

Request to be included

If you completed a PhD regarding an element of electronic evidence and electronic signatures, or are involved in a research project in this field, and would like to have your details added to our Current Research section or PhD listing, please download and complete a [submission form](#) (docx) and send by email to: stephenmason@stephenmason.eu

PhDs completed

Name of candidate: **Khaled Ali Aljneibi**, LLB, LLM (Dubai)

University at which the PhD is registered and the awarding institution: Bangor University

Department or faculty: Law.

Title of the degree: PhD

Title of the thesis:

The Regulation of Electronic Evidence in the United Arab Emirates: Current Limitations and Proposals for Reform

Brief description:

Due to the crucial role that electronic evidence is now playing in the digital age, it constitutes a new form of evidence for prosecutors to rely on in criminal cases. However, research into the use of electronic evidence in the United Arab Emirates (UAE) is still in its initial phase. There have been no detailed discussions on the procedural aspects associated with electronic evidence when investigating crimes, or the problems and challenges faced by law enforcers when handling electronic evidence. In addition, there has also been no detailed explanation of the ideal investigation process, such as the processes involved in computer search and seizure, and forensic investigation. As a result, the understanding and awareness of how to regulate and combat criminal cases that rely on electronic evidence is incomplete. In such

situations, offenders usually take advantage of this lack of prescription in law. Because the understanding and awareness levels associated with electronic evidence is not perfect in the UAE, the UAE needs to promulgate new rules for handling electronic evidence as its laws are currently focused on traditional eyewitness accounts and the collection of physical evidence. Thus, it is very important that issues related to the existing approaches pertaining to electronic evidence in criminal procedures are identified, and that reform proposals are developed, so that new rules for handling electronic evidence can be adopted to effectively combat crime, by making full use of it.

This thesis examines the problems and challenges currently affecting the regulation of electronic evidence in the UAE, and contributes to the body of academic literature in this area. Such a contribution is appropriate in the UAE context, where the law currently lacks sufficient academic input, especially concerning electronic evidence. The thesis makes actual recommendations as to how the substantive law may be reformed in the form of draft articles and includes an analysis as to how the process of prosecution and evidence collection can be facilitated. In particular it suggests that the electronic evidence process should be regulated in order to facilitate effective investigation and make full use of electronic evidence. This will ensure that electronic evidence is used in a transparent manner to preserve the integrity of criminal procedure, thereby safeguarding the accused, whilst at the same time facilitating prosecution and trial proceedings.

Supervisors: Dr. Yvonne McDermott and Professor Dermot Cahill

External markers: Professor Gavin Dingwal and Mr Griffiths Aled

Date of registration of the PhD: 1 May 2010

Date of submission of the PhD thesis: May 2014

Date PhD was awarded: 1 June 2014

Name of candidate: **Maria Astrup Hjort**

Contact information: m.a.hjort@jus.uio.no

URL:

<http://www.jus.uio.no/ior/personer/vit/mariash/index.html>

University: Universitet i Oslo (University of Oslo)

Department or faculty: Det juridiske fakultet (The Faculty of Law, Department of Public and International Law)

Title of the degree: PhD

Title of the thesis:

Tilgang til bevis i sivile saker – med særlig vekt på digitale bevis

Access to evidence in civil proceedings – with particular emphasis on digital evidence

Brief description (it will be helpful if you provide this information in both your native language and in English):

Avhandlingen tar utgangspunkt i et scenarium der en part vet eller tror at det eksisterer materiale som kan brukes som bevis i en kommende eller verserende rettssak, og at parten ikke selv har hånd om dette beviset. Hovedproblemstillingen er i hvilke tilfeller og på hvilke betingelser parten kan få tilgang til beviset. Problemstillingen fordrer en rettsdogmatisk analyse av de tre fremgangsmåtene for tilgang til realbevis; å få bevis stilt til rådighet, bevisopptak og bevissikring.

En type bevis som det ofte er utfordrende å få tilgang til, er digitalt lagrede bevis. Mens fysiske gjenstander stort sett er klart definert og avgrenset, er digitalt lagret informasjon dynamiske størrelser i stadig endring som gjerne er lagret sammen med en mengde annen informasjon uten relevans for saken. I tillegg er digitalt lagret informasjon lett å kopiere, manipulere og slette. Disse trekkene utfordrer spørsmålet om tilgang, både praktisk og rettslig. Digitale bevis er derfor godt egnet til å belyse spørsmål knyttet til bevis tilgangsinstituttet. Det er imidlertid vanskelig å behandle alle bevis tilgangsspørsmål med utgangspunkt i digitale bevis, og noen spørsmål behandles

derfor for realbevis generelt. Hovedvekten vil likevel - såfremt det er mulig – være på digitale bevis.

