

Current Position

WSU

Professor of Cybersecurity and Behaviour, Faculties of SSAP and SCEM (2018 to present)

NSW Cybersecurity Network

Cyber Ambassador for the network representing NSW (2018) to present

UNSW

Senior Lecturer, The Faculty of Law, UNSW (2011-present)

- Senior Research Fellow, The Australian Centre for Cybersecurity, UNSW Canberra (2014 to present)
- Key Researcher, D2DCRC – Big Data and National Security (2015 to present)
- Cybersecurity/Cybercrime Stream Leader, Allen’s Technology, Law and Innovation
- Academic Director of the Cyberspace Law and Policy Centre 2008 to 2016)

HKU

Lecturer and Deputy Director of the LL.M in Information Technology and Intellectual Property Law, the Faculty of Law, The University of Hong Kong (2002-2006)

Neligan O’Brien Payne (2001-2002)

Research Consultant for project on Technological Protection Measures and Digital Rights Management Systems

Department of Justice, Government of Canada

Researcher in the Intellectual Property and Information Technology Division

Education

Doctorate of Philosophy , Faculty of Law, University of New South Wales <i>Botnet Badinage: Regulatory Approaches to Combating Botnets</i>	2012
Masters of Law with Concentration in Technology Law , University of Ottawa Graduated top in the program.	2002
Bachelors of Common Law with Distinction , McGill University	2001
Bachelors of Civil Law with Distinction , McGill University	2001
Bachelors in Communications , University of Calgary	1995

Industry Experience and Research Consultancies

IFW Global (cybercrime investigation and cyber security intelligence),
Board of Directors and Special Cyber Advisor 2015 to present

Goodly App (health insurance comparison mobile app), Legal Advisor 2016 to present

The Center of the Governance of Change

Project with Telefonica, EI University and Oxford University REPORT: Maurushat, A., “Privacy, Security-Enhancing Tools and the GDPR	April 2019
Information and Privacy Commissioner New South Wales, Project Leader <i>Enabling a Culture of Open Data Report</i> <i>Technical Open Data Country Reports</i> (I project led a team of 6 to investigate emerging trends in the world’s most advanced Open Government Data jurisdictions including empirical work. The work was undertaken for the IPC NSW with guidance from the Premier’s Cabinet, Data 61 and others).	2017
Department of Communications, Key Consultant <i>Open Data – Review of Barriers to Open Data (2015)</i>	2015
Australian Human Rights Commission, Key Consultant <i>United Nations Invited Keynote Lecture for the China branch of the United Nations for Cybersecurity and Human Rights</i>	2016
Cybersecurity Division, Minister of Public Safety Canada, Project Leader <i>Ethical Hacking</i>	2012
Australian Communications and Media Authority, Key Consultant <i>An Overview of International Cyber-Security Awareness Raising and Educational Initiatives</i>	2010
Internet Freedom House (U.S. based NGO), Key Consultant for Australia <i>Australian Internet Freedom, in Sarah Cooke et al (eds), Internet Freedom Index</i>	2011-present

Successful Research Grants

NSW Cybersecurity Network Grant of \$67,000 over one year looking at socially engineered payment diversion fraud.

With Jeff Foster, Abubakar Bello, Tomas Trescak, Lesley Land and Clinton Free (UNSW)

CRC grant of \$25 million dollars for the Data to Decisions Centre for Big Data and National Security (www.d2dcr.com.au). I am part of the law and policy group, a joint collaboration between UNSW and Deakin/La Trobe Universities, as well as with government agencies such as the AGD. The law and policy group divides funding in half between Deakin/La Trobe and UNSW. Funding to date:

Law and Policy: \$ 1.3 million as of September, 2017

UNSW portion Law and Policy: \$650,000 as of September, 2017, with approximately \$217,000 per researcher

The D2DCRC funding is from 2015-2020.

Louis de Koker (La Trobe)
Janet Chan (UNSW)
Lyria Bennett-Moses (UNSW)
Alana Maurushat (UNSW)
Danuta Mendelson (Deakin)

Cybersecurity Centre Research Grant

With post doc Keiran Hardy

Data Matrix: Mapping Data Set Obligations for Opening Datasets
\$52,000

.auDA

With David Vaile and Chris Connelly (2012)

Report: *Drowning in Codes of Conduct: An analysis of codes of conduct applying to online activity in Australia* (2012)

\$20,000 research grant (Cyberspace Law and Policy Centre)

CAL Copyright Grant “Orphan Works”

With David Vaile, Cate Bond, and Chris Connelly

\$30,000 research grant (Cyberspace Law and Policy Centre)

Report: *Orphan Works* (2011)

Research Grant: RGC Project No: F-HK27/03T

France/Hong Kong Joint Research Scheme 2003-2004 (A competitive Hong Kong-wide research grant awarded by the UGC)

With Jean-Pierre Clavier (Faculty of Law, University of Nantes) and Alana Maurushat

\$20,000 (approximately AUD)

Report: *Nationally Implemented Internet Firewall Technology and Policy – A Comparative Legal Analysis of its Effects on Freedom of Expression (China and France) - Les Incidences des technologies de pare-feus et leurs politiques nationales sur la liberté d’expression (la Chine et la France)*”

UNSW Faculty Research Grant 2007 Scheme (\$10, 000 for 6 months)

“An Australian initiative for legal and technical models for effective control of computer malware” Cyberspace Law and Policy Centre. Unsuccessful ARC Linkage Grant. There was no rebidding as the linkage partner, McAfee underwent substantial management change due corporate downturn.

