CURRICULUM VITAE Dr Martin Boldt

Date of birth:	Born May 5, 1977 in Lund, Sweden.
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Appointments

2022-present	Team leader (AI team) at Department of Computer Science, BTH.
2021-2022	Acting deputy head of department, Department of Computer Science, BTH.
2019-present	Associated professor (Docent), Department of Computer Science, BTH.
2010-2019	Assistant professor, Department of Computer Science, BTH.
2005-2010	PhD student (50%), School of Computing, BTH.
2005-2010	Adjunct teacher (50%), School of Computing, BTH.
2002-2005	Teacher assistant, School of Computing, BTH.
2001-2002	Software developer at CellPoint Systems, Sweden.

Professional preparation

2005-2010	PhD in Computer Science with emphasis on Information Security, BTH.
2002-2003	Master in Software Engineering at BTH.
1998-2001	Bachelor in Software Engineering at BTH.

Theses titles

2010	PhD thesis, "Privacy-Invasive Software"
2007	Lic. thesis, "Privacy-Invasive Software: Exploring Effects and Countermeasures"
2003	MSc thesis, "Investigating Spyware in Peer-to-Peer Tools"

Research

My research focuses on data analysis in the domains such as computational criminology, information security and telecom, which are approached using various methods from the interdisciplinary field of data science. Most research is software-related and involves various approaches from applied machine learning and more generally data-science. Together with Swedish law enforcement the research aims to investigate and improve data-driven methods for mitigation of crimes as well as improved clearance rates. The research within the telecom domain focused on anomaly detection and fault prediction in different telecom settings.

Teaching

All in all, I have been involved in teaching at least 15 unique courses on both under-graduate and graduate levels, as well as two Doctoral student courses. Out of these courses I have been course responsible in at least 10 of them. For some of the courses the course material has been created from scratch, while in others I have been responsible for parts of the course material. As I have a background in computer security and since BTH provides two computer security programmes, many of the courses that I have been involved in have been in that field. However, since 2016 much more of my teaching time have been scheduled for supervision and examination of degree projects. Between 2016-2018 I was the examiner for Master's thesis projects in computer science

at BTH. Apart from individual courses, I was the manager for a Bachelor programme in IT Security between 2010 – 2012. In 2018 I was assigned as manager for a 5-year programme in AI and machine learning which started autumn 2019.

Supervision experience

I'm currently supervising two PhD students as main supervisor. I have previously supervised three doctoral students that have successfully defended their Ph.D. theses. The first doctoral student was Dr Anton Borg who started his doctoral studies in 2009. I was included as a supervisor from the time he received his Licentiate degree in 2012 (approximately half way) until he defended his Ph.D. thesis in 2014. The second doctoral student was Dr Fredrik Erlandsson that I supervised from his start in 2012 until he successfully defended his Ph.D. thesis in 2017. The Third PhD student is Khurram Shahzad from the time he received his Licentiate degree in 2013, until he defended his Ph.D. thesis in 2024. In addition to doctoral students I have also supervised some 30 successfully defended Master's degree projects.

Commitments of trust

When it comes to commissions of trust commitments I am one of the chairs for the 35th Swedish Artificial Intelligence Society (SAIS'23) annual workshop in Karlskrona. I was also general chair for general chair for the IEEE European Intelligence and Security Informatics Conference (EISIC'18) in 2018. I was a teacher representative in the university board 2016-2019. During 2020 I was assigned stand-in pro-prefect of the department, and in 2021 I was assigned head of the AIDA team (including personnel responsibility) consisting of approx. 20 members.

Review commitments

As a senior researcher I'm peer-reviewing work for journals and conferences, e.g., Springer's Knowledge and Information Systems and Elsevier's Expert Systems with Applications. I'm also a member of the scientific program committee for various conferences and workshops which involves peer-reviewing submitted papers. During the last years I have reviewed in for instance: NIPS, ICML, LOD, UAI, and SAIS.

