

# Curriculum Vitae

## Dr. Markus Hofmann

### Personal Details:

- Current Position:** Senior Lecturer  
Department of Informatics  
Institute of Technology Blanchardstown  
Dublin  
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

- 2017 – to date** **Senior Lecturer**, Department of Informatics, Institute of Technology Blanchardstown, Ireland
- 2015-2017** **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

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

**Editorial responsibilities**

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 9<sup>th</sup> Neural Network Summer School in Porto, Portugal in 2012.

## Academic Management and Administration

### Responsibilities

|                          |   |
|--------------------------|---|
| <b>External</b>          | <p>External Examiner of the Limerick Institute of Technology, BSc Software Development</p> <p>Validation Panel Member – Level 8 – BBS Business with Computing, Limerick IT, 2017</p> <p>Validation Panel Member – Level 9 – MSc in Data Science, Carlow IT, 2016</p> <p>Validation Panel Member – Level 6 – Dorset College, Dublin, 2015</p> <p>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)</p> <p>Member of the HETAC/QQI Register of Expert Panellists (2009 – date)</p> <p>External Examiner of the College for Computer Training (2009 – 2017)</p> <p>External Examiner of BBS Business Administration (IT SLIGO) Level 6, 7 &amp; 8 (2009 – 2014)</p> |
| <b>Internal</b>          | <p>Internal PhD Examiner - 2017</p> <p>Member of Academic Council (2009 – 2015)</p> <p>Member of Postgraduate Subcommittee (2012 – date)</p>  |
| <b>Department/School</b> | <p>Member of Departmental Data Mining Group (2009 – date)</p> <p>Member of Course Development Committee: BA (Honours) in Digital Media</p> <p>Member of Course Development Committee: MSc. Computer Science in Data Mining and Business Intelligence</p> <p>Member of Course Development Committee: BSc (Honours) in Web and Mobile Applications</p> <p>Member of Course Development Committee: BSc (Honours) in Forensics and Security</p> <p>Member of Course Development Committee: Certificate Network Associate Professional</p> <p>Year 4 Course Coordinator - BSc (Honours) in Computing</p>   |

## 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 UNIVERSITY, Gurgaon, India) | 2017         |

### 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 30 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 Times at Dublin Airport   | 2017 |
| 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 |
| PhD | A Wikipedia Powered State-based Approach to Automatic Search Query Enhancement  | 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  | 2018 |

|     |  |         |
|-----|--|---------|
|     | Investigations   |         |
| PhD | Opinion Mining with multilingual input   | Ongoing |
| PhD | Exploring the relationship between depicting verbs, constructed actions and NMF's in Irish Sign Language | 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 Klinckenberg                         | 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'Shaugnessy | 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                 | Mining Student Record Data   | 12       | Jan-09     | PI       |

|                                      |   |    |         |    |
|--------------------------------------|---|----|---------|----|
| Capital Funding                      |   |    |         |    |
| 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 |
| 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
- 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*.

### Books/Proceedings

- E1 Muntean, G-M, **Hofmann, M.** and Nolan, B. (2007) Digital Convergence in a Knowledge Economy (eds), *Proceedings of the 7<sup>th</sup> International Information Technology and Telecommunication Conference*, SNAP Publishing, ISSN: 1649-1246
- E2 **Hofmann, M.** Murnion, P. and Nolan, B. (2008) Virtual Systems and Digital Convergence in a Knowledge Society (eds), *Proceedings of the 8<sup>th</sup> Information Technology and Telecommunication Conference*, HP Publishing, ISSN: 1649-1246
- E3 **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 9<sup>th</sup> Information Technology and Telecommunication Conference*, HP Publishing, ISSN: 1649-1246
- E4 **Hofmann, M.**, Morrison, J. and P. Doyle (2010) RESEARCH—Driving the Knowledge Economy (eds), *Proceedings of the 10<sup>th</sup> Information Technology and Telecommunication Conference*, ISSN: 1649-1246
- E5 **M. Hofmann** (2012) ICT for a more Sustainable Planet (eds), *Proceedings of the 11<sup>th</sup> Information Technology and Telecommunication Conference*, ISSN: 1649-1246
- E6 **M. Hofmann** and E. Fallon (2013) Small Devices, Big Data, Real Challenges (eds), *Proceedings of the 12<sup>th</sup> Information Technology and Telecommunication Conference*, ISSN: 1649-1246
- E7 **Hofmann, M.** and R. Klinkenberg (Eds.) (2013) *RapidMiner: Data Mining and Business*

Application Use Cases. Taylor & Francis, CRC Press, USA.

- E8 **Hofmann, M.** and G. Muntean (Eds) (2014) , Towards the Internet of Things: Issues, Challenges and Approaches, Proceedings of the 13<sup>th</sup> Information Technology and Telecommunication Conference, ISSN: 1649-1246.
- E9 **Hofmann, M.** and A. Chisholm (Eds.) (2015) Text Mining and Visualisation – Case Studies using Open-Source Tools. Taylor & Francis, CRC Press, USA.

### 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, 9<sup>th</sup> 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, 10<sup>th</sup> 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, 11<sup>th</sup> 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, 12<sup>th</sup> 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?), 12<sup>th</sup> International Information Technology and Telecommunication Conference, Athlone, Ireland.
- R21 Galvin E. and M. **Hofmann** (2013) Speech Analysis of the 2012 American Presidential Election, 12<sup>th</sup> 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), 12<sup>th</sup> 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 4<sup>th</sup> 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 4<sup>th</sup> 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 4<sup>th</sup> 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.
- R35 Keane M. and **M. Hofmann** (2017) An Investigation into Third Level Module Similarities and Link Analysis, 3rd International Conference on Higher Education Advances (HEAd’17), Valencia, Spain.
- R36 Yourell P. and **M. Hofmann** (2017) Do gender and the presence of children have an influence on telecommuting practices?, 44th Annual Conference "Sociological Futures", Sociological Association of Ireland, Belfast, UK.
- R37 Patel S., Nolan B., **Hofmann M.**, Owende P. and K. Patel (2017) Sentiment Analysis: Comparative Analysis of Multilingual Sentiment and Opinion Classification Techniques, 19th International Conference on Machine Learning and Applications, Copenhagen, Denmark.
- R38 Singh, L. and **M. Hofmann** (2017) Dynamic Behavior Analysis of Android Applications for Malware Detection, International Conference on Intelligent Communication and Computational Techniques, Jaipur, India.
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