	67.5	0	0
Université Laval	Michel Piché	Accélération d'électrons à l'aide d'impulsions laser ultrabrèves et fortement focalisées à polarisation radiale	115	0	0
Université Laval	Luc Beaulieu	Effet des hétérogénéités dans les calculs de dose en radiothérapie, en imagerie et en thérapie interne	189	0	0
Université Laval	Faïçal Larachi	Collector's selection and optimization to account for ores mineralogy in flotation processes	54	0	0
Université Laval	Guy Dumas	CFD for green energy production systems	274.5	0	22
Université Laval	Hugo Martel	Formation and evolution of galaxies.	126	0	0
Université Laval	Marcel Babin	Estimation of particulate organic carbon int he Mackenzie River plume using MODIS: time series analysis	30	0	10
Université Laval	Arnaud Droit	Compuational biology ressources for Early Detection of Breast Cancer	63	0	36

Université Laval	Claire Deschênes	Numerical and experimental investigations of low-head turbines hydrodynamic for generation of greener hydro-electricity	319.5	0	0
Université Laval	André Fortin	Chaire de calcul scientifique de haute performance	50	0	0
Université Laval	Jacques Corbeil	metagenomic and drug design using machine learning approaches	504	0	85
Université Laval	Patrick Lagüe	Computational studies of the mechanism of action of different proteins playing key roles biological processes	212	0	0
Université Laval	Louis Bernatchez	Genome assembly and annotation of three fish species	43	0	0
Université Laval	Ermanno Borra	Recherche de lentilles gravitationnelles par l'autocorrélation d'intensité	0	0	20
Université Laval	David Ardia	Bayesian Prediction of Market Risk Using Regime-Switch Garch Models	26	0	0
University Health Network	Frances Skinner	Neuron and Network Models in Hippocampus	350.1	0	4.5
University of Alberta	Lesley Harrington	Micro-CT of archaeological human dentitions from Later Stone Age sites in South Africa	0	0	15
University of Alberta	Gane Ka-Shu Wong	1000 Plants and "Viral Discovery"	67.5	0	1
University of Alberta	Richard Marchand	Spacecraft - environment modelling	315	0	7
University of Alberta	Duane Szafron	Computer Poker Research 2014	540	0	21

University of Alberta	Martyn Unsworth	3-D imaging of Earth structure using magnetotellurics	86.4	0	0
University of Alberta	Andrew Bush	Regional climate modeling with applications to alpine glaciers in the Canadian Cordillera, the Andes, and the Himalaya	0	0	0
University of Alberta	Moritz Heimpel	Modelling planetary fluid flow and magnetic field generation	288	0	16
University of Alberta	Alex Brown	Designing new biofluorophores and materials	216	0	0
University of Alberta	Michael Houghton	Design of Highly Specific and Effective Viral Polymerase Inhibitors by Screening for Off-Target Interactions with Human Polymerases	245.7	0	2
University of Alberta	Gino DiLabio	New Density-Functional Theory Based Methods for the Simulation of Nanosystems	200	0	0
University of Alberta	Mathieu Dumberry	Quasi-Geostrophic models of convection in planetary interiors	72	0	0
University of Alberta	Satyapal Rathee	Radiation Dose Calculation in inhomogenous media with applied magnetic field	43.2	0	0
University of Alberta	Darren Grant	IceCube data analysis and detector upgrade developments	632	70	83
University of Alberta	Natalia Ivanova	Violent stellar interactions.	0	38	0

University of Alberta	Yunjie Xu	Spectral Signatures of Chirality and Chirality Recognition	156	0	0
University of Alberta	Yutaka Yasui	GWAS Allele-Specific Gene-Level Logic Regression Analysis	31	0	0
University of Alberta	Martin Mueller	Advancing Parallel Depth-first Monte Carlo Tree Search and its Applications	68	0	0
University of Alberta	Paul Stothard	Using whole genome sequencing to develop more effective tools for cattle breeding	3	0	55
University of Alberta	Tian Tang	Molecular Modeling of Materials	131	0	0
University of Alberta	Carsten Krauss	Astroparticle Physics with SNO+ and PICO	146	0	0
University of Alberta	Robert Fedosejevs	Laser Fusion Energy â€“ Fast Ignition and Shock Ignition	270	0	0
University of Alberta	Robert Driver	Disproportionate Collapse Resistance of Steel Structures	65	0	0
University of Alberta	Witold Krzymien	Efficient Signal Processing and Radio Resource Management for Broadband Multiple-Antenna Heterogeneous MIMO Cellular Networks	135	0	0
University of Alberta	Changxi Li	Identifying functional SNPs to enhance genomic prediction accuracy for feed efficiency and carcass merit traits in beef cattle	64	0	0