Project funding obtained

2024-2026	~100' € from Skandia Research Fund, "Mobile app for measuring and analyzing
	young citizens' safety", donation
2024-2024	~300' € from NKT, "Data-driven production planning and fault prediction",
	applicant together with Prof. Håkan Grahn and Dr. Anton Borg
2023-2025	~480' € from Swedish Research Council (VR), "Data-driven interdisciplinary
	methods to combat crime and fear using police CCTV", applicant together with
	Malmö Univ. and Univ. of New Haven
2022-2025	~220' € from KK Foundation, "Senior lecturer in computer science", applicant
	together with Prof. Håkan Grahn
2021-2024	~120' € from Länsförsäkringar Research Fund, "Applied computer science in
	crime prevention ", co-applicant – main driver was Manne Gerell at MaU
2019-2020	~35' € from Vinnova, "Analysis of patients' incident reports within
	healthcare using learning algorithms", applicant together with Blekinge Hospital
2015-2016	~250' € from Vinnova FRÖN, "Increasing efficiency in law enforcement using
	data science methods", main applicant and project leader.
2014-2015	~200' € from Regional Council of Blekinge, "Open data and predictive models
	in law enforcement", main applicant and project leader.

2012-2014 ~660' € from EU's Regional Development Fund, "Computer-based support for improved knowledge of serial crime", main applicant and project leader.

2008-2011 ~180' € from Swedish Internet Infrastructure Foundation, "Secure e-mail amongst malicious software", main applicant.

Publications

ID	JOURNAL ARTICLES (PEER-REVIEWED)
118	Lars Lundberg, Martin Boldt, Anton Borg and Håkan Grahn, "Bibliometric Mining of Research Trends in Machine Learning",
,10	in AI, 5(1), 2024
J17	Anton Borg, Jim Ahlstrand and Martin Boldt, "Improving Corporate Support by Predicting Customer E-mail Response Time:
	Experimental Evaluation and a practical Use Case", in Springer's Lecture Notes in Business Information Processing, 2021
	Martin Boldt, Anton Borg, Selim Ickin, Valentin Kulyk and Jörgen Gustafsson, "Alarm prediction in cellular base stations
J16	using data-driven methods", accepted for <i>IEEE Transactions on Network and Service Management</i> , ISI impact factor: 3.878 , 2021
J15	Anton Borg and <u>Martin Boldt</u> , "Using VADER Sentiment and SVM for predicting customer response sentiment", accepted for journal <i>Expert Systems With Applications</i> ISI impact factor: 5 452 , 2020.
	Ana Luiza Dallora . Ola Kvist. Johan Sanmartin Berglund. Sandra Diaz Ruiz. Martin Boldt. Carl-Frik Flodmark. Peter
J14	Anderberg, "Predicting chronological age from bone age assessment stagings, socioeconomic factors, physical activity,
	parents' origin, BMI and Tanner Scale", accepted for JMIR Medical Informatics, ISI impact factor: 2.580, 2020
J13	Anton Borg, Martin Boldt, Oliver Rosander and Jim Ahlstrand, "Decision support system for e-mail classification using
	machine learning and word embeddings for improved customer support", in journal of Neural Computing and
	Applications, Springer, ISI impact factor: 3.570 , 2020
J12	Martin Boldt, Anton Borg, Selim Ickin, and Jörgen Gustafsson, "Anomaly detection of event sequences using multiple
	temporal resolutions and Markov chains, in knowledge and information systems, isi impact: 2.247, 2019
J11	100 Fortune global companies" in International Journal of Information Security and Privacy ISI impact: 0 550 2019
	Martin Boldt. "An evaluation of the efficiency and quality of structured crime reports", in Nordic Journal of Policing
J10	Studies, 2018
10	Martin Boldt, Anton Borg, Martin Svensson, Jonas Hildeby, "Predicting burglars' risk exposure and level of pre-crime
,,,	preparation using crime scene data", in Journal of Intelligent Data Analysis, ISI impact: 0.631 , 2018
J8	Martin Boldt, Andreas Jacobsson, Dejan Baca and Bengt Carlsson, "Introducing a novel security-enhanced agile software
	development process", in International Journal of Secure Software Engineering, 2017
J7	Fredrik Erlandsson, Plotr Brodka, Martin Boldt and Henric Jonnson, "Do we really need to catch them all? User-guided
	Social media crawling method, in Entropy, ISI Impact: 1.821, 2017 Martin Boldt and Anton Borg, "Evaluating temporal analysis methods using residential hurglany data" in International
16	Journal of Geo-Information – Special Issue "Frontiers in Spatial and Spatiatemporal Crime Analytics" ISI impact factor:
	1.502 , 2016
	Anton Borg and Martin Boldt, "Clustering residential burglaries using modus operandi and spatiotemporal information", in
15	International Journal of Information Technology & Decision Making, World Scientific, ISI impact: 1.406, 2016
14	Andreas Jacobsson, Martin Boldt and Bengt Carlsson, "A risk analysis of a smart home automation systems", in Journal of
,4	Future Generation Computer Systems, ISI impact: 2.786, 2015
J3	Anton Borg, Martin Boldt, Niklas Lavesson, Ulf Melander, Vaselka Boeva, "Detecting serial residential burglaries using
	clustering", in Journal of Expert Systems with Applications, ISI impact: 2.339, 2014
J2	agreements" in International Journal of Knowledge and Information Systems, ISL impacts 2,225 , 2000
	agreements, in methational Journal of Nioweuge and information systems, isi impact: 2.223, 2009
J1	factor: 0.768 , 2009
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ID CONFERENCE PAPERS (PEER-REVIEWED)

