

Curriculum Vitae

Dr. Markus Hofmann

Personal Details:

Current Position: Senior Lecturer
Department of Informatics
TU Dublin – Blanchardstown
Dublin 15
Ireland

Qualifications: **Certificate in Enquiry Based Learning**, Institute of Technology Blanchardstown, 2010
Ph.D., Trinity College Dublin, 2008
Certificate in Teaching and Learning, National College of Ireland, 2006
Postgraduate Diploma in Statistics, Trinity College Dublin, 2005
MSc. Computing Science (Information Technology for Strategic Management) – DIT, 2003
BA Information Systems Management, Galway Mayo Institute of Technology, 2000

Academic Appointments

2019 – date	Senior Lecturer , Department of Informatics, TU Dublin – Blanchardstown Campus, Ireland
2017 – 2019	Senior Lecturer , Department of Informatics, Institute of Technology Blanchardstown, Ireland
2015-2019	Guest Lecturer in Text Mining , Department of Business Informatics, Trier University of Applied Science, Trier, Germany
2009-2017	Lecturer , Department of Informatics, Institute of Technology Blanchardstown, Ireland
2006-2009	Assistant Lecturer , Department of Informatics, Institute of Technology Blanchardstown, Ireland
2006-2007	Part-time Lecturer , Dublin Institute of Technology, Dublin, Ireland
2002-2006	Associate Faculty Lecturer , National College of Ireland, Dublin, Ireland
2001-2002	Part-time Lecturer , Dublin Institute of Technology, Dublin, Ireland

Professional Activity

Institutions	Chartered Member of the Institute of Logistics and Transport
Professional Bodies	Member of the Irish Learning Technology Association Member of the Irish Computer Society
Appointments	International Smart Cities Conference, 2019 – Advisory Body Scientific and Programme Committee - Universal Design and Higher Education in Transformation Congress (UDHEIT2019), 2019, Dublin Ireland Technical Programme Committee member – 2019 International Conference on Advanced Computing, Networking, and Informatics, India. Scientific Committee and Organising Committee - 7th International conference on meaning and knowledge representation, 2018, Dublin, Ireland Scientific and Programme Committee - Universal Design and Higher Education in Transformation Congress (UDHEIT2018), 2018, Dublin Ireland Technical Programme Committee – Higher Education on Transformation Symposium, 2016, Oshawa, Ontario, Canada. Programme Committee Member of ICEP 2013-2016 (International Conference on Engaging Pedagogy) Annual Information Technology & Telecommunication Conference 2013 – 2015 General Chair & Session Chair Programme and Organising Committee Member of ICEP 2012 (International Conference on Engaging Pedagogy) Session Chair (Pedagogical Practice) of ICEP 2012 (International Conference on Engaging Pedagogy) General Chair of the IT&T Steering Committee, 2012-2015 Local Chair of RCOMM (RapidMiner Community Meeting and Conference) 2011 Officer in Statistics, Irish Central Statistics Office – 2010, 2011, 2012 Local Head Judge in Intel Scifest – Junior Category – 2009, 2010, 2011 Annual Information Technology & Telecommunication Conference 2009, 2010 and 2012– Technical Chair & Web Chair & Session Chair Annual Information Technology & Telecommunication Conference 2008 – Technical Chair & Web Chair Annual Information Technology & Telecommunication Conference 2007 – Web Chair & Organising Committee

Editorial responsibilities

Technical Reviewer of Kao-Tai Tsai (2021) Machine Learning on Big Data - Handbook for Data Science Practitioners, Chapman and Hall/CRC.

Technical Reviewer of Tomas Beuzen (2020) Python Packages, Chapman and Hall/CRC.

Editorial Review Board Member of the International Journal of Business Analytics, Taylor and Francis Online, 2019.

Technical Reviewer of John Tuhaio Chen (2019) Statistical Prediction and Machine Learning, Taylor & Francis.

Technical Reviewer of Tanya Kolosova (2019) Supervised Machine Learning: Optimization Framework and Applications with SAS and R, Taylor & Francis.

Technical Reviewer of “B. Rattner (2016) Statistical and Machine-Learning Data Mining: Techniques for Better Predictive Modeling and Analysis of Big Data, Second Edition, Taylor & Francis”

Technical Editor of “D. Nettelton (2014) Commercial Data Mining, Morgan Kaufmann”

Technical Editor of “A. Chisholm (2013) RapidMiner for Data Mining, By Example, Packt Publishing.”