University of Alberta	Thian Yew Gan	Climate change impact on water levels of the Mackenzie River and extreme storms for Urban Watersheds of Western Canada	427	0	36
University of Alberta	Sushanta Mitra	High Resolution Simulations of Droplet Coalescence in Transient Shear Flow	0	28	5
University of Alberta	Paul Myers	High Resolution Ocean Modelling	64	0	1
University of Alberta	Erik Rosolowsky	High-Resolution Calibrated Simulations of Star Formation	78	0	6
University of Alberta	Antti Arppe	21st century tools for indigenous languages	0	0	1
University of Alberta	Mauricio Sacchi	Seismic Data Processing, Reconstruction, Imaging and Inversion	59	0	0
University of Alberta	Joan Greer	folkwaysAlive!	0	0	16
University of Alberta	Robert Wolkow	Investigation of silicon atomic states for novel electronic devices	397	0	0
University of Alberta	Andriy Kovalenko	Multiscale theory, modeling, and simulation for rational design in nanochemistry, nanoelectronics, nanomaterials, energy, and health applications	1200	0	22
University of Alberta	Russell Greiner	Computational Mass Spectrometry for Automated Metabolite Identification	145	0	0
University of Alberta	Benjamin Tucker	Creating a database and modeling the production and recognition of spontaneous speech	0	0	1

University of Alberta	Michael Bowling	Investigating General Competency in Sequential Decision-Making	158	0	0
University of Alberta	Andriy Nahachewsky	Ukrainian Cultural Heritage Repository UCHR	0	0	45
University of Alberta	khaled barakat	Atomistic modeling for cardiac ion channels blockade	243	0	0
University of British Columbia	Gren Patey	Molecular Level Simulations of Complex Physical Systems	540	0	0
University of British Columbia	Holger Hoos	Programming by Optimisation: Automated Configuration and Selection of Algorithms for Challenging Computational Problems	540	0	0
University of British Columbia	Leonard Foster	Protein complex atlas of mouse tissues	0	0	8
University of British Columbia	Quentin Cronk	PopCan: large scale genomic research on poplar	0	0	35
University of British Columbia	Steven Plotkin	Computational approaches to protein misfolding, protein evolution, and lead compound design	252	0	0
University of British Columbia	Philip Austin	Large eddy simulations of cloud entrainment and detrainment	100.8	0	0
University of British Columbia	Matthias Militzer	Quantum mechanical/molecular mechanical simulations of grain boundaries	52.2	0	0
University of British Columbia	Ingrid Stairs	Renewal of Radio Telescope Pulsar Data Repository - 2014	0	0	10

University of British Columbia	Joseph Henrich	The co-evolution of brain size and cultural complexity: explaining the human brain expansion during the Pleistocene	81	0	0
University of British Columbia	Joerg Rottler	Multiscale simulations of the mechanical properties of nanonstructured polymers	59	0	0
University of British Columbia	Ian Frigaard	Multi-phase flows in complex fluids and industrial applications	176	0	4
University of British Columbia	Kendal Bushe	Model Development for Numerical Simulation of Turbulent Combustion	178	0	0
University of British Columbia	Douglas Bryman	Rare Decay Experiments	37	0	270
University of British Columbia	James Little	Large Scale Human Pose Estimation with Deep Visual Features	55	14	0
University of British Columbia	Susan Allen	Coupled Ocean Models: Salish Sea and Arctic Ocean	140	0	0
University of British Columbia	Matthew Choptuik	Numerical Relativity	242	5	35
University of British Columbia	Loren Rieseberg	Genome Assemblies of Compositae Crops and Weeds	103	0	0
University of British Columbia	Robert Hancock	Bioinformatics Strategies to Combat Inflammation	0	0	9
University of British Columbia	Ludovic Van Waerbeke	Weak Lensing N-body Simulations for KiDS and RCS2 Surveys	0	0	70
University of British Columbia	Steven Hallam	Global scale metabolic pathway reconstruction from environmental genomes	262	0	0
University of British Columbia	Alexandre Bouchard-Côté	High-resolution evolutionary modelling	84	0	0