Draft Research Grants and Research Direction

ODFC Notification Tool for Emerging Cybersecurity Threats

Richard Frank, International Centre for Cybercrime, Simon Fraser University

Alana Maurushat

The Artificial Intelligence Lab, The University of Arizona

The proposed project aims to study the greater hacking community to find prominent players and identify emerging threats. This will be done through three methods: the Open Discussion Forum Crawler, Identifying and Monitoring Threats, and a Notification System. The **Open Discussion Forum Crawler (ODFC)**, which was developed in part through CSCP grant PS-SP-#1505707-1. ODFC has been primarily a research tool, which has been utilized by SFU’s International Cybercrime Research Center (ICRC) to study areas such as violent extremism, hacker communities and online drug markets. ODFC currently is capable of capturing data (after the appropriate configuration for each forum) from multiple online discussion forums simultaneously, merging the data into a single cohesive searchable database, and downloading updates on a regular schedule. ODFC captures forum data from both the open internet and dark net forums. Using ODFC, we will collect data from online hacking and cyber-jihad discussion forums, for the purposes of cross-community analysis, understanding community overlap, trying to identify prominent users across multiple communities and the emerging threats that they pose. In an analysis of online dark net hacking and cyber-jihad forums, it was found that there was some overlap of pseudonyms/identities between these forums (Maurushat and Agius, 2017); this study, however, was limited to instances of ethical hacking, used a very small sample size examining only 8 online forums, and was labour-intensive as the unstructured forum data often had to be manually structured in order to run basic analytics. This project will undertake identification of relevant content, monitor threats, and notify relevant authorities of threat intelligence.

A notification tool would be developed and used for the notification of information related to cyber security incidences with an Australian or Canadian link. In particular, the purpose of the tool is to provide information related to a cyber security incident to the relevant authorities. It will cover types of cyber security intelligence with a Canadian or Australian link including: mentions of registered IP addresses; company names; provinces

and territories; cities; government agencies; bank transfer codes; URLs with .ca or .au domain names; zip/post codes; social security numbers and phone numbers with appropriate prefixes; relevant geo-location information; hacker pseudonyms with community overlaps ;and where possible, references to vulnerabilities that target previously identified government and commercial technologies.

There is a draft of this research grant ready. Discussions with the Royal Canadian Mounted Police are underway, as is discussion with the Australian Federal Police, and New South Wales Police. Maurushat has negotiated access and use of the AZSecure – data.org intelligence and security informatics data sets which includes the world's largest collection of deep web / dark market data (currently this is privately held data) outside of intelligence agency collection.

Profiling Ethical Hackers (PEH)

Alana Maurushat

PEH will analyse ethical hackers from a sociological perspective. Researchers will attend a series of conferences, workshops and underground events for hackers to conduct the first empirical study of ethical hackers (The United Nations sponsored a comprehensive study of profiling hackers in 2009 but did not include questions about ethical hacking – hacktivism – which is understandable given that hacktivism gained notoriety in 2011). The events will be covered in Europe, North America, The Middle East, Asia and Australia (funding permitting). This will be done through questionnaires distributed by the research team at key hacking events. The questionnaires will be delivered as blind distribution and relate to three separate yet related components: personal data; relational data; and technical / criminological data. The questionnaires will be designed around learning more about motivation and psychological characteristics.

The draft for this research proposal is only 50% complete, while the success of the project will ultimately require two additional researchers ideally from computer science (and preferably a renowned hacker or activist), and someone from social sciences.

Research Interests

My research interests in order of priority and interest span across three main themes:

1. Cybersecurity and Cybercrime

My research in cybersecurity is entirely interdisciplinary. The aim of my research is to be of *practical significance and have consequent impact* for cybersecurity professionals, ethical hackers, business, the neuro-diverse community and to steer and shape both research and policy within Australia and the Asia Pacific region. I have published in foreign affairs/political science, law, computer science, information systems, social sciences and information philosophy.

2. Big Data Analytics (Machine – Learning / Artificial Intelligence)

My research in big data analytics is mostly interdisciplinary with extensive collaboration between universities (UNSW and Deakin/La Trobe), members of the D2DCRC including computer scientists at universities and in industry, as well as with government departments. My personal interest in the big data space is the intersection with data analytics and cybersecurity. For example, my forthcoming book on Ethical Hacking includes data analytics from hacking forums on the dark market. I am now learning how to convert the data analytics methods to open source machine learning analytics tools. The empirical work on ethical hackers reaches back to 2001 to current; to my knowledge I am the only person globally doing empirical work in the area outside of intelligence agencies and defence.

3. Information Technology and Media Law and Policy in the context of Civil Liberties

I am the researcher and author of the Australian portion of the annual Freedom House Report *Freedom on the Net*— global perspectives (2011-2017). *Freedom on the Net* is produced by the NGO Freedom House founded by the late Eleanor Roosevelt. The report is sponsored by Google and Facebook. It is the most widely utilized resource worldwide for activists, government officials, journalists, businesses, and international organizations aiming to understand the emerging threats and opportunities in the internet freedom landscape globally, as well as policies and developments in individual countries. I am the Academic Director of the Cyberspace Law and Policy Community at UNSW which involves a group of experts that engage in information technology and media issues through the lens of ‘public interest’. This is one example of many different engagements with issues in civil liberties and information technology.

Training

Department of Defense
 Keynote and Training in Cybersecurity for Armed Forces Generals and Intelligence Officers in the Austral-Asia Pacific Region
 College of Defence, Canberra (May, 2012)
 College of Defence, Canberra (2013)

North American Parliamentary Security Units Training in Counter-Terrorism.