Avhandlingen har et komparativt tilsnitt, der svensk, dansk og engelsk rett er med på å belyse norsk rett.

The thesis is based on a scenario where a party knows or believes that there exists material that can be used as evidence in an upcoming or pending case and where the party is not in possession of this evidence. The main question is in what circumstances and on what conditions the party can get access to the evidence. The problem requires a dogmatic analysis of the three procedures for access to real evidence according to Norwegian law; the obligation to make evidence available, taking of evidence and securing of evidence.

One type of evidence that it is often challenging to get access to is digitally stored evidence. While physical objects are generally clearly defined and delineated, digitally stored information is dynamic and often stored together with a plethora of other information, irrelevant to the case. In addition, digitally stored information is easy to copy, manipulate, and delete. These features are challenging the issue of access, both practically and legally. Digital evidence is therefore well suited to shed light on issues related to the provisions on access to evidence. It is however difficult to treat all questions related to access to evidence based on digital evidence, and some questions are therefore discussed based on real evidence in general. The emphasis will anyway – if possible – be on digital evidence.

The thesis has a comparative perspective, where Swedish, Danish and English law shed light on Norwegian law.

Supervisors: Professor Inge Lorange Backer and Professor Magne Strandberg

Date of registration for degree: 1 February 2007

Date of submission: 13 March 2015

Date of defence: 6 May 2015

Name of candidate: **Giuseppe Vaciago**

Contact information: giuseppe.vaciago@uninsubria.it
giuseppe.vaciago@replegal.it

URL: <http://www.replegal.it/it/tutti-i-soci/118-giuseppe-vaciago.html>

University: Università degli Studi di Milano-Bicocca
(University of Milan – Bicocca)

Department or faculty: Facoltà di Giurisprudenza
(Faculty of Law)

Title of the thesis:

Digital forensics, procedura penale Italiana e diritti fondamentali dell'individuo nell'era delle nuove tecnologie

Digital Forensics, Italian Criminal Procedure and Due Process Rights in the Cyber Age

Brief description:

Il mondo digitale interagisce con la giustizia in molteplici segmenti: sempre più numerosi sono i casi in cui esso è sede di reati (dal furto di identità, fino ad arrivare al cyberterrorismo) e non lontani sono i tempi in cui esso sostituirà il tradizionale modo di intendere il processo (questo sta già accadendo nel processo civile e presto accadrà anche nel processo penale). Come Sherlock Holmes nel XIX secolo si serviva costantemente dei suoi apparecchi per l'analisi chimica, oggi nel XXI secolo, egli non mancherebbe di effettuare un'accurata analisi di computer, di telefoni cellulari e di ogni tipo di apparecchiatura digitale.

La presente opera si prefigge due compiti: il primo è quello di offrire al lettore un'analisi della prova digitale e dell'articolato sistema di regole e procedure per la sua raccolta, interpretazione e conservazione. La casistica giurisprudenziale, non solo italiana, ha dimostrato come l'errata acquisizione o valutazione della prova digitale possa falsare l'esito di un procedimento e come il digital divide sofferto dalla maggior parte degli operatori del diritto (magistrati, avvocati e forze di polizia) possa squilibrare le risultanze processuali a favore della parte digitalmente più forte.

This paper focuses specifically on digital forensics and the rules and procedures regulating the seizure, chain of custody and probative value of digital evidence, with particular emphasis of three distinct aspects. Firstly, the extremely complex nature of digital evidence; Secondly, the dire need for an adequate level of computer literacy amongst judges, lawyers and prosecutors. The last, but no less crucial aspect involves the potentially prejudicial effects of invasive digital forensic techniques (such as the remote monitoring of data stored on hard drives) on the suspects fundamental freedoms (the right to privacy and the inviolability of personal correspondence) and due process rights (including the privilege against self-incrimination and the right to an adversarial hearing on the probative value of the electronic data proffered as evidence).