Annual Information Technology & Telecommunication Conference 2020 – Editor of Proceedings (ISSN 1649-1246)

Annual Information Technology & Telecommunication Conference 2010 – Editor of Proceedings (ISSN 1649-1246)

Annual Information Technology & Telecommunication Conference 2009 – Editor of Proceedings (ISSN 1649-1246)

Annual Information Technology & Telecommunication Conference 2008 – Editor of Proceedings (ISSN 1649-1246)

Annual Information Technology & Telecommunication Conference 2007 – Co - Editor of Proceedings (ISSN 1649-1246)

Reviewer

Journal of Business Analytics

IEEE Symposium Series on Computational Intelligence

Iranian Journal of Science and Technology, Transactions A: Science, 2016

International Conference on Engaging Pedagogy, 2012, 2013, 2014, 2015, 2016

RapidMiner Community Meeting and Conference 2011

Public Opinion Quarterly (Journal impact factor 2007: 1.550)

Annual Information Technology & Telecommunication Conference 2007-2012

IEEE Intelligent Transportation Systems – Annual Conference

Invited Lectures I have been invited to lecture on public transportation and computing topics at a number of institutions in Ireland and overseas including Dublin Institute of Technology, Trinity College Dublin, University of Newcastle, and University of Porto (RCOMM). I also delivered two workshops at the 9th Neural Network Summer School in Porto, Portugal in 2012.

Academic Management and Administration

Responsibilities

External

External Examiner of Galway Mayo Institute of Technology, BSc Business Information Systems; Higher Diploma in Business Analytics, 2020 - today

External PhD Application Examiner, IT Sligo, 2020

External Examiner of the Athlone Institute of Technology, MSc Data Analytics; Higher Diploma in Data Analytics, 2018 - 2021

External Examiner of the Limerick Institute of Technology, BSc Software Development, 2017 - today

Validation Panel Member – Level 8 – BBS Business with Computing, Limerick IT, 2017

Validation Panel Member – Level 9 – MSc in Data Science, Carlow IT, 2016

Validation Panel Member – Level 6 – Dorset College, Dublin, 2015

External Examiner of Higher Diploma in Science in Web Technologies, the Higher Diploma in Science in Software Development, Higher Diploma in Science in Data Analytics and the Certificate in Web Technologies (National College of Ireland) (2012 – 2016)

Member of the HETAC/QQI Register of Expert Panellists (2009 – date)

External Examiner of the College for Computer Training (2009 – 2017)

External Examiner of BBS Business Administration (IT SLIGO) Level 6, 7 & 8 (2009 – 2014)

Internal

Internal Core Panel member of the Graduate Research School Regulations, 2021

Internal PhD Examiner – 2017, 2020

Member of Academic Council (2009 – 2015)

Member of Postgraduate Subcommittee (2012 – date)

Department/School

Member of Departmental Data Mining Group (2009 – date)

Member of Course Development Committee: BA (Honours) in Digital Media

Member of Course Development Committee: MSc. Computer Science in Data Mining and Business Intelligence

Member of Course Development Committee: BSc (Honours) in Web and

Mobile Applications

Member of Course Development Committee: BSc (Honours) in Forensics and Security

Member of Course Development Committee: Certificate Network Associate Professional

Year 4 Course Coordinator - BSc (Honours) in Computing

Teaching, Supervision and External Examination

Teaching Activities

Level	Module Title	Contact hours
MSc	Business Intelligence	>200
MSc	Advanced Databases	>200
MSc	Management Information Systems	120
MSc	Pre-Processing & Data Exploration	>200
MSc	Business Intelligence and Data Mining Applications	>200
MSc	Text Mining & Web Content Mining	>200
PgD	Modelling and Databases	>200
BSc	Data Mining	>200
BSc	Data Mining delivered using Enquiry Based Learning	120
BSc	Databases	>200
BSc	Mathematics for Computing	>200
BSc	Web Multimedia	>200
BSc	Web Site Design & Development (Client and Server)	>200
BSc	Research Skills	>200