University of Calgary	Tom Ziegler	The development of new density functional based methods and their application to catalysis	315	0	0
University of Calgary	Peter Vize	Xenbase genomic systems	0	0	10
University of Calgary	Carey Williamson	Backup Storage for ELISA Networking Lab	0	0	6
University of Calgary	Peter Tieleman	Computational studies of biological membranes	7980	5	180
University of Calgary	Marie Fraser	Off-Site Storage of Crystallographic Data for Structural Biology	0	0	2
University of Calgary	Arvi Rauk	Peptide-Peptide and Peptide-Metal interactions related to Alzheimer's disease	442	0	20
University of Calgary	Craig Johansen	Simulation of High-Speed Compressible Flows	491	0	0
University of Calgary	Sergei Noskov	Multi-Scale Models of Solute Transport Across Cell Membranes	2720	10	65
University of Calgary	Peter Kusalik	Molecular simulations of crystallization processes, interfaces, and OH* behaviour in condensed phases	560	0	5
University of Calgary	Dennis Salahub	Towards the multiscale modeling of biocatalytic systems	1344	0	0
University of Calgary	Justin MacCallum	Physics-based approaches to integrative structural biology and protein design.	85	45	1
University of Calgary	Zhangxing John Chen	Reservoir Modelling and Simulation	344	0	4
University of Calgary	Eric Donovan	Remote Sensing the Near Earth Space Environment	0	0	120

University of Guelph	Susan Brown	30TB Storage for the Canadian Writing Research Collaboratory	0	0	1
University of Lethbridge	Stacey Wetmore	DNA Damage: The Formation of Bulky DNA Adducts	0	0	36
University of Lethbridge	Hans-Joachim Wieden	Identification of allosteric regulators and signal transmission pathways in ribosome-dependent molecular switches	44	5	13
University of Manitoba	Scott Ormiston	Computational Fluid Dynamics Modelling of Film Condensation, Discharging Two-Phase, and Supercritical Fluid Flows	76	0	3
University of Manitoba	David Barber	Nucleus for European Modelling of the Ocean NEMO and its use in the ArcticNet Integrated Regional Impact Study IRIS process	26	0	8
University of Manitoba	Vladimir Okhmatovski	Parallel Fast Higher-Order Solution of Complex Large Scale Electromagnetic Scattering Problems via Locally Corrected Nyström Discretization of CFIE	136	0	0
University of Manitoba	Jesko Sirker	Quantum Dynamics out of Equilibrium	379	0	0
University of Manitoba	David Kuhn	Direct Numerical Simulation of Physiological Blood Flow in Abdominal Aortic Aneurysms	25	0	0

University of Manitoba	H. Georg Schreckenbach	Quantum Chemistry Applied to Diverse Energy and Materials Problems	159	0	0
University of Manitoba	Bing-Chen Wang	High-Performance Numerical Simulation of Turbulent Flow and Dispersion	273	0	0
University of Manitoba	Mahmoud Torabi	Big data: complex mixed models with applications to spatio-temporal and small area estimation	255	0	0
University of Manitoba	Michelle XiaoQing Liu	Genetic analysis of autism spectrum disorders	0	0	28
University of Northern British Columbia	Brian Menounos	High Performance Computing Allocation Request to Support Cryospheric Science	55	0	100
University of Ontario Institute of Technology	Isaac Tamblyn	Structure of the electrode-water interface - carbon based materials	611	0	0
University of Ottawa	Tom Woo	Virtual Screening of Advanced Materials for Clean Energy Applications	342	0	15
University of Ottawa	Thomas Brabec	Ab initio modelling of light-matter interaction	370	0	5
University of Ottawa	Lora Ramunno	Computational electrodynamics for nanoscale nonlinear laser-matter interaction	890	0	0
University of Saskatchewan	Yuanming Pan	Theoretical modeling of paramagnetic defects in minerals and other materials	280	0	0

University of Saskatchewan	Doug Degenstein	Atmospheric Species Retrievals From Limb Scattered Sunlight Data Collected by the Canadian OSIRIS Satellite Instrument	270	0	0
University of Saskatchewan	Howard Wheater	Saskatchewan River Basin: a large scale observatory for new water science	0	0	1
University of Saskatchewan	Raymond Spiteri	Towards real-time heart simulation	115.2	0	0
University of Saskatchewan	John Tse	Computational Materials Science	423	0	0
University of Saskatchewan	Barbara Szpunar	Modeling Properties of Nuclear Materials	108	0	10
University of Saskatchewan	Kathryn McWilliams	SuperDARN International Data Distribution Facility	0	0	35
University of Saskatchewan	Richard Bowles	Theory and Simulation of Soft Condensed Matter	87.3	0	6
University of Saskatchewan	Chris Soteros	Lattice models of polymer entanglements and applications to DNA topology	57.6	0	26
University of Saskatchewan	Alexander Moewes	Probing new materials with Density Functional calculations and synchrotron-based spectroscopy	184.5	0	1
University of Saskatchewan	Jerzy Szpunar	First Principles Simulation of Thermal Conductivity	86.4	0	0
University of Saskatchewan	Tomasz W. Wysokinski	Biomedical Imaging and Therapy Beamlines at the Canadian Light Source	0	0	30
University of Saskatchewan	Kirstin Bett	Lentil Genome Sequencing	0	0	1
University of Saskatchewan	Igor Morozov	Seismic Research Lab, University of Saskatchewan	0	0	3