Supervisor: Professor Andrea Rosseti

External marker: Giovanni Sartor

Date of registration for degree: 21 March 2011

Date of submission: 24 January 2011

Publication of thesis: January 2012

URL:

<https://boa.unimib.it/handle/10281/20472?mode=full.9>

Name of candidate: **George Dimitrov**

Contact information: george.dimitrov@dpc.bg

University at which the PhD was registered and the awarding institution: Katholieke Universiteit Leuven

Department or faculty: Interdisciplinair Centrum voor Recht und Informatica

Title of the degree: PhD in Laws

Title of the thesis: Liability of Certification Service Providers

Supervisor: Professor Dr. Jos Dumortier

Thesis published: George Dimitrov, *Liability of Certification Services Providers* (VDM Verlag Dr. Müller, 2008)

PhD RESEARCH

Name of candidate: **Adrian McCullagh**

University at which the PhD is registered and the awarding institution: Queensland University of Technology

Department or faculty: Information Security Research Centre, Faculty of Information Technology

Title of the degree: PhD

Title of the thesis: The Incorporation of Trust Strategies in Digital Signature Regimes

Brief description: The aim of this research is to document the differences between a traditional signature and an electronic signature including in particular one form of electronic signature known as a "digital signature". It will be established that it is a fallacy for legislators to insist upon functional equivalence between electronic/digital signatures and traditional signatures from a legal perspective. Many jurisdictions have not only advocated functional equivalence but in so doing have also approached the legal recognition of signing digital documents from a technology neutral language perspective in their respective electronic signature legislative regimes, whilst at the same time attempting to create some magical certainty for commerce to rely on. In short, there is, as this thesis will show, a clear contradiction concerning technology neutral language in electronic signature regimes and the certainty that commerce requires. Technology neutral language regimes provide no guidance to either the judiciary or commerce in their dealings with enforceable contracts that are evidenced electronically and where the "signature" is in dispute. There are, as will be established in this thesis, too many fundamental differences for functional equivalence to be achieved. This thesis does not attempt to define an electronic signature, as any definition would most likely overtime become outdated as technology advances such concept, but this thesis does describe a set of elements which if technologically achievable would closely correspond to the traditional concept of a signature as commercially and legally understood.

Supervisors: Professor William Caelli and Professor Peter Little

External markers: Professor Alan Tyree and Professor Bob Blackley Snr, University of Texas A&M

Date of submission of the PhD thesis: July 2001

Date PhD was awarded: 3 February 2001

Request to be included

If you are currently doing a PhD regarding an element of electronic evidence and electronic signatures, and would like to have your details added to our Current Research section, please download and complete a [submission form](#) (docx) and send by email to: stephenmason@stephenmason.eu

Candidates taking PhDs

Name of candidate: **Justin de Jager**

University at which the PhD is registered and the awarding institution: The University of Cape Town

Department or faculty: The Faculty of Law, Commercial/Public Law Departments

Title of the degree: PhD

Title of the thesis:

An evaluation of the rules of evidence in South Africa pertaining to electronic data messages

Brief description:

Traditionally, courts in South Africa have followed the English common law. As a result South African courts take an exclusionary approach to hearsay evidence, which requires that such evidence should be excluded if it cannot be accommodated within a recognised exception. The problem, however, is that data messages do not adhere to what is traditionally seen as the categories for excluded and admitted evidence. Electronic evidence must further overcome the rules relating to authenticity and the production of the original version.

Over the years a number of legislative attempts have emerged which sought to address these challenges. The current Electronic Communications and Transactions Act drew heavily on the UNCITRAL Model Law on Electronic Commerce. The provisions of the ECT Act have, however, been applied with a great deal of circumspection by the courts

and the interpretation of the Act has proven haphazard at best.

Currently the South African Law Reform Commission is undertaking an extensive enquiry into the reform of the law of evidence in South Africa. This PhD is aimed at grappling with the difficulties highlighted by the Law Reform Commission's work and evaluating the rules of evidence pertaining to electronic evidence. It is hoped that from the final document a handbook can be produced that will act as a guide to practitioners in South Africa.

Supervisors: Dr Debbie Collier and Professo Pamela Schwikkard

External marker: To be determined

Date of registration of the PhD: February 2014

Date of submission of the PhD thesis: To be determined

Name of candidate: **Bo Liu**

University: 中国政法大学 (China University of Political Science and Law)

Department or faculty: 证据科学研究院 (Institute of Evidence Law and Forensic Science)

URL: <http://zikxyjy.cupl.edu.cn/en>

Title of the degree: PhD

Title of the thesis:

电子证据运用环境研究

Study on the judicial environment for electronic evidence

Brief description:

针对过于强调鉴定和公证对电子证据运用的作用的中国司法实践，反思哪些因素对于电子证据的运用有重要的影响。论文将从三方面——程序性立法、证据规则及相关行为人展开讨论

In Chinese judicial practice, too much emphasis was given to authentication by forensic experts and notary organs in the application of electronic evidence. What is the main issue for the application of electronic

PHD RESEARCH

evidence on earth? This dissertation will try to answer it from three main aspects, including the legal frame work, evidentiary rules and the participants.