Awards, Memberships and Training

Australian Endeavour International Postgraduate Research Scholarship	2006
Social Sciences Humanities Research Council Doctoral Fellowship	2006
Workshop on the Economics of Information Security Conference Scholarship	2008
Australian Information Security Association Annual Seminar Debate Winner	2008
Excellence in Postgraduate Supervision UNSW	2015
Collaboration Award from the Australian Government, Data to Decisions CRC	2016
Member of the Prime Minister Cabinet special working party on Women in Cybersecurity	2016 to present
Member of the International Cybercrime Prevention Association	2016 to present
Thomson Legal Prize for Best Oral Presentation	2007
Visiting Senior Fellow, Faculty of Computer Science, The University of Bologna, Italy	2014
Visiting Professor, The Faculty of Law, The University of Melbourne, Australia	2013
Visiting Senior Fellow, The Faculty of Law, The University of Ottawa, Canada	2011
Visiting Fellow, Oxford Internet Institute, Oxford University, UK	2014
Visiting Professor, Institute of Cybercrime and Big Data Analytics Centre, Simon Fraser University, Canada	2017

University Teaching Experience, Curriculum Development and Evaluations

1. Course Title: Surveillance, Security and Democracy – Big Data Analytics (UNSW Law)			
Level:	LLM	Year & sessions:	S1 2015, S1 2016
Form of Teaching:	Seminar	Student numbers:	35
Teaching hrs/ session:	24 hours	CATEI score:	Q0 100% (2015) Q10 83% (2016)
Contribution and Impact:	I developed the course and the materials. I have assembled a team of leading experts in big data and machine-learning from different disciplines (finance, technical, law from government, academia and industry) to provide a cutting edge innovative course. The course teaches many of the elements that we are working on for the D2DCRC (Big Data and national security). It is the only course of its kind offered in an Australian Law Faculty. I developed the materials and am convener of the course.		

2. Course Title: Cybercrime, Security and Digital Law Enforcement (UNSW Law)			
Level:	LLM	Year & sessions:	2011 til Present
Form of Teaching:	Seminar	Student numbers:	30-56 depending
Teaching hrs/ session:	24	CATEI score:	Q 10 100% every year
Contribution and Impact:	I developed the course and the materials with students coming from other universities in Sydney, and Canberra. It is the only course of its nature taught in an Australian Law Faculty. The materials are unique in that I am able to take the students through live cybercrime and cybersecurity investigations based on the work of cybercrime investigation firm IFW Global.		

3. Course Title: Cybersecurity and Data Governance (Cybersecurity Centre UNSW Canberra)			
Level:	Training	Year & sessions:	S2 2015
Form of Teaching:	Intensive Seminar	Student numbers:	10
Teaching hrs/ session:	32 hours	CATEI score:	NA
Contribution and Impact:	I developed the course and the materials. This course can be taken as a combined course, or separated into two courses. It is comprised of two offerings – one to LLM students at the Australian Defence Forces Academy in their new Masters of Cybersecurity program offered through UNSW Australian Centre for Cybersecurity. The other form is short training courses to senior military and government officials.		

4. Course Title: Equity and Trusts Legal Research and Writing (UNSW Law)			
Level:	UG and JURD	Year & sessions:	2013 – ongoing
Form of Teaching:	Flip – Online	Student numbers:	30
Teaching hrs/ session:	16 hours per group	CATEI score:	Q10 100%
Contribution and Impact:	The lecturing is done online. I developed the online modules. I convene this core compulsory course including training of sessional lecturers.		

5. Course Title: Information Technology Law (UNSW Law)			
Level:	UG	Year & sessions:	S2 2015 and S2 2016
Form of Teaching:	Seminar	Student numbers:	46
Teaching hrs/ session:	36 hours	CATEI score:	Q10 100% 2015 Q10 91% 2016
Contribution and Impact:	I developed the materials. This course is co-taught with David Vaile.		

6. Course Title: Criminal Threats from Cyberspace (UNSW Law)			
Level:	UG	Year & sessions:	2011
Form of Teaching:	Intensive Seminar	Student numbers:	46
Teaching hrs/ session:	32 hours	CATEI score:	Q10 100%
Contribution and Impact:	I developed the materials.		

7. Course Title: Cybercrime (UNSW Criminology)			
Level:	UG Criminology	Year & sessions:	2011 to ongoing
Form of Teaching:	Intensive Seminar	Student numbers:	35
Teaching hrs/ session:	32 hours	CATEI score:	Q10 100%
Contribution and Impact:	I developed the materials and have been the convener all times offered.		

8. Course Title: Law in the Global Context Legal Research and Writing (UNSW Law)			
Level:	UG and JURD	Year & sessions:	S2 2013
Form of Teaching:	Intensive Seminar	Student numbers:	30
Teaching hrs/ session:	32 hours	CATEI score:	Q10 100%
Contribution and Impact:	The lecturing is done online. I developed the online modules. I convened this core compulsory course the first two times that it was offered.		

9. Course Title: Advance Legal Research and Writing (UNSW Law)			
Level:	UG	Year & sessions:	2006 to 2012
Form of Teaching:	Intensive Seminar	Student numbers:	20
Teaching hrs/ session:	16 hours per group	CATEI score:	Q10 100%
Contribution and Impact:	I convened the course (S1, S2 and Summer) from 2007 to 2012. This included 2011 and 2012 where we had to put through close to 1400 students in order to shift to the new curriculum. I contributed to the development of the materials with Graham Greenleaf, Philip Chung and David Vaile.		

Other

University of Melbourne
Faculty of Law
Visiting Professor (2014)
Taught Post Graduate Course, Cybersecurity Law and Policy

University of Ottawa
Faculty of Law
Visiting Professor (2011)
Taught Post Graduate Course, Techopudence (a course in information philosophy and theory)

University of Hong Kong
Faculty of Law
Visiting Lecturer (Winter 2006)
Assistant Lecturer (2002-2005)
Deputy Director of the LLM in Information Technology and Intellectual Property Programme (2002 -2005)

I have taught at both the undergraduate and graduate levels at the Faculty of Law in the fields of intellectual property, information technology, contractual law, and legal research and writing. This included the LLM courses of ‘Internet Governance’, ‘Internet Content’ and ‘Protecting Digital Assets with Intellectual Property’. I additionally taught a “broadening” media course to non-law students on issues in information technology and the law.