Anton Borg, Jim Ahlstrand, and <u>Martin Boldt</u>, "Predicting E-mail Response Time in Corporate Customer Support", in proceedings of the 22nd International Conference on Enterprise Information Systems, 2020.
Anton Borg, <u>Martin Boldt</u> and Johan Svensson, "Using conformal prediction for multi-label document classification in e-mail support systems", in proceedings of the 32nd International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, 2019
Martin Boldt and Anton Borg, "A statistical method for detecting significant temporal hotspots using LISA statistics", in

	proceedings of the 8th European Intelligence and Security Informatics Conference, 2017
C21	Anton Borg, <u>Martin Boldt</u> and Johan Eliasson, "Detecting crime series based on route estimations and behavioral similarity", in proceedings of the 8th European Intelligence and Security Informatics Conference, 2017
C20	Martin Boldt and Jaswanth Bala, "Filtering estimated crime series based on route calculations on spatiotemporal data", in
C19	Dejan Baca, <u>Martin Boldt</u> , Bengt Carlsson and Andreas Jacobsson, "A novel security-enhanced agile software development process applied in an industrial setting", in proceedings of the 10th International Conference on Availability, Reliability and Security, Lecture Notes in Computer Science, 2015
C18	Fredrik Erlandsson, Roozbeh Nia, <u>Martin Boldt</u> , Henric Johnson and Felix Wu, "Crawling online social networks", in proceedings of the Second European Network Intelligence Conference, 2015
C17	Raja Khurram Shahzad, Mehwish Fatima, Niklas Lavesson, <u>Martin Boldt</u> , "Consensus decision making in random forests", in Machine Learning, Optimization, and Big Data, Lecture Notes in Computer Science 9432, 2015
C16	Martin Boldt and Anton Borg, "En strukturerad metod för registrering och automatisk analys av brott", in proceedings of the 5th Biennial Nordic Police Research Seminar, 2014
C15	Martin Boldt, Andreas Jacobsson, Bengt Carlsson, "On the risk exposure of smart home automation systems", in proceedings of the 2nd IEEE International Conference on Future Internet of Things and Cloud, 2014
C14	Fredrik Erlandsson, <u>Martin Boldt</u> and Henric Johnson, "Privacy threats related to user profiling in online social networks", in proceedings of 4th IEEE International Conference on Information Privacy, Security, Risk and Trust, 2012
C14	Anton Borg, <u>Martin Boldt</u> and Bengt Carlsson, "Simulating malicious users in a software reputation system", Communications in Computer and Information Science, Vol. 186, 2011
C12	Anton Borg, <u>Martin Boldt</u> and Niklas Lavesson, "Informed software installation through license agreement categorization", in Proceedings of Information Security South Africa, 2011
C11	Martin Boldt, Anton Borg and Bengt Carlsson, "On the simulation of a software reputation system", in Proceedings of the International Conference on Availability, Reliability and Security, 2010
C10	Niklas Lavesson, Paul Davidsson, <u>Martin Boldt</u> and Andreas Jacobsson, "Spyware prevention by classifying end user license agreements", in Studies in Computational Intelligence, Volume 134, 2008