Supervisor: Professor Lin Chang

Date of registration for degree: September 2013

Anticipated date of submission: May 2016

Name of candidate: **Jonas Ekfeldt**

Contact information: Jonas.Ekfeldt@juridicum.su.se

URL: <http://su.avedas.com/converis/project/314>

University at which the PhD is registered and the awarding institution: Stockholms universitet (Stockholm University)

Department or faculty: Juridiska fakulteten (Faculty of Law)

Title of the degree: LL.D., Dr. iur., Doctor of Laws

Title of the thesis:

Värdering av informationstekniskt bevismaterial

Legal evaluation of digital evidence

Brief description:

Avhandlingsprojektet har som huvudsyfte att identifiera problemområden som framträder vid viss nationellt rättsligt påbjuden hantering och värdering av informationstekniskt bevismaterial. Informationstekniskt bevismaterial ges i avhandlingen en vidsträckt generisk definition, rättsligt och tekniskt anknuten, innefattande vad som i allmänna ordalag ofta beskrivs som 'digitala bevis', 'elektroniska bevis' och 'it-forensiska bevis'. I avhandlingen görs även bevisrättsliga analyser av aktuellt förekommande civila och polisiära s.k. 'it-forensiska analysprotokoll'.

The dissertation project has as its primary aim to identify problem areas that appear during certain legally imposed handling and evaluation of digital evidence, from a national perspective. Digital evidence is given an extensive generic definition, legally and technically based, encompassing what is generally also described as 'electronic evidence' and 'IT (forensic) evidence'. The

thesis also includes evidence law analyses of currently occurring 'IT forensic analysis reports' from civilian and police sources.

Supervisors: Professor Cecilia Magnusson Sjöberg and Professor Em. Christian Diesen

External marker: not applicable

Date of registration of the PhD: 2011

Anticipated date of submission: Autumn 2015/Spring 2016

Name of candidate: **Allison Stanfield**

Contact information: a.stanfield@elaw.com.au

URL: <http://www.elaw.com.au>

University: Queensland University of Technology

Department or faculty: Faculty of Law

Title of the degree: PhD

Title of the thesis: The Authentication of Digital Evidence

Brief description:

An analysis of whether the existing rules of evidence sufficiently protects the integrity of electronic evidence in contemporary times.

Supervisors: Professor Bill Duncan and Professor Sharon Christensen

External marker: TBC

Date of registration for degree: 2011

Date of submission: 2015

Name of candidate: **Kristel De Schepper**

URL:

<http://www.kuleuven.be/wieiswie/en/person/00060086>

University: Catholic University of Leuven, Belgium

Department or faculty: Faculteit Rechtsgeleerdheid, Instituut voor Strafrecht (Law Faculty, Institute of Criminal law)

Title of degree: PhD

Title of the thesis:

Strafbaarstelling van spionage en informatiemisbruik ter bescherming van bedrijfsgeheimen

Criminalisation of espionage and information abuse to protect business secrets

Brief description:

Het strafrecht koppelt negatieve gevolgen aan de schendingen van rechtsgoederen en mag daarom pas als laatste redmiddel worden ingezet. In een informatiemaatschappij nemen deze rechtsgoederen steeds meer een immateriële vorm aan (dematerialisering). Deze dematerialisering daagt het strafrecht uit. Bij het strafbaar stellen van gedragingen (en bijgevolg het beschermen van rechtsgoederen) lijkt de normgever de neiging te hebben om te focussen op de al dan niet materiële vorm of op de fysieke drager van goederen. De vraag rijst of hij hierdoor de inhoud van de informatie niet teveel op de achtergrond plaatst. De vorm zal immers steeds minder belangrijk worden naargelang de samenleving (en haar rechtsgoederen) steeds meer wordt geïnformatiseerd. Daarnaast kan de inhoud ook belangrijk zijn terwijl deze net moeilijker te beschermen is door de informatisering.

Dit onderzoek gaat uit van het vermoeden dat de normgever bij de strafbaarstelling meer aandacht moet hebben voor het type rechtsgoed dat hij wil beschermen. Aan de hand van een gevalstudie van de strafrechtelijke bescherming van bedrijfsgeheimen, onderzoeken we of een betere focus op het begrip rechtsgoed bij de strafbaarstelling niet tot betere wetgeving kan leiden en zo bijdragen tot de toepassing van het strafrecht als laatste toevlucht.

