**Atlantic Canada Opportunities Agency (ACOA)**

 **Dalhousie University**

**Please note we have over 1100 researchers what is identified is some specific expertise with other connections possible**

**Potential R&D Activities**

|  |  |  |  |
| --- | --- | --- | --- |
| **R&D Activities** | **R&D Description** | **Atlantic University and/or College** | **Key Contact**  |
| **Missile Systems** | Self-propelled precision-guided munition system including missile guidance, missile launching and/or *related technologies*.  | A,M | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Autonomy and Robotics** | Human/autonomous-system interaction and collaboration, swarm and multi-unit autonomy, machine perception, reasoning, and intelligence, and test, evaluation, validation, and verification. | EE, D | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Biological Technologies** | Modification of living cells to produce novel substances, such as bio-fuels, bio-sensors, improved vaccines, and high-strength materials.  | B,M | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Cyber Security** | Development of science and technology for efficient, effective cyber capabilities across the spectrum of joint operations to include the protection of secure networks and surveillance of hostile networks.  | C,D | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Data Analytics** | Science and applications to reduce cycle time and manpower requirements for analysis and use of large data sets, leading to actionable data.  | D | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Directed Energy** | Systems to transfer energy to a target for a desired effect. Energy sources can be electromagnetic, particle-based or acoustic/sonic. | E,M | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Energy & Power Technologies** | Power generation, energy conversion, energy storage, power distribution and control, thermal transport and control, electromechanical conversion technologies to enhance operational effectiveness and accelerate fielding of new platforms/weapons. | E,M | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Human Systems, Terrain and Training** | Technologies to extend the capabilities of the human, enhance the capabilities of the human, sustain the human, or repair the human.  | K,D | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Materials & Manufacturing** | Modeling, development, fabrication and characterization of materials/structures at the atomic/molecular scale and understanding of associated applications (e.g., mechanical, sensor, communications, and medical applications).  | M | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Next Generation Electronics** | Advancement of scientific understanding of new materials and devices to enhance exploitation and insertion of advanced microelectronics/nanoelectronics and reduce requisite supply chain risk.  | EE,M | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Quantum Technologies** | Quantum mechanics to perform otherwise intractable numerical calculations, provide ultra-secure communications, and simulate exotic materials.  |  | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Sensory Technology & Exploitation** | Physics-based maritime, ground, air-borne, and space-borne sensing capabilities to include EOIR sensors, RF sensors, acoustic, magnetic, and seismic sensors; and associated signal processing, fusion, and modeling.  | EN,ES | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Signal Processing & Communications** | Achievement of reliable connectivity through undersea, surface, air, and space layers through the development of robust, cyber-protected and adaptable networks.  | EN | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Intelligent Integrated Systems** | Autonomous capability and products, open architectures & communications, sensors and other modular payloads, energy generation, monitoring, storage & propulsion. | Ag,EN | Kevin Dunn9024941648Kevin.dunn@dal.ca |
| **Ballistic Missile Defence** | Advanced radar & scalable combat systems. | A | Kevin Dunn9024941648Kevin.dunn@dal.ca |

**A -Atmospheric Science**

[**James R. Drummond**](http://fizz.phys.dal.ca/~jrdrummond/index.htm)
**Professor, Canada Research Chair in Remote Sounding of Atmospheres**
Atmospheric Science

[**Tom Duck**](http://aolab.phys.dal.ca/)
**Associate Professor**
Atmospheric Science

**M - Materials**

[Paul Bishop](http://www.dal.ca/faculty/engineering/civil-resource/faculty-staff/our-faculty/professors/steve-corbin.html%22%20%5Ct%20%22_blank)

[Stephen Corbin](http://www.dal.ca/faculty/engineering/civil-resource/faculty-staff/our-faculty/professors/steve-corbin.html%22%20%5Ct%20%22_blank)[[Zoheir Farhat](http://www.dal.ca/faculty/engineering/civil-resource/faculty-staff/our-faculty/professors/steve-corbin.html%22%20%5Ct%20%22_blank)](http://myweb.dal.ca/zh722369/)[[Kevin Plucknett](http://www.dal.ca/faculty/engineering/civil-resource/faculty-staff/our-faculty/professors/steve-corbin.html%22%20%5Ct%20%22_blank)](http://www.dal.ca/research/profiles/plucknett.html) [Noubar Yemenidjian](http://www.dal.ca/faculty/engineering/civil-resource/faculty-staff/our-faculty/professors/steve-corbin.html%22%20%5Ct%20%22_blank)Darrel A. Doman
[Dominic Groulx](http://www.dal.ca/faculty/engineering/mechanical/faculty-staff/our-faculty/associate-professors/dominic-groulx.html)
[Ted Hubbard](http://www.dal.ca/faculty/engineering/mechanical/faculty-staff/our-faculty/professors/ted-hubbard.html)
[Alex Kalamkarov](http://www.dal.ca/faculty/engineering/mechanical/faculty-staff/our-faculty/professors/alex-kalamkarov.html)
[Marek Kujath](http://poisson.me.dal.ca/~marek/)