Asia-America Institute in Transnational Law
Duke University and the University of Hong Kong
I taught the course, ‘Surveillance, Technology, and National Security’ (Summer 2005)
I taught ‘Intellectual Property and Human Rights’ (Summer 2014)

Santa Clara University
I taught a series of short spring courses related to intellectual property and information technology law (Spring 2004 and 2005)

Continued Legal Education
UNSW
Cybersecurity and CyberInsurance
A short course for practicing lawyers on cybersecurity protocols and standards.

Teaching Innovation

Assessment

Lecturing in emerging fields of cybersecurity, cybercrime, big data and information technology can be challenging with students from disparate backgrounds. I moved to self-selective final projects as a means of instilling excitement and confidence in the students. As students are able to explore for assessment purposes the object was to allow them to play to their skill set and to a lesser extent, pioneer. The ability to self-select an assessment also worked as an equaliser between those in the class who were from a technology background. I wanted to provide an environment where students could have the room to challenge themselves in an area of interest that may lie in unfamiliar and often uncomfortable territory. Students select their topic, their project medium and whether they wish to work individually or in a group up to a maximum of five members. The diversity of assessment has included Dark Market Terrorism Analytics, Dark Market Hacking Analytics, A Business Plan to Disrupt the Online Hotel Industry (the chrome extension browser is now in development in conjunction with UNSW Innovation), proof of concept hack, a book (written by a group of students), the first chapter of a cybercrime novel, an informative blog with over 50,000 views, and several brilliant YouTube educational videos. I take a different approach to research papers submitted for both the undergraduate and graduate students; the aim is an original research paper on a topic where there is either limited published research, where there is a problem that requires further research to advance a solution, or where the current publications offer defective solutions. This difficult criteria has meant that many of my students' assessments have led to:

- publications in peer reviewed journals (Eg. Keiran Hardy in both the UNSW Law Journal and Computer Security Report, Pauline Rappaport in the Media & Arts and Law Review, Nina Yiannopoulos in the Media & Arts Law Review, and Hadeel Al-Alosi, Marquette Benefits and Social Welfare Law Review)
- publications in non-peer reviewed journals and bulletins (Eg. Renee Watt, Atul Vidhatain)
- prestigious awards (Eg. Adrian Agius won an Australia-wide essay prize for the Computers and Law Society Committee)
- prestigious fellowship (Eg. Lauren Loz was the inaugural Google Fellow in Australia, Jelena Ardelic won the ACCAN Google Fellow)

Introduced Professional Writing and the Flip Format: In the summer of 2013 I introduced the first online course in the Faculty of Law. I re-designed the legal research and writing curricula to move to a flip model. In doing so, I divided the previous Advance Legal Research course into two separate courses Legal Research and Writing – Equity and Trusts, and Legal Research and Writing – Law in the Global Context. I introduced the professional writing element such as client interviews, client letters, letters to supervising solicitor, and research visualisation which previously was taught and assessed in a very limited capacity in the Faculty. The Flip model involves students attending lectures online and doing their assessments in class with the lecturer. Students receive their lectures online through a series of online videos (designed in three different formats so that they could be viewed on Apple laptops, non-Apple laptops and smart phones) with quizzes and short assignments. The videos allow students to start, pause, and revisit as many times as they require. Students then come to class to improve on their research task where they receive direct feedback (written) and through interaction with the lecturer and their fellow classmates. At the moment I am developing materials on how to write up legal information that can feed directly into an algorithm. Students will learn how to write legal information in computation tree logic. The advanced students will learn how to work with open machine-learning software.

Current Ongoing Cybersecurity Investigation Content: I am a Board of Directors and Special Cyber Advisor for the cybercrime investigation and security intelligence firm IFW Global (www.ifwglobal.com) where I aid the company approximately a half day a fortnight. I am moderately compensated for this role; I do this role instead in order to have first-hand experience in cybercrime and cybersecurity investigations and to be able to provide my students with the most cutting-edge and practical course materials. For my Cybercrime and Cybersecurity courses I take the innovative approach of going in detail through past and current (I have authorisation from the company and the clients) investigations. Students are able to see firsthand the challenges and issues that arise in investigating, prosecuting and litigating these types of problems. The firm also does luxury brand management through our Sentinel Intellectual Property Management System. I work with the software development team to convert current legal trademark notices to automated processes with Chinese platforms TaoBao and Alibaba. The legal information is converted to a process that can feed directly

into the API to API anti-counterfeit monitoring system. The information is collected and notices are then auto-generated in the Mandarin.

Dyanmic Two Way Content Development on OpenLearning Platform: OLP was developed by students in the School of Computer Science at UNSW. It is an exceptional online learning platform with unique functions that Moodle and Blackboard do not offer. The platform uses social media workflow which allows better community engagement. For me, the functions to embed wikis and blogs pages, and moreover, the team is willing to build in any bespoke functions for a course. This makes the platform an ideal fit for the development of my new Cybersecurity and Cybercrime materials. As I have students from disparate backgrounds, and often who come to learn already having substantial careers and expertise (military, intelligence, iDefense, CISCO), I want my materials to be delivered in a manner where my students contribute to the content of the course. The learning materials, therefore, change dynamically. I am hoping that the new online design will be complete by mid- to –end 2018.

Secure Negotiation Simulated War Games: Professor Richard Buckland (UNSW Computer Science) and I will be offering the inaugural inter-disciplinary hacking event to be known as Secure Negotiation Simulated War Games 2018 (SecNeg War Games). This is not a traditional hackathon. For its first year, we will have students from UNSW law, business and computer science compete on combined teams. The simulation will mimic international negotiations where teams will have to secure their communication channels, complete a 24 hour arbitration/negotiation process, and defend against cyber-attacks and leaks of information while the negotiations proceed. We have not seen a similar competition anywhere in the world. We are hoping to make this event national, and potentially international in the years to follow and are currently investigating sponsorship with the Commonwealth Bank.