Criminal law incriminates behaviour which violates legal interests, but only as a last resort. Is our criminal law up to the challenges of the information society? In an information economy a different approach towards the protection of valuable corporate information should be considered. Management and corporate policy decisions nowadays are taken in the 'virtual world', and economically valuable information is increasingly stored on digital data systems. Secret corporate

information can be very valuable and as such worth protecting against espionage by insiders or outside competitors.

Existing offences relate to the illegal access, use or abuse of corporate (digital) information and hence they often focus on the means used to access the data, rather than on their actual content.

The research hypothesis is that a focus on and a sharper definition of the legal good protected by specific offences, will lead to more respect for the idea of criminal law as the ultimate resort and to a more efficient use of criminal law.

On the basis of a case study of corporate espionage and the violation of corporate secrets, the research intends to establish the criteria which should guide lawmakers considering the creation and use of criminal law. It hopes to illustrate how these criteria interact in the pursuit of the criminal protection of information as an ephemeral, itinerant and sometimes opaque legal interest.

Supervisors: Professor dr. Frank Verbruggen

Date of registration for degree: 1 September 2011

Anticipated date of submission: 1 September 2016

Name of candidate: **Charlotte Conings**

URL:

<http://www.kuleuven.be/wieiswie/en/person/00078626>

University: Catholic University of Leuven, Belgium

Department or faculty: Faculteit Rechtsgeleerdheid, Instituut voor Strafrecht (Law Faculty, Institute of Criminal law)

Title of degree: PhD

Title of the thesis:

Een coherent regime voor strafrechtelijke zoekingen in de fysieke en digitale wereld

A coherent criminal procedure regime for search in the physical and digital world

Brief description:

De procedureregels die burgers beschermen tegen zoekingen naar strafrechtelijk relevante informatie, zijn erg versnipperd: huiszoeking, netwerkzoeking, fouillering, telefoon- en informaticatap, bijzondere opsporingsmethoden... Elke vorm van zoeking kent een apart regime met specifieke voorwaarden. Dit is geen typisch Belgisch probleem, de meeste Europese staten kampen er mee. De versnipperde Europese aanpak vloeit immers voor een deel voort uit de strengheid waarmee het EHRM het legaliteitsbeginsel van art.8, 2 heeft ingevuld. In de Verenigde Staten lijkt het 4de amendement bij de Federale Grondwet daarentegen een meer overkoepelend beschermingsmechanisme tegen onverantwoorde zoekingen en beslagen in te houden. De uiteenlopende regelgeving met betrekking tot de zoeking in Europa maakt de bewijsvergaring inefficiënt. Vooral de digitalisering van bewijs doet ons inzien dat de bestaande regelgeving complex, onduidelijk, achterhaald en inconsistent is. Het onderzoek tracht te komen tot een vereenvoudigde regeling voor efficiëntere bewijsvergaring zowel in nationale als in internationale context, die aangepast is aan de digitale realiteit en bestand tegen toekomstige technologische evoluties.

The Belgian criminal procedure regime for searches is very fragmented. It contains specific regulations for house search, for frisking, for strip search, for wire- or data tapping, for visual observation, for infiltration etc. This approach forms part of a bigger legal picture in two different ways. First of all, the fragmentation into detailed sub regimes is an often criticized characteristic of the Belgian Code of Criminal Procedure as such. On the other hand, the fragmented approach is not typical to Belgium but is also known in other parts of Europe. To a certain extent this can be attributed to the severe interpretation of the legality principle of art. 8, §2 ECHR by the European Court of Human Rights.

However, such fragmented criminal procedure regime for searches causes numerous problems and renders evidence gathering inefficient, not only in a national but

also in an international context. Especially digitalization of different types of evidence exposes the complex, unclear, outdated and inconsistent character of the existing legal framework.

This research aims at creating a simplified and clearer comprehensive regulation for searches aimed at gathering criminal evidence, which can make national and international evidence practice more efficient. It should be fit for use in a digitalized society and at the same time be resistant or adjustable to future technological evolutions to the largest extent possible. We will look for a general legal framework for search with certain specific regimes which are necessary to strike a balance between efficient law enforcement and other countervailing legal interests like the right to privacy, due process and human dignity.

Supervisors: Professor dr. Frank Verbruggen and Professor dr. Raf Verstraeten

Date of registration for degree: 1 September 2012

Anticipated date of submission: 1 September 2016