External/Internal MSc/PhD Examination

Level	Title	Internal/ External	Date Awarded
MSc	A Sketch-based Interface for Terrain and Water Feature Creation	Internal (Institute of Technology Blanchardstown)	2011
MSc	Semantic Markup in Web Data Extraction	External (Trinity College Dublin)	2013
MSc	A Performance Analysis of Big Data Processing and Data Mining Algorithms in a Telecommunications Environment	External (Athlone Institute of Technology)	2015
MSc	Cognitive algorithms and the optimisation of Quality of Experience and bandwidth utilisation	External (Trinity College Dublin)	2015
MSc	Collaborative Mapping Process	External (Trinity College Dublin)	2016
PhD	Feature Selection for Blind Image Steganalysis	External (THE NORTHCAP UNIVERSITY, Gurgaon, India)	2017
PhD	A Linguistic Approach to Detecting Public Textual Cyberbullying	Internal (Institute of Technology Blanchardstown)	2017
PhD	Computational Modelling and Information Processing of Firing Patterns in Parkinson Disease	External (THE NORTHCAP)	2017

		UNIVERSITY, Gurgaon, India)	
MSc	Unidirectional circular dataflow architecture for real-time updates	External (Dublin City University)	2018
PhD	Evaluation of Machine Learning Algorithms Based on Speech Features as Predictors to the Classification of Intellectual Disability	External (The Northcap University, Gurgaon, India)	2019
PhD	An application of data mining techniques to explore relationships between factors of organisational silence and culture, with specific focus predicting silence behaviours	Internal (TU Dublin)	2020

Student Supervision

Level	Title/Domain	Date Awarded
BSc	I have successfully supervised more than 30 final year projects	2008 – to date
HDip	I have successfully supervised more than 40 final year projects	2008 – to date
MSc	Empirical review of divergences from Zipf's law to aid text categorisation	2012
MSc	Dealing with Class Imbalance in the Fraud Domain	2012
MSc	A Performance Related Investigation of Open Source Data Mining Tools Powered by Relational Databases	2013
MSc	An Analysis into the different user groups of social networking websites using text mining techniques	2013
MSc	Sentiment Analysis and Text Visualisation within Irish Politics	2013
MSc	Using Data Mining to reduce fuel bill of a major international airline	2013
MSc	The value of sentiment analysis on social media customer interactions in a telecommunications environment	2013
MSc	Detection of Cyberbullying using Python and Text Mining	2014
MSc	'Is Talk Cheap?' An analysis of athlete interviews using text classification techniques to predict future performance	2014
MSc	Topic Modelling of Irish Political Text	2014
MSc	Multinational Product Price Comparison using Web Mining Techniques	2014
MSc	A Multiple Regression Analysis for Airline Disruption Prediction	2015
MSc	Skills and Vacancy Analysis with Data Mining Techniques	2015
MSc	Determination of the Critical Economic Corridor Zones Servicing Dublin City & Insights into Unusual Traffic Events	2016
MSc	Differentials in UFC Fights	2016
MSc	Do Gender and Presence of Children have an Influence on Telecommuting Practices	2016
MSc	Android malware detection using dynamic behaviour analysis of apps	2017
MSc	Customer Rating Contribution Analysis of Complex Constituent Compositions with Particular Reference to International Cocktail Preferences	2017
MSc	Can a Model be Built Using External Factors to Predict Security Queue	2017

	Times at Dublin Airport	
MSc	Sentiment Analysis and Comparison of Public Bike Sharing Schemes in Different Geographical Regions	2017
MSc	A study of machine learning in the context of predicting football results	2017
MSc	Predicting System Failure using System Log	2017
MSc	Input Encodings for Character Level Convolutional Neural Networks	2018
MSc	Can the Direction of Movement in Price in Bitcoin/Thereum/Ripple be Predicted using Text Mining Techniques?	2018
MSc	Automated Topic Modelling on Irish and English Politicians' Speeches in Terms of Their Sentiment Towards Brexit.	2018
MSc	Automated Face and Emotion Detection Operations to Assist Criminal Investigations	2018
MSc	Development of a Python Library to Analyse Misclassifications	2019
MSc	Prescription Drug Utilisation Forecasting	2019
MSc	Data science methods for drug repurposing and hypothesis expansion using literature-based discovery	2019
MSc	A Twitter study into how sentimental the British are about Brexit and the predictive ability of neural networks	2019
MSc	Thai Words Segmentation using Unsupervised Learning Techniques	2019
MSc	Extracting similarity in sentences extracted from medical journals: Novel information discovery using Unsupervised Machine Learning	2020
MSc	Application of data analytics techniques to produce a reagent control philosophy in PGM flotation circuits	2020
MSc	Win, Lose or Draw, Semantic Analysis of Twitter Football Fans	2020
PhD	A Wikipedia Powered State-based Approach to Automatic Search Query Enhancement	2017
PhD	Neural Information Retrieval	Ongoing
PhD	Exploring the relationship between depicting verbs, constructed actions and NMF's in Irish Sign Language	Ongoing
PhD	Advanced Visualisation of Text Misclassifications with the Aim to Improve Model Accuracy and Robustness	Ongoing
PhD	Data science methods for drug repurposing and hypothesis expansion using literature-based discovery.	Ongoing