Graduate Supervision

	Student name:	Degree:	Role in supervision:	Enrolment Date:	Completion Date:
1.	Hadeel Al-Alosi	PhD	Co-Supervisor (primary)	July 2015	April 2017
2.	Saravuth Pitiyasak	SJD	Co-Supervisor (secondary)	Unknown	2003
3.	David Simons	Masters of Research	Primary	2011	2012
4.	Grace Chan	Masters of Research	Primary	2003	2004
5.	Rob Hamper	PhD	Co-Supervisor (primary)	2013	Ongoing
6.	Dan Cater	PhD	Co-Supervisor (secondary)	2015	Ongoing
7.	Stanley Shanapinda	PhD (Australian Cyber Security Centre, UNSW Canberra)	Co-Supervisor (primary)	2015	2018
8.	Steven Wilson	PhD (Australian Cyber Security Centre, UNSW Canberra)	Co-Supervisor (secondary)	2016	Ongoing
9.	Erica Franklin	Criminology Honours	Co-Supervisor (secondary)	2015	2015
10	Hayley Boxall	Criminology Honours	Primary Supervisor	2010	2010
11	Michael Seto	Criminology Honours	Primary Supervisor	2010	2010

University Service

Governance

I have been the course coordinator for Legal Research and Writing subjects from 2007 to present which involves training new sessional lecturers each semester, and overseeing the curriculum development, and lecturing consistency for approximately 500 students annually.

I was an Academic Advisor from 2015-2017 with well over 40 students under my guidance with 3 of these students considered as difficult cases. Students requiring academic advice fall into three categories. The first are otherwise good students who have had something difficult happen to them and their marks have suffered for a brief period of time. The second group are students who struggle with the materials throughout their degree and as such, require direction and advice on workload, and studying techniques. The last group are students who often have a disability, or are depressed. In my time as Academic Advisor I have had to physically take one student to the hospital, and I've had to dialogue on a continual basis with Counselling services to make sure that a student didn't take his life. This requires me to be in constant contact with students when they are going through a turbulent time. I have cancelled many a dinner plan to ensure that the student got the help that he or she needed.

While at the University of Hong Kong I was the Associate Director of the LLM in Information Technology and Intellectual Property Program, a member of the Ethics Committee for Dental Research, and intellectual property advisor to the Graduate Research Council.

Strategic direction and planning

I have been a member of the Undergraduate, Juris Doctorate and Postgraduate Education Committees at the Faculty of Law. My role has been quality assurance for new courses and strategic concerns around curricular reform and in particular, around law and technology and legal research and writing.

Capacity building

I have been Academic Director of the Cyberspace Law and Policy Centre since 2010. I was Deputy Director and Acting Director of CLPC from 2007-2010. During this time I applied for two ARC Linkages, and a plethora of other small research grants. We have won several small grants totalling \$70,000 since 2010. The Centre is now a Community but we continue to represent the public interest in matters of technology and policy including making submissions, appearing in the media and supervising interns. I have supervised well over 60 interns since 2010. This involves at least 10 hours per week of my time as the interns require continual feedback on their work. I would estimate that in the last six years I have devoted somewhere in the area of 1000 hours to supervision of interns.

I have assisted three start-up companies/ideas for students: Goodly App; Intellectual Property for a patent and business in a new construction material; and a chrome extension browser development for a Hotel Coupon App. I have advised NSW Innovation on a number of matters.

Building inclusive cultures

I have played an active role in establishing and strengthening cross-disciplinary link both within UNSW as well as abroad. I have done this both in my research and teaching. I co-supervise PhD candidates in the School of Engineering, Cybersecurity Centre at UNSW Canberra. I collaborate with Professor Richard Buckland in the development of a new course in law and computer science on Digital Forensics in Court, and we are running the inaugural Secure Negotiations Simulated War Games 2018. I collaborate extensively with members in the Faculty and Schools of computer science at UNSW and at other institutions linked to the D2DCRC in the development of our research projects, and in establishing inter-disciplinary courses such as Security, Surveillance and Democracy (Big Data) where I had guest lectures from multiple disciplines from academic, industry and government agencies as part of the D2DCRC.

Community/Public Service

Significant contributions to the Australian Community

I have appeared on many different media programs including Insight, Four Corners and 7:30 Report, and have provided background research for Four Corners, 60 Minutes, and 7:30 Report. I have appeared on radio programs, and local news television broadcasts, and have been interviewed by several journalists in Australia and overseas including the Wall Street Journal and the New York Times.

I am a member of the New South Wales Parliamentary Resources Committee. I provide advice and assistance in the development of online legal databases and research for the New South Wales Parliamentary Library.

Significant contributions to the global community

I am a member of the professional group, the International Prevention of Cybercrime Alliance. I contribute research for the IPCA and help to organise conferences and workshops.

Significant contributions to business and government

I was invited to privately address the British Columbia Parliament in Canada in June 2016. As part of this I provided cybersecurity training for the International Security Preparedness Professional Development Conference, British Columbia Parliament and Simon Fraser University, Victoria, British Columbia, Canada, June 2016. This is an invite only workshop for members of governments involved in training for counter terrorism and national security.

Building partnerships with the community

I am a volunteer with the Northern Settlement Services, an organisation assisting migrants and refugees. I am establishing a respite and healing program in Nelson Bay for refugees to come away for short holidays to “heal”.

Governance of professional bodies

I sit on the Board of Directors of a private cybercrime investigation company, IFW Global. IFW investigates online fraud syndicates in the Asia-Pacific region, and monitors and investigates online trade in counterfeit goods. They do increasingly important work that law enforcement is unable to do for a multitude of reasons. One of the reasons that I took up this appointment was to be actively in the loop to how investigations of this nature work in reality. In addition to providing strategic direction to the company I assist them where possible in the automation of their online monitoring systems (automating cease and desist trademark violations). I view their work as ground-breaking, especially in the area of organised online fraud syndicates. During my time on the Board of Directors the company has successfully investigated three organised crime syndicates in Australia and the Asia Pacific region, recovered substantial funds for our clients, as well as given intelligence and evidence to law enforcement for prosecution. As of 2017 I have taken up a new role with the firm as Special Cyber Advisor for a number of cyber security intelligence operations.