University of Toronto	Hue Sun Chan	Order and Disorder in Protein Folding and Interactions	437.4	0	0
University of Toronto	Ulrich Fekl	Discovering New Catalysts and New Materials using Density Functional Theory	39.6	0	0
University of Toronto	John Polanyi	Atomic Motions Underlying Chemical Reaction	243	0	0.1
University of Toronto	Joaquim Martins	High-Fidelity Multidisciplinary Design Optimization for the Next Generation of Aircraft	178.5	0	0
University of Toronto	David Steinman	Prevalence and Importance of "Turbulent" Flows in Cerebral Aneurysms	175.5	0	45
University of Toronto	Hans-Arno Jacobsen	Large-Scale Publish/Subscribe-Based Event Processing and Content Dissemination	63	0	0
University of Toronto	Raymond Kapral	Dynamics of Chemically Powered Nanomotors and Protein Machines	279	13.5	8
University of Toronto	Edward Sargent	Computational design of materials and device architectures for thin-film optoelectronic devices	607.5	0	1
University of Toronto	Norman Murray	Galaxy, Star, and Planet Formation	387	0	0
University of Toronto	Hae-Young Kee	Discovery of New Quantum Materials	144	0	0
University of Toronto	Cristina Amon	Nanoscale Thermal Transport in 2D Nanomaterials	629.1	0	0
University of Toronto	Ue-Li Pen	Computational Astrophysics	1520	0	500
University of Toronto	Sabine Stanley	Numerical Simulations of Planetary Dynamos	790	0	25

University of Toronto	Chandra Veer Singh	First Principles Investigation of Nanomaterials for Artificial Photosynthesis	540	0	50
University of Toronto	Paul Kushner	Analyzing Forced and Natural Climate Variability with Earth System Models: Atmospheric and Cryospheric Processes	649	0	102
University of Toronto	Francis Dawson	Quantum Mechanical Characterization of the Capacitive Properties of Graphene-based Devices	579	0	20
University of Toronto	j. richard bond	Cosmic Microwave Background, Early Universe, and Large Cosmic Structures	993	0	35
University of Toronto	Paul Chow	Interconnect Architectures for Field-Programmable Gate Arrays	82	0	6
University of Toronto	Harald Pfeiffer	Numerical simulations of compact object binaries: Understanding gravity and contributing to LIGO	3284	0	32
University of Toronto	Aimy Bazylak	High-performance computing to investigate multiphase transport in porous media for clean energy technologies and processes	182	0	0
University of Toronto	R. J. Dwayne Miller	Molecular Dynamics Simulation of Ablation by Desorption Impulsive Vibrational Excitation: Towards Fundamental Limits in Biodiagnostics	99	0	0

University of Toronto	Richard Peltier	Atmospheric and Geophysical Fluid Dynamics	1953	0	475
University of Toronto	Clinton Groth	Multi-Scale Adaptive Modelling and Numerical Methods for Turbulent Reactive Flows	2500	0	50
University of Toronto	William Navarre	Molecular dynamics analysis of H-NS binding to DNA targets.	73	0	0
University of Toronto	Christopher Matzner	Multidimensional hydrodynamics of Star Formation and Exotic Supernovae	906	0	8
University of Toronto	Timothy Chan	Optimization Methods for Healthcare Applications	22	0	0
University of Toronto	Quaid Morris	Improving cancer treatment by reconstructing the evolutionary history of tumours	900	0	10
University of Toronto	Nasser Ashgriz	LES Simulations of Coolant Flow in a 37-Element Fuel Channel	100	0	0
University of Toronto	David Zingg	High-Fidelity Numerical Optimization for Future Aircraft Design	3300	0	12
University of Toronto	Anton Zilman	Natively unfolded proteins of the Nuclear Pore Complex	207	0	0
University of Victoria	Andrew Weaver	Research using The UVic Earth System Climate Model	13.5	0	0
University of Victoria	Ben Koop	Genomics in Fish Biology	90	0	0
University of Victoria	randy sobie	Belle-II HEP Experiment	144	0	40
University of Victoria	Irina Paci	Self-assembly and properties of complex materials	298.2	0	0