Project Supervision/Coordination

Researcher	Title
Jelena Terzic, Anthony Duncan	e-Learning materials to support first year Financial Accounting Business students
Kyle Goslin	Development of a Moodle plug-in aiming to improve tagging and filtering of learning objects
Kyle Goslin	Development of a Moodle plug-in for Deaf Studies

Ralf Klinkenberg	Development of eLearning Material for Business Intelligence and Data Mining
Kyle Goslin	Development of an Interactive Moodle Visual Map Plug-in
Andrew Carroll, David Ryan, Toms Andrulis	Cross Platform Mobile Development if ITB Application
Sam Furlong	Development of a Maths Formula step by step framework

Thesis Committee

Researcher	Title	Degree
Geraldine Gray	An analysis of the impact of inclusive teaching practices on student performance, retention and progression.	PhD
Robert Smith	Evaluating the use of Facial Expression as a Means to Improve Realism in Synthesised Sign Language Avatars	MSc
Stephen O'Shaughnessy	Information Forensic in Network and Cloud Computing Environments	PhD
Robert Smith	Towards Motivating a Linguistic Non-Manual Feature Framework for Synthesising Signed Language Avatars	PhD
Stephen Barrett	Exploring the potential of data mining techniques in research on silence in organizations	PhD
Marie Brennan	With the development of a new entity in third level education in Ireland, can understanding the creation of this new Technological University and knowing what did not work in the previous system help to develop a transition pedagogy for future institutions going forward.	PhD
Mark Lane	Software Defined Networking Security: Defending SDN Networks from Attack	PhD
Michael Hegarty	The development of steganalysis tools to assess the impact of steganography on electronic communications over insecure networks.	PhD
Brian Watters	The efficacy of data mining techniques in managing financial risk	PhD

Research Grants and Contracts

Source of Funds	Title of project	Duration	Start Date	Comments
AIB Seed Capital Funding	An Investigation of the Impact of Extra-curricular Activities on Retention Rates, Attendance and Student Performance	24	Oct-07	PI
AIB Seed Capital Funding	e-Learning materials to support first year Financial Accounting Business students	12	Jun-08	PI
AIB Seed Capital Funding	Mining Student Record Data	12	Jan-09	PI
Enterprise Ireland	Innovation Voucher: Design and Development of a data collection application for corporate insurance brokers. Company: BMCI	3	Apr-08	PI
Enterprise Ireland	Innovation Voucher: Design and Development of a data analysis tool for small sales orientated companies. Company: Senator Windows	3	Jul-08	PI
Enterprise Ireland	Innovation Voucher: Data exploration and mining of data originating from a corporate insurance broker. Company: BMCI	3	Oct-08	PI
Enterprise Ireland	Innovation Voucher: Data exploration and mining of data originating from a small sales orientated organisation. Company: Senator Windows	3	Dec-08	PI
Enterprise Ireland	Innovation Voucher: Design and Development of a customer support database. Company: EW Technologies	3	Dec-08	PI