Publications

Forthcoming

Alana Maurushat, *Ethical Hacking* forthcoming book for the University of Ottawa Press, 2019. The book will officially be published April 2019

Alana Maurushat and Robyn Hamper, ‘Security, Encryption and Vulnerability Markets’ in Edwards, L., Schafer, B. and Harbinja, E. eds. Forthcoming, *Future Law: Emerging Technology, Ethics and Regulation* (Edinburgh Press, 2017).

Alana Maurushat and Hannah Rappaport, 'Cybersecurity and Neurodiversity' in Greg Austin (ed) *Frontiers of Education: Security and Cyberspace* (2018).

Books

Alana Maurushat, *Disclosure of Security Vulnerabilities: Legal and Ethical Issues* (Springer, 2013).

Book Chapters

Alana Maurushat and David Vaile, 'Big Data and Identifiability in Australia, EU and the US' in Svantesson, D. ed., *Transatlantic Data Privacy Relationships As A Challenge For Democracy* (European Integration and Democracy Series, Vol. 4) (2016).

Alana Maurushat, 'Asia' in Pauline Reich (ed) *Cybercrime & Security* (Thomson Reuters, 2012) Rel. 12-1 § 8:1.50.

Peer Reviewed Journal Articles

Alana Maurushat, Jan Traskowski, and Hadeel Al-Alosi, 'Open Government Data: A Comparative Analysis of Leading Jurisdictions who Turn Data into Information, and Information into Insights that Allow for Evidence Base Policy', *New Castle Law Journal* 2018.

Alana Maurushat 'Big Data Use by Law Enforcement and Intelligence in the National Security Space' (2016) 21 *Media and Arts Review* 1.

Alana Maurushat and Keiran Hardy, 'Opening up Government Datasets for Big Data Analysis to Support Policy Decisions' (2016) 10 *International Journal of Social, Behavioural, Educational, Economic, Business and Industrial Engineering* Vol. 1

Alana Maurushat and Keiran Hardy, 'Opening up Government Data for Big Data Analysis and Public Benefit' (2017) 33 *Computer Law and Security Review* 1.

Alana Maurushat, Lyria Bennett-Moses and David Vaile, 'Using Big Metadata for Criminal Intelligence: Understanding Limitations and Appropriate Safeguards' (2015) *ACM ICAIL '15 Proceedings*.

Maurushat AM, 2016, 'BD use by Law Enforcement and Intelligence in the National Security Space: Perceived Benefits, Risks and Challenges', *Media and Arts Law Review*, vol. 21, pp. 229 - 255

Alana Maurushat, Mohammed Chawki, Hadeel Al-Alosi, and el Shazly, 'The Impact of Social Networks and Mobile Technologies on the Revolutions in the Arab World – A Study of Egypt and Tunisia' *Laws* 2014, Open Access *Laws MDPI*.

Alana Maurushat, David Vaile and Anthony Chow, 'The Aftermath of Mandatory Internet Filtering and S 313 of the Telecommunications Act 1997 (Cth)' (2014) 19 *Media and Arts Law Review*.

Alana Maurushat, 'Cybercrime to Cyberwar: Security Through Obscurity or Security Through Absurdity' (2013) *Canadian Journal of Foreign Affairs*.

Alana Maurushat, 'Hack Counter-Attack: its uses and the need for legislation' (2013) 6 *E-Finance & Payments Law & Policy* 2.

Alana Maurushat, 'The role of Internet Service Providers in combating botnets: an examination of recent Australian initiatives and legislative reform' (2012) 62 *Telecommunications Journal of Australia* 4.

Alana Maurushat, 'Forced Transparency: Should we keep secrets in times of weak law, and should the law do more to support secrecy?' (2012) 17 *Media & Arts Law Review*.

Rodger Jamieson, Lesley Pek Wee Land, Donald Winchester, Gregory Stephens, Alex Steel, Alana Maurushat, and Rick Sarre, 'Addressing Identity Crime in Crime Management Information Systems: Definitions, Classifications and Empirics'"(August 2012) 28 *Computer Law & Security Review* 4.

Alana Maurushat, 'Zombie Botnets' (2010) 7 *Scripted* 2.

Alana Maurushat, 'Australia's Accession to the *Cybercrime Convention*: Is the Convention Still Relevant in Combating Cybercrime in the Era of Obfuscation Crime Tools?' (2010) 16 *University of New South Wales Law Journal* 1.

Alana Maurushat, 'Data Breach Notification Law Across the World from California to Australia' (2009) *Privacy Law and Business International*.

Sophia Christou and Alana Maurushat, 'Waltzing Matilda or Advance Australia Fair: Fair dealings copyright exemptions with user-generated content' (2009) *Media & Arts Law Review*.

Alana Maurushat and Ron Yu, 'When internet protocols and legal provisions collide: Unauthorised Access and *Sierra v. Ritx*' (February 2009) *Computer, Law and Security Report*.

John Aycock and Alana Maurushat, 'Good' Worms and Human Rights' (2008) 38 *ACM Computers & Society* 1.

Roger Clarke and Alana Maurushat, 'Passing the Buck: Who Will Bear the Financial Transaction Losses from Consumer Device Insecurity?' (2008) 1 *Journal of Law, Information Technology and Science* 1.

Alana Maurushat, 'The benevolent health worm: comparing Western human rights-based ethics and Confucian duty-based moral philosophy,' (2008) *Ethics and Information Technology Journal* (DOI 10.1007/s10676-008-9150-1).

Alana Maurushat and Alex Colangelo, 'Exploring the Limits of Computer Code as a Protected Form of Expression: *A Suggested Approach to Encryption, Computer Viruses and Technological Protection Measures*' (2006) 51 *McGill Law Journal* 1.