[Dr. Ian Hill](http://fizz.phys.dal.ca/~ihill/OEMD_Home.html)

[Dr. Mark Obrovac](http://chemistry.dal.ca/Faculty/Professors/Obrovac%2C_Mark.php)

[Dr. Mary Anne White](http://myweb.dal.ca/mawhite/)

[Dr. Josef Zwanziger](http://jwz.chem.dal.ca/)

[Paul F. Gratzer](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/PaulGratzer.html)
[J. Michael Lee](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-ltoz/MichaelLee.html)
[Geoffrey Maksym](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-ltoz/GeoffreyMaksym.html)

**EE -Electrical Engineering**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rob Adamson |  |  |  | Biomedical Engineering |
| Jeremy Brown |  |  |  | Biomedical Engineering |
| [Jean-François Bousquet](http://myweb.dal.ca/jn729681/) |  |  |  | Microelectronics, Communications |
| Michael Cada |  |  |  | Photonics / Fiber Optics |
| [Zhizhang (David) Chen, Fellow of IEEE, CAE, EIC](http://emgroup.ece.dal.ca/index.htm) |  |  |  | Electromagnetics, Antenna, Wireless Technology |
| Jason Gu, Fellow of EIC |  |  |  | Control, Robotics, Biomedical |
|  |  |  |  |  |
| Jacek Ilow |  |  |  | Signal Processing, Communications, Networks |

**D – Data**

Dr. Stan Matwin

[Dr. Evangelos E. Milios](http://www.dal.ca/faculty/computerscience/faculty-staff/evangelos-e-milios.html)

[Dr. Carolyn R. Watters](http://www.dal.ca/faculty/computerscience/faculty-staff/carolyn-watters.html)

[Dr. Vlado Keselj](http://www.dal.ca/faculty/computerscience/faculty-staff/vlado-keselj.html)

[Dr. Robert Beiko](http://www.dal.ca/faculty/computerscience/faculty-staff/robert-beiko.html)

**B- Bio Engineering**

* + [Rob Adamson](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/RobAdamson.html)
	+ [Manohar Bance](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/ManoharBance.html)
	+ [Daniel Boyd](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/DanielBoyd.html)
	+ [Jeremy Brown](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/JeremyBrown.html)
	+ [Michael Dunbar](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/MichaelDunbar.html)
	+ [Ron El-Hawary](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/RonElHawary.html)
	+ [Mark Filiaggi](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/MarkFiliaggi.html)
	+ [Alan Fine](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/AlanFine.html)
	+ [Paul Gratzer](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/PaulGratzer.html)
	+ [Jason Gu](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/JasonGu.html)
	+ [Cheryl Kozey](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/CherylKozey.html)
	+ [John Kozey](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/JohnKozey.html)
	+ [Laurent Kreplak](http://www.dal.ca/faculty/school-biomedical-engineering/our-people/our-faculty-atok/LaurentKreplak.html)
	+ Michael Lee
	+ Joshua Leon
	+ Geoffrey Maksym

**C - Cyber Security**

Dr. Nur Zincir-Heywood

**E – Energy**

Lukas Swan

Kenny Corscadden Ph.D, P.Eng, FIET

**K – Kinesiology**

John Kozey , Health & Human Performance

**Q – Quantum Computing**

[Dr. Jordan Kyriakidis](http://quantum.phys.dal.ca/)
Department of Physics & Atmospheric Science

Kimberley C Hall

Peter Selinger

**EN – Engineering Sensors**

Dr. Christian Schlegel

[Jean-François Bousquet](http://myweb.dal.ca/jn729681/)

**ES - Earth Sciences**

**Grant Wach**

[Mladen Nedimović](http://www.dal.ca/faculty/science/earth-sciences/faculty_staff/faculty/nedimovis_m.html)

[John Gosse](http://www.dal.ca/faculty/science/earth-sciences/faculty_staff/faculty/gosse_j.html)

**AG – precision Agriculture**

Qamar Zaman