Enterprise Ireland	Innovation Voucher: Implementation and customisation of an open source customer relationship management system. Company: Wardrobe Elegance	3	Apr-09	PI
Enterprise Ireland	Innovation Voucher: Design and Development of a commercial customer support database. Company: EW Technologies	3	Apr-09	PI
AIB Seed Capital Funding	e-Learning materials to support first year Financial Accounting Business students	12	Jun-09	CI
Enterprise Ireland	Innovation Voucher: Design and Development of a dynamic database driven website with product catalogue capacities for a SME. Company: Lumex	3	Jun-09	PI
Enterprise Ireland	Innovation Voucher: Design and Development of a dynamic database driven website with product catalogue capacities for a SME. Company: B-Lex	3	July-09	PI
Strategic Innovation Fund Cycle II	Development of a Moodle Plug-in aiming to improve tagging and filtering of learning objects	3	Jun-09	PI
National Digital Learning Repository	Development of Data Mining Learning Objects	3	Aug-09	PI
Enterprise Ireland	Innovation Voucher: Prototyping matching algorithm in a Web Environment: Company: BizViz	3	Oct-09	PI
Enterprise Ireland	Innovation Voucher: Prototyping Community based Social Networking Website. Company: Made Ltd	3	Jan-10	PI
AIB Seed Capital Funding	Moodle Plug-in for Visual Mapping of Learning Objects	3	Jun-10	PI
Enterprise Ireland	Moodle Development and Consultancy. Company: Irish Academy	3	Jun-10	PI
Strategic Innovation Fund Cycle II	eLearning to serve Flexible Learning	12	Nov-10	CI
Enterprise Ireland	Innovation Voucher: Online Alarm and CCTV Certification Submission System. Companies: MSCert and EQA	3	Dec-10	PI
Enterprise Ireland	Innovation Voucher: User Experience and Universal Design Consultancy. Company: Diaryplan.com	3	Mar-11	PI
NDLR - LInCS	Data Analytics Learning Resources	12	Jun-2011	PI
Enterprise Ireland	Innovation Voucher: Prototyping Community based Social Networking Website. Company: Made Ltd	3	July-11	PI
AIB Seed Capital Funding	Development of a multiplatform mobile application of ITB	3	July-11	PI
Enterprise Ireland	Innovation Voucher: Advanced Online Alarm and CCTV Certification Submission System. Companies: MSCert and EQA	3	Dec-11	PI
Enterprise Ireland	Textual Content analysis and visualisation for Feedback.ie	3	Jan-12	PI
Strategic Innovation Fund Cycle II	eLearning to serve Flexible Learning	12	Jan-12	CI
Enterprise Ireland	TopFlight – Making sense of data for improved decision making	3	Mar-12	PI
Enterprise Ireland	Salubria – Development of an IT infrastructure for an Irish Health Game	3	Apr-12	PI
Enterprise Ireland	Using data and text mining to analyse planning permissions	3	Jun-12	PI
Enterprise Ireland	ParkYa – Prediction of parking places in urban areas	3	Jan-13	PI

Enterprise Ireland	uTracOnline – Query wizard and optimisation	3	Mar-13	PI
Strategic Innovation Fund Cycle II	eLearning to serve Flexible Learning	12	Jan-13	CI
Enterprise Ireland	Treasury Delta – VLE development	3	Apr-14	PI
Enterprise Ireland	Treasury Delta – Web Application Security Investigation	3	July-14	PI
Enterprise Ireland	Stellar Consulting – Information System to facilitate certification material provision	3	Feb-15	PI
Enterprise Ireland	Stellar Certification – Integrated Online Payment System for Online Certification System	3	Aug-15	PI