University of Victoria	Caren Helbing	Informatics on Sentinels of the Environment INFO-SENSE	36	0	12
University of Victoria	Arif Babul	Computing the Universe: Unified Modeling of the Evolution of Galaxies and Hot Diffuse X-ray Emitting Gas in Cluster Environments	648	0	20
University of Victoria	Juergen Ehlting	Quantitative transcriptome analysis in Douglas fir.	28.8	0	0
University of Victoria	Boualem Khouider	Use of the Climate Forecasting System to Improve the skill of weather and climate in the Asian monsoon with a better representation of organized convection	136	0	15
University of Victoria	Olaf Niemann	Multisenor Data Integration and Modelling.	5	0	45
University of Victoria	Julio Navarro	Local Group Simulation Suite	618	0	301
University of Victoria	Curran Crawford	Wave energy device performance prediction	76	0	20
University of Victoria	Ned Djilali	Modeling of "PEM Fuel Cells" and "Sudden Hydrogen Leakage"	304	0	20
University of Victoria	Peter Oshkai	Development of Marine Hybrid Electric Propulsion	79	0	0
University of Victoria	Falk Herwig	Hydrodynamics of convection and nuclear astrophysics in the final phase of stellar evolution	907	0	59
University of Victoria	Jody Klymak	Flows in Arctic and Subarctic tidal channels	37	0	4

University of Victoria	Julia Baum	Ocean Ecology: Spatial Data and Models to Understand How Human Disturbances Alter Community Structure, Diversity, and Function	4	0	8
University of Victoria	Dennis Hore	Addressing heterogeneity in the structural distribution of proteins adsorbed on surfaces	120	0	24
University of Waterloo	Hans De Sterck	Large-Scale Simulation of Planetary Environments using Cubed-Sphere Grids	342	0	9
University of Waterloo	Scott Hopkins	Determining the Chemical and Physical Properties of Nanoclusters	216	0	0
University of Waterloo	Roger Melko	Simulations of Entanglement in Quantum Many-Body Systems	350	0	0
University of Waterloo	Edward Sudicky	High-Resolution 3D Analysis of the Impact of Climate Change on Surface Water and Groundwater Resources in the Athabasca River Basin and the Grand River Watershed	26	0	0
University of Waterloo	Duane Cronin	Advanced Virtual Human Body Models for Injury Prevention and Improved Safety	88	0	12
University of Waterloo	Youngki Yoon	Carrier Transport in 2D Flexible Electronics	184	0	5
University of Waterloo	Mark Smucker	Focused Retrieval of Streaming News Events	0	0	0

University of Waterloo	Fue-Sang Lien	Development of a multiscale modeling framework for short-term wind power forecasting	180	0	45
University of Waterloo	Jeff Z. Y. Chen	Calculation of phase diagrams for wormlike polymer melts and liquid-crystals	142	0	0
University of Waterloo	Ellsworth LeDrew	Canadian Cryospheric Information Network/Polar Data Catalogue Offsite Backup	0	0	40
University of Western Ontario	Peter Rogan	Breast Cancer Data Depot	0	0	100
University of Western Ontario	Denis Maxwell	Molecular Dynamic investigation of the adaptation of Heat Shock Proteins in the Antarctic psychrophile, Chlamydomonas sp. UWO 241	24	0	0
University of Western Ontario	Styliani Constas	Moldelling of the interactions of complexes of macromolecules in droplets	136	0	0
University of Western Ontario	Mikko Karttunen	Simulating Biomolecules at Interfaces	3000	0	55
University of Windsor	Robin Gras	Analysis of a predator-prey evolving ecosystem simulation	170	0	50
University of Windsor	James Gauld	Multi-scale computational studies of biocatalytic systems: their evolution, mechanisms and properties.	100	0	0
University of Winnipeg	Joshua Hollett	Multiscale molecular modelling: organocatalysis to viral enzyme inhibition	88	0	0

University of Winnipeg	Seyed Moghadas	Evaluating Strategies for Prevention and Control of Infectious Disease Using Quantitative Decision-Support Methods	800	0	30
Wilfrid Laurier University	Ian Hamilton	Semiconductor Nanocrystals and Gold Nanostructures	95	0	0
Wilfrid Laurier University	Hind Al-Abadleh	Surface Interactions of Arsenic Compounds on Extended Iron Oxide Clusters	87	0	0
Wilfrid Laurier University	Ilias Kotsireas	Search for new complementary sequences	207	0	4
York University	Siu Ning Leung	Modelling and Simulation of Polymer Nanocomposite Foams for Energy Harvesting	10	0	0