Alana Maurushat, 'Multi-lateral Recognition of PKI Certification Authorities in the Asia Region: Issues in Privacy and Trans-Border Data Flow' (2005) 35 *Hong Kong Law Journal* 3.

Alana Maurushat, 'Setting a Positive Agenda for Internet Governance at the World Summit on the Information Society (WSIS): Of technology and humankind'" (2005) 18 *Revue quebecoise de droit international* 1.

Ian Kerr, Alana Maurushat, and Christian Tacit, 'Technical Protection Measures: *Tilting* at Copyright's Windmill' (2003) 34 *Ottawa Law Review* 1.

Ian Kerr, Alana Maurushat, and Christian Tacit, 'Mesures techniques: La protection juridique des mesures Techniques' (2003) 15 *Les Cahiers de Propriété Intellectuelle* 2.

Ian Kerr, Alana Maurushat, and Christian Tacit, 'Mesures techniques: Tendances en matière de mesures de protection techniques et en matière de technologies de contournement' (2003) 15 *Les Cahiers de Propriété Intellectuelle* 3.

Alana Maurushat and Daniel Gervais, 'Fragmented Copyright, Fragmented Management: Proposals to Defrag Copyright Management,' (2003) 1 *Canadian Journal of Law and Technology* 1.

Alana Maurushat, 'Hong Kong Anti-Terrorism Ordinance and the Surveillance Society: Privacy and Free Expression Implications' (2003) 12 *AsiaPacific Media Educator*.

Alana Maurushat, 'Open Source, Open Sesame: An Open-Ended Question' (2002) 1 Canadian Journal of Law and Technology 2.

Non-Peer Reviewed Journal Articles

Alana Maurushat, 'Cybersecurity and Cyber Insurance,' The International Council for Commercial Arbitration Conference Proceedings, Sydney 2018, Kluwer Law International 2019

Ciarran Finnane and Alana Maurushat, 'Managing Cybersecurity Risks Through Cyber Insurance' (2016) Precedent.

Atul Vidhata, Hadeel Al-Alosi and Alana Maurushat, 'The Role of Bystanders in Cyberbullying' (2016) Precedent.

Maurushat and Renee Watt, 'The Limits of Internet Filtering' Internet Law Bulletin (March 2008).

Graham Greenleaf, Alana Maurushat, Cate Bond and David Vaile, 'Not A Fair Trade: Australia's TPM Protection and AUSFTA-Inspired Reforms' UNSWLRS 19 (2007)

Alana Maurushat, 'Who let the Cat out of the Bag? Internet Data Leakage and its Implications for Privacy Law and Policy in Hong Kong' (2006) 38 Hong Kong Law Journal 1.

Alana Maurushat, '*Ecuyer et Aéroports de Montréal*: Canada's private sector privacy law sidelined by labour code' (2004) 10 Privacy Law & Policy Reporter 3.

Public Reports

Alana Maurushat, 'Australian Internet Freedom 2011' in Sarah Cooke et al (eds), *Internet Freedom Index*, Freedom House (2012)

Alana Maurushat, 'Australian Internet Freedom 2012' in Sarah Cooke et al (eds), *Internet Freedom Index*, Freedom House (2013)

Alana Maurushat, 'Australian Internet Freedom 2013' in Sarah Cooke et al (eds), *Internet Freedom Index*, Freedom House (2014)

Alana Maurushat, 'Australian Internet Freedom 2014' in Sarah Cooke et al (eds), *Internet Freedom Index*, Freedom House (2015)

Alana Maurushat, 'Australian Internet Freedom 2015' in Sarah Cooke et al (eds), *Internet Freedom Index*, Freedom House (2016)

Alana Maurushat, 'Australian Internet Freedom 2016' in Cooke, S. et al (eds), *Internet Freedom Index*, Freedom House (2017)

Alana Maurushat, *Enabling a Culture of Open Data* (2017). For the Information and Privacy Commissioner NSW.

Alana Maurushat, et al. *Technical Country Reports* (2017). For the Information and Privacy Commissioner NSW. (I was project lead and wrote 60% of this report)

Alana Maurushat, *Cybersecurity and Human Rights* (2016). United Nations Invited Keynote Lecture for the China branch of the United Nations, For the Australian Human Rights Commission. (translated to Chinese and distributed to the 700 members of the Chinese United Nations training delegates)

Non-publicly Available Reports for Australian and Canadian Governments

Open Data – Review of Barriers to Open Data (2015)

With Alanah James, David Vaile, Louis de Koker, Lyria Bennett-Moses and Alana Maurushat

CRC Big Data and National Security Methodology Report (2016)

Janet Chan, Louis de Koker, Lyria Bennett-Moses, Alana Maurushat, Danuta Mendehlson, and David Vaile

CRC Big Data and National Security Comparative Report (2016)

Janet Chan, Louis de Koker, Lyria Bennett-Moses, Alana Maurushat, Danuta Mendehlson, and David Vaile

CRC Big Data and National Security Australia Report (2016)

Janet Chan, Louis de Koker, Lyria Bennett-Moses, Danuta Mendehlson, and David Vaile

I did 37 interviews and helped edit the report.

CRC Big Data and National Security Canada Report (2016)

Alana Maurushat

CRC Big Data and National Security Risks and Opportunities (2016)

Alana Maurushat

CRC Agile Risk Management for Securing Big Data (2016)

Alana Maurushat

Ethical Hacking: A Report for the Minister of Public Safety Canada / Le Piratage: Un Rapport pour le Ministre de la Sécurité publique du Canada (2012).

Alana Maurushat

Submissions

Stanley Shanapinda and Alana Maurushat, Review of the Telecommunications and Other Legislation Amendment Bill 2016, submission to the Parliamentary Joint Committee on Intelligence and Security (2017).