Publications

Journal Papers

- J1 **Hofmann, M.** and O'Mahony, M. (2005) Public Transport Passenger Path and Behaviour. *GEO Informatics*, 8(2):44-47.
- J2 G. Tseytin, **Hofmann, M.**, O'Mahony M. and Lyons, D. (2006) Tracing Individual Public Transport Customers from an Anonymous Transaction Database. *Journal of Public Transportation*, Vol. 9, 4.
- J3 **Hofmann, M.** and B. Tierney (2009) Development of an Enhanced Generic Data Mining Life Cycle. *ITB Journal*, Issue 18, pp. 50-71, December 2009.
- J4 Gray, G., McGuinness, C., Owende, P., and **Hofmann, M.** (2016) Learning Factor Models of Students at Risk of Failing in the Early Stage of Tertiary Education, *Journal of Learning Analytics*, 3(2): 330–372, September 2016.
- J5 Goslin, K. and **M. Hofmann** (2017) A Wikipedia Powered State-based Approach to Automatic Search Query Enhancement, *Journal of Information, Processing and Management*, Volume 53, Issue 5, December 2017, Pages 1005-1025 [IMPACT FACTOR: 3.892]
- J6 Patel, S.; Nolan, B.; **Hofmann, M.**; Owende, P.; Patel, K. (2017), Sentiment Analysis: Comparative Analysis of Multilingual Sentiment and Opinion Classification Techniques, *World Academy of Science, Engineering and Technology, International Science Index 126, International Journal of Computer, Electrical, Automation, Control and Information Engineering*, 11(6), 624 - 630.
- J7 English, V. and **M. Hofmann** (2018) Business Intelligence as a source of Competitive Advantage in SMEs: A Literature Review, *DBS Business Review*.
- J8 Colton, David and **Markus Hofmann** (2019) Sampling Techniques to Overcome Class Imbalance in a Cyberbullying Context. *Journal of Computer-Assisted Linguistic Research*, [S.l.], v. 3, p. 21-40, July 2019. ISSN 2530-9455. doi:<https://doi.org/10.4995/jclr.2019.11112>.
- J9 Goslin, Kyle and **Markus Hofmann** (2019) A qualitative analysis of the Wikipedia N-Substate Algorithm's Enhancement Terms. *Journal of Computer-Assisted Linguistic Research*, [S.l.], v. 3, p. 67-77, July 2019. ISSN 2530-9455. doi:<https://doi.org/10.4995/jclr.2019.11159>.
- J10 Karpau, Andrei and **Markus Hofmann** (2019) Input Encodings for Character Level Convolutional Neural Networks, *Digitale Welt I/2019*, ISSN: 2569-1996, November 2019.
- J11 Sunkpho, J. and M Hofmann. (2019) Analyzing Customer Satisfaction of a Mobile Application using Data Mining Techniques. *Thammasat Review*, 22, 50-64.
- J12 Patel, S. and **M. Hofmann** (2020) Word Embeddings and Length Normalization for Document Ranking, *Research in Computer Science*, ISSN 1870-4069
- J13 Smith, R. G., & **Hofmann, M.** (2020). A Lexical Frequency Analysis of Irish Sign Language. *TEANGA, the Journal of the Irish Association for Applied Linguistics*, 11, pp.18–47. doi:[10.35903/teanga.v11i1.162](https://doi.org/10.35903/teanga.v11i1.162).
- J14 Sizochenko, N.; **Hofmann, M.** (2021) Predictive Modeling of Critical Temperatures in Superconducting Materials. *Molecules* 2021, 26, 8.

Books/Proceedings

- B1 Muntean, G-M, **Hofmann**, M. and Nolan, B. (2007) Digital Convergence in a Knowledge Economy (eds), Proceedings of the 7th International Information Technology and Telecommunication Conference, SNAP Publishing, ISSN: 1649-1246
- B2 **Hofmann**, M. Murnion, P. and Nolan, B. (2008) Virtual Systems and Digital Convergence in a Knowledge Society (eds), Proceedings of the 8th Information Technology and Telecommunication Conference, HP Publishing, ISSN: 1649-1246
- B3 **Hofmann**, M., Deegan, M. and P. Murnion (2009) Ubiquitous and Green Computing - The Challenges Facing Computing Systems in Presenting Ubiquitous Computing in an Environmentally Sustainable Manner (eds), Proceedings of the 9th Information Technology and Telecommunication Conference, HP Publishing, ISSN: 1649-1246
- B4 **Hofmann**, M., Morrison, J. and P. Doyle (2010) RESEARCH—Driving the Knowledge Economy (eds), Proceedings of the 10th Information Technology and Telecommunication Conference, ISSN: 1649-1246
- B5 M. **Hofmann** (2012) ICT for a more Sustainable Planet (eds), Proceedings of the 11th Information Technology and Telecommunication Conference, ISSN: 1649-1246
- B6 M. **Hofmann** and E. Fallon (2013) Small Devices, Big Data, Real Challenges (eds), Proceedings of the 12th Information Technology and Telecommunication Conference, ISSN: 1649-1246
- B7 **Hofmann**, M. and R. Klinkenberg (Eds.) (2013) RapidMiner: Data Mining and Business Application Use Cases. Taylor & Francis, CRC Press, USA.
- B8 **Hofmann**, M. and G. Muntean (Eds) (2014) Towards the Internet of Things: Issues, Challenges and Approaches, Proceedings of the 13th Information Technology and Telecommunication Conference, ISSN: 1649-1246.
- B9 **Hofmann**, M. and A. Chisholm (Eds.) (2015) Text Mining and Visualisation – Case Studies using Open-Source Tools. Taylor & Francis, CRC Press, USA.
- B10 D. Colton and M. **Hofmann** (2019) 'Detection of Cyber Bullying Using Text Mining', in Nolan B. and E. Diedrichsen (ed) Linguistic Perspectives on the Construction of Meaning and Knowledge, Cambridge Scholars Publishing, UK, November 2019.