С9	Martin Boldt, Paul Davidsson, Andreas Jacobsson and Niklas Lavesson, "Automated spyware detection using end user license agreements", in proceedings of the Second International Conference on Information Security and Assurance, 2008
C8	Martin Boldt and Bengt Carlsson, "Confidentiality aspects within road user charging systems: the Swedish case", in proceedings of the 15th ITS World Congress, 2008
C7	Bengt Carlsson and <u>Martin Boldt</u> , "Security analysis of the Swedish road user charging system", in Proceedings of the 15th ITS World Congress, 2008
C6	Martin Boldt, Bengt Carlsson, Tobias Larsson, Niklas Lindén, "Preventing privacy-invasive software using online reputations", in Lecture Notes in Computer Science, Volume 4721, 2007
C5	Jan Persson, Paul Davidsson, <u>Martin Boldt</u> , Bengt Carlsson, Marcus Fiedler, "Evaluation of road user charging systems: the Swedish case", in proceedings of the 14th World Congress on Intelligent Transport Systems, 2007
C4	<u>Martin Boldt</u> , Bengt Carlsson, Roy Martinsson, "Software vulnerability assessment – version extraction and verification", in proceedings of the International Conference on Systems and Networks Communications, 2007
C3	Martin Boldt and Bengt Carlsson, "Privacy-invasive software and preventive mechanisms", in proceedings of the International Conference on Systems and Networks Communications, 2006
C2	Martin Boldt and Bengt Carlsson, "Analysing countermeasures against privacy-invasive software", in Proceedings of the International Conference on Systems and Networks Communications, 2006
C1	Andreas Jacobsson, Martin Boldt and Bengt Carlsson, "Privacy-invasive software in file-sharing tools", in Proceedings of the IFIP World Computer Congress, 2004
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W6	Jim Ahlstrand, <u>Martin Boldt</u> , Håkan Grahn and Anton Borg, "Preliminary Results on the use of Artificial Intelligence for
W5	Managing Customer Life Cycles", accepted for publication in proceedings of the 35th SAIS workshop, 2023. Victor Arvidsson Ahmad Al-Mashahedi, <u>Martin Boldt</u> , "Evaluation of Defense Methods Against the One-Pixel Attack on
W4	Deep Neural Networks", accepted for publication in proceedings of the 35th SAIS workshop, 2023. Kenneth Lewenhagen, <u>Martin Boldt</u> , Anton Borg, Manne Gerell, Johan Dahlen, "An interdisciplinary web-based framework for data-driven placement analysis of CCTV cameras", <i>in proceedings of the 9th Swedish Workshop on Data Science</i>
W3	Martin Boldt, Anton Borg and Veselka Boeva, "Multi-expert estimations of burglars' risk exposure and level of pre-crime preparation using on crime scene data", in proceedings of the 30th Annual Workshop of the Swedish Artificial Intelligence
W2	Martin Boldt, Bengt Carlsson and Andreas Jacobsson, "Exploring spyware effects", in Proceedings of the Nordic Workshop
W1	Johan Wieslander, <u>Martin Boldt</u> and Bengt Carlsson, "Investigating spyware on the internet", in Proceedings of the Nordic Workshop on Secure IT Systems, 2003
	workshop on secure in systems, 2005