Matthew Keely, Lyria Bennett-Moses, Michael Legg, Fleur Johns, Alana Maurushat and Daniel Chung, Justice for Everyday Problems: Civil Justice in New South Wales, submission on Law Access and Technology to New South Wales Attorney General (2017.)

Jill Slay, Greg Austen and Alana Maurushat, submission to Prime Minister's Cabinet on Cybersecurity Strategy (2016)

Alana Maurushat, David Vaile, Melinda Bolton, Lauren Stubb and Kendy Ding, Serious Data Breach Notification Submission to the Attorney General (2016)

Alana Maurushat and David Vaile, Data Retention Scheme to the Attorney General (2012), submission to the Attorney General.

Alana Maurushat, Proposed Data Breach Notification Scheme (2012), Submission to the Attorney General.

Alana Maurushat, Cybercrime Legislation Amendment Bill (2011), submission to the Attorney General.

Lyria Bennett Moses, David Vaile, Dan Cater, and Alana Maurushat, Submission on ALRC's Serious Invasions of Privacy in the Digital Era Discussion Paper 80 (12 May 2014). <http://www.alrc.gov.au/inquiries/invasions-privacy/submissions> or http://www.alrc.gov.au/sites/default/files/subs/98.org_unsw_cyberspace...

David Vaile, Alana Maurushat, and Lyria Bennett Moses, Submission on Privacy Amendment (Privacy Alerts) Bill (20 June 2013) Senate Standing Committee on Legal and Constitutional Affairs. http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Legal

Alana Maurushat, *Hackers, Fraudsters and Botnets: Tackling the Problem of Cyber Crime – The Report of the Inquiry into*

Cyber Crime Invited Submission to the House of Representatives Standing Committee on Communications, Parliament of Australia (2010) http://aph.gov.au/house/committee/coms/cybercrime/report/full_report.pdf

Abi Paramaguru, David Vaile, Catherine Bond, and Alana Maurushat (October 22, 2007)
Copyright Infringement Notices Scheme: A Submission to the Attorney-General's Department

Ian Kerr, Alana Maurushat and Christian Tacit (Nelligan, O'Brien, Payne Law Firm)
Technical Protection Measures: Trends in Technical Protection Measures and Circumvention Technologies
Online Government publication for the Department of Canadian Heritage (2003)

Ian Kerr, Alana Maurushat and Christian Tacit (Nelligan, O'Brien, Payne Law Firm)
Technical Protection Measures: The Legal Protection of Technical Protection Measures
Online Government publication for the Department of Canadian Heritage (2003)

Other

The OpenNet Initiative (a collaborative partnership between the Citizen Lab at the University of Toronto, the Berkman Center for Internet & Society at Harvard Law School, and the Advanced Network Research Group at the Cambridge Security Programme)
Report on Internet Filtering in China in 2004-2005

Select Conference Keynotes, Invited Panelist, And Public Lectures

Artificial Intelligence and the Law
Conference, Brasilia, Brazil
Cybersecurity and AI
Keynote 2018

Cyber Storm Policy
An invite only cyber attack simulation involving Australian Defence, US Defence, critical infrastructure organisations and a few academics where we contemplate future policy options for cybersecurity based on emerging threats.
UNSW Canberra
Participant February 2019

Workshop on Security Intelligence and Surveillance in the Big Data Age
Privacy, Oversight and Information Sharing Frameworks for Big Data and National Security – a Comparison between Canada and Australia
Panelist (October 2017)

RAND Corporation
Ethical Hacking Analytics on the Dark Market
October 2017

Big Data, the General Data Protection Regulation (GDPR) and Data Localisation
Workshop organised by Alana Maurushat for a Senior Chinese Delegation including:
China Mobile Communications Corporation, the National Office of Network Information, China Telecom Group, National Information Centre, and Beijing Institute of Information in Applied Technology

Australian Cyber Security Centre 2017 Conference
Security Vulnerability and Exploit Markets – Revisiting Cybersecurity Policy Post Tallin Manual v2 and Wassenaar Arrangement
Panelist (March 2017)

FST Government
Rebooting the Cyber Security Framework: Are we on the Right Track?
Panelist (May 2017)

The University of Melbourne
Apple v FBI: Encryption Policy
Public Lecture (October 2016)

The Australian Political Studies Association Conference 2016
Metadata Surveillance
Panelist (September 2016)

RAND 360 Cyber Security Game
The 360° Cyber Game was held by ANU's National Security College in partnership with RAND Corporation — a non-profit think tank from the US, where 90 influential stakeholders across government, business and academia helped prepare Australia's Prime Minister's Cabinet for future cyber security challenges.
Participant (December 2016)

Copenhagen Business School
Cybersecurity Policy for Ethical Hacking
Public Lecture September 2015

BrainFood UNSW Open Public Lecture
It won't happen to me" - Cybercrime Myths and Misconceptions
Public Lecture (May 2012)

Forced Transparency Conference, The University of Melbourne
Forcing the Line of Transparency through Ethical Hacking
Keynote Speaker (November 2011)

Australian Federal Police High Tech Crime Conference
Cybercrime Trends
Keynote Speaker (September, 2010)

Computer Security Institute (Annual Conference, Washington, DC)
Data Breach Notification Laws
Keynote Speaker (October 2009)

The University of Edinburgh
'Deputizing Sheriffs in Cyber Frontiers: Russian organized crime, botnets and the cyber activists and vigilantes who operate in this space'
Public Guest Lecture, AHRC Research Centre for Studies in IP and IT Law, September 22, 2008

Conference of Copyright Law Association of Japan
'Transactional Copyright: Licensing Tailored Uses'
Tokyo, Japan (December, 2002)
Keynote presenter.

I have presented at over 100 conferences in disciplines of Cybersecurity, Cybercrime, Information Technology Law, Artificial Intelligence, Political Science, Information Technology Philosophy, Big Data, Intellectual Property, Business, Human Rights and more.