Refereed Conference Papers

- R1 M. **Hofmann** 'Automatic Intelligent Crash Notification Framework', 9th World Congress on Intelligent Transport Systems and Services, (CD-ROM) Proceedings, Chicago, USA, 2002.
- R2 M. **Hofmann**, M. O'Mahony, and B. Tierney. A Framework to Utilise Urban Bus Data for Advanced Data Analysis. Conference Proceedings of 10th World Congress on Intelligent Transport Systems (CD-ROM), Madrid, Spain, 2003.
- R3 **Hofmann**, M. and B. Tierney "The Involvement of Human Resources in Large Scale Data Mining Projects", International Symposium on Information and Communication Technologies, (CD-ROM) Proceedings, Dublin, Ireland, 2003.
- R4 M. **Hofmann** and O'Mahony, M. (2005) Transfer Journey Identification and Analyses from Electronic Fare Collection Data. IEEE Intelligent Transportation Systems, Vienna, Austria.
- R5 M. **Hofmann** and O'Mahony, M. (2005) The Impact of Adverse Weather Conditions on Urban Bus Performance Measures an Analysis Using ITS Technology. IEEE Intelligent Transportation Systems, Vienna, Austria.
- R6 M. **Hofmann** and O'Mahony, M. (2005) An Analysis of Route Symmetry in an Urban Bus Public

- Transport Network Using Electronic Fare Collection Data. Washington, D.C., USA, Transportation Research Board (CD-ROM).
- R7 **Hofmann**, M. and Tierney, B. (2007) Development Phases of a Generic Data Mining Life Cycle (DMLC), International Conference on Software Engineering Theory and Practice. Proceedings, Orlando, USA.
- R8 **Hofmann**, M., Wilson, S. and White, P. (2009) Automated Identification of Linked Trips at Trip Level Using Electronic Fare Collection Data. Washington, D.C., USA, Transportation Research Board (CD-ROM).
- R9 **Hofmann**, M. and Tierney, B. (2009) An Enhanced Data Mining Life Cycle. IEEE Symposium on Computational Intelligence and Data Mining. Proceedings, Nashville, USA.
- R10 **Hofmann**, M., Gray, G. and L. Keyes (2009) Visualisation of Multi-dimensional Learning Objects in Moodle. Proceedings of the Irish Educational Technology Users' Conference, EdTech 2009, Dublin, Ireland.
- R11 **Hofmann**, M. and M. Smith (2009) Compatibility Challenges for Mobile Learning Objects. Proceedings of the Irish Educational Technology Users' Conference, EdTech 2009, Dublin, Ireland.
- R12 Goslin, K. **Hofmann**, M. and G. Gray (2009) Development of a Moodle Course Content Filter using Meta Data, 9th International Information Technology and Telecommunication Conference, Dublin, Ireland.
- R13 **Hofmann**, M, Wilson, S. and P. White (2010) How 'Good' is Urban Bus Electronic Fare Collection Data?, Conference Proceedings of the World Conference of Transport Research, Lisbon, Portugal.
- R14 **Hofmann**, M., Goslin, K., Nolan, B. and L. Leeson (2010) Development of a Moodle VLE Plugin to Support Simultaneous Visualisation of a Collection of Multi-Media Sign Language Corpora Objects, Representation and Processing of Sign Languages: Corpora and Sign Language Technologies, Conference on Language Resources and Evaluation, Malta.
- R15 Nolan, B., **Hofmann**, M. and L. Leeson (2010) Moodle innovation for teaching Irish Sign Language at 3rd level: Providing access with flexible delivery online. Proceedings of the Conference on Frontiers in Education: Computer Science and Computer Engineering. Las Vegas, USA.
- R16 Goslin, K. and M. **Hofmann** (2010) Interactive Visual Map Tool for Moodle, 10th International Information Technology and Telecommunication Conference, Letterkenny, Ireland.
- R17 Goslin, K. and M. **Hofmann** (2010) Integrated Tutorial Tool for RapidMiner 5, RCOMM 2010, University of Dortmund, Germany.
- R18 Goslin K. and M. **Hofmann** (2012) Extraction of VLE course hierarchy for the creation of tree based context specific metadata, 11th International Information Technology and Telecommunication Conference, Cork, Ireland.
- R19 Goslin K. and M. **Hofmann** (2013) Utilization of Text And Document Context in Large Content Repositories to Aid Environment Specific Search, 12th International Information Technology and Telecommunication Conference, Athlone, Ireland.
- R20 Kirwan E. and M. **Hofmann** (2013) Predicting Premiership Football Match Results (Machine vs. Men – Can predictive models outperform human experts?), 12th International Information Technology and Telecommunication Conference, Athlone, Ireland.
- R21 Galvin E. and M. **Hofmann** (2013) Speech Analysis of the 2012 American Presidential Election, 12th International Information Technology and Telecommunication Conference, Athlone,

Ireland.

- R22 Ryan J. and M. **Hofmann** (2013) Communities and Crime: Creating a Data Mining Prediction Model (Identify Future Crimes given the Socioeconomic Background in an Area), 12th International Information Technology and Telecommunication Conference, Athlone, Ireland.
- R23 Goslin, K. and M. **Hofmann** (2013) Identifying and Visualizing the Similarities Between Course Content at a Learning Object, Module and Program Level, Sixth International Conference on Educational Data Mining 2013. Memphis, Tennessee.
- R24 Goslin, K. and M. **Hofmann** (2013) Cross Domain Assessment of Document to HTML Conversion Tools to Quantify Text and Structural Loss During Document Analysis, FORTAN Workshop, Intelligence and Security Informatics Conference (EISIC 2013), Uppsala, Sweden.
- R25 **Hofmann**, M., Gray, G. and L. Keyes (2013) Teaching Data Analytics in a Fully Online Mode at Postgraduate Level, Conference Proceedings of Big Data and Analytics EdCon, Las Vegas, USA.
- R26 Carter, B. and **M. Hofmann** (2014) An analysis into using unstructured non-expert text in the illicit drug domain. Proceedings of 4th IEEE International Advance Computing Conference, New Delhi, India.
- R27 Ryan, J. and **M. Hofmann** (2014) Analysing the Irish 2011 General Election Party Manifestos and Irish Political Statements from the Irish Parliament using Text Analysis. Proceedings of 4th IEEE International Advance Computing Conference, New Delhi, India.
- R28 Tsatsoulis, C. and **M. Hofmann** (2014) Focusing on Maximum Entropy Classification of Lyrics by Tom Waits. Proceedings of 4th IEEE International Advance Computing Conference, New Delhi, India.
- R29 Tristan O’Gorman and M. **Hofmann** (2014) Text Mining on Software Patents, 13th International Information Technology and Telecommunication Conference, Dublin, Ireland.
- R30 Ryan J. and M. **Hofmann** (2014) Sentiment Versus Polarity within Tokens and Sentences, 13th International Information Technology and Telecommunication Conference, Dublin, Ireland.
- R31 Colton D. and M. **Hofmann** (2014) Automated Detection of Cyberbullying, 13th International Information Technology and Telecommunication Conference, Dublin, Ireland.
- R32 Causer S. and M. **Hofmann** (2014) Comparison of Video Game Classification Schemes Utilising Web Mining Techniques, 13th International Information Technology and Telecommunication Conference, Dublin, Ireland.
- R33 McSweeney D., **Hofmann M.**, Gray G. and L. Keyes (2015) Lessons Learned from Teaching Data Analytics in a Fully Online Mode at Postgraduate Level, Higher Education in Transformation Conference, Dublin, Ireland.
- R34 O’Brien M. and **M. Hofmann** (2017) The Potential of Learning Outcomes analytics, EdTech Conference, Irish Learning Technology Association (ILTA), Sligo, Ireland.
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