

## Curriculum Vitae

Name: **Allan George Hanbury**  
Born: 5 March 1974 in George, South Africa  
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Allan Hanbury is Professor for Data Intelligence at the TU Wien, Austria, and faculty member of the Complexity Science Hub Vienna. He was scientific coordinator of the EU-funded Khresmoi Integrated Project on medical and health information search and analysis, and is co-founder of contextflow, the spin-off company commercialising the radiology image search technology developed in the Khresmoi project. He also coordinated the EU-funded VISCERAL project on evaluation of algorithms on big data, and the EU-funded KConnect project on technology for analysing medical text. He is author or co-author of over 150 publications in refereed journals and refereed international conferences. He contributes to research and innovation strategy development in Austria and Europe, and regularly gives talks on topics related to his research.

He was born in George, South Africa in 1974. He was awarded the B.Sc. degree in Physics and Applied Mathematics in 1994, the B.Sc. (Hons) degree in Physics in 1995, and the M.Sc. degree in Physics in 1999, all from the University of Cape Town, South Africa. He was awarded the Ph.D. degree in Applied Mathematics in 2002 from the Mines ParisTech, France, and the Habilitation in Practical Informatics from the TU Wien, Austria, in 2008.

### **Education:**

2008 **TU Wien**, Austria: Habilitation in practical informatics  
1998–2002 **MINES ParisTech**, France:  
Doctorate in applied mathematics (with honours – *très honorable avec les felicitations du jury*)  
Thesis title: *Morphologie Mathématique sur le Cercle Unité : avec applications aux teintes et aux textures orientées* (Mathematical Morphology on the Unit Circle: with applications to hues and to directional textures),  
Advisor: Prof. Jean Serra  
1996–1998 **University of Cape Town**: Master of Science (M.Sc.) in physics  
Thesis title: *Generalised Fourier Analysis of Human Chromosome Images*,  
Advisor: Assoc. Prof. Gerald Robertson  
1995 **University of Cape Town**: Bachelor of Science (Honours) in physics  
1992–1994 **University of Cape Town**: Bachelor of Science (B.Sc.) in physics and applied mathematics  
1979–1991 Primary and High School in South Africa

## **Professional Career:**

- Since 12.2017 Faculty member at the Complexity Science Hub, Vienna, Austria
- Since 11.2017 Professor for Data Intelligence at the TU Wien, Austria (professor endowed by Deutsche Telekom)
- 10.2016–10.2017 Leader of the Data Science Research Studio at the Research Studios Austria Forschungsgesellschaft mbH
- Since 7.2016 Co-founder at contextflow GmbH, a spin-off of the Khresmoi EU project and incubee at the TU Wien i2ncubator
- 10.2014–9.2016 Consultant on Data Science for the Research Studios Austria Forschungsgesellschaft mbH
- 5.2011–10.2017 Senior Researcher in the Information and Software Engineering Group, Institute of Software Technology and Interactive Systems, TU Wien, Austria
- 5.2009–4.2011 Senior Scientific Officer at the Information Retrieval Facility (IRF), Vienna
- Since 11.2008 Privatdozent at the TU Wien
- 11.2008–4.2009 Senior Scientist & Consultant at CogVis GmbH, Vienna (a spin-off company of the TU Wien)
- 1.2009–4.2009 Visiting Researcher at the Intelligent Sensory Information Systems Laboratory, University of Amsterdam, The Netherlands
- 10.2002–10.2008 Assistant Professor at the Institute of Computer-Aided Automation, TU Wien, Austria
5. 2002–9. 2002 Postdoctoral Research Assistant at the TU Wien, Austria
4. 2002 Postdoctoral Research Assistant at the Centre for Mathematical Morphology, MINES ParisTech, France
- 1994–1998 Research and Teaching Assistant in the Department of Physics, University of Cape Town

## **Job Responsibilities:**

Research; teaching; research team leadership; participation in various committees at university national and international level; research project management; research project acquisition; research strategy development; innovation management; reviewing for journals, conferences and funding agencies; and staff development.

## **Further Courses:**

- 14.5-15.5.2016 *Electric Public Speaking*, a 2 day course by Avocet Consulting
- 1.12–2.12.2014 *Successful Negotiation*, a 2 day course by Coverdale Austria
- 2.6.–3.6.2014 *Leadership and Management in Science*, a 2 day course by Coverdale Austria
- 2.2013–3.2013 *Management of Research and Development Projects*, an 8 day course by Roland Gareis Consulting, Vienna

## **Principal Investigator in Projects:**

- 1.2019–12.2022 **Visual History of the Holocaust (VHH)**: EU Innovation Action 822670. This project develops search and analysis tools for multimodal documentary material from the holocaust, and fits the tools to the research workflows of historians. Total project budget: €5.3 million, of which €5 million funded by the EU. Own institute funding: €220.000.
- 10.2016–9.2019 **Data Market Austria (DMA)**: Austrian Research Promotion Agency (FFG) Lighthouse Project 855404. This project of 17 Austrian partners is developing the technology and environment for a Data-Services Ecosystem in Austria, which makes possible the straightforward exchange of data, services and computational infrastructure between members of the Ecosystem. I

- coordinated this project until October 2017, and advised after this date. Total project budget: €3.8 million. Own institute funding: €360.000.
- 1.2016–9.2017 **HISNI**: Austrian Research Promotion Agency (FFG) BRIDGE project 689189, *Harnessing Information from Social Networks in Industry 4.0*. This project analyses messages that are exchanged between employees in a factory-internal social network, with the goal of developing techniques to better target messages at the employee most qualified to respond to a message. Total project budget: €151.376. Own institute funding: €121.112. This project is done in collaboration with the company Tieto in Austria.
- 9.2015–10.2017 **Self-Optimizer**: Eurostars project 9867. This project optimises semantic matching performance to provide a new automated approach for retrieving prior art documentation for patent search and efficiently support decisions in patent information workflows. Total project budget: €1.130.600. Own institute funding: €276.320. This project is done in collaboration with the company Uppdragshuset in Sweden.
- 2.2015–7.2017 **KConnect**: EU Innovation Action 644753, *Khresmoi Multilingual Medical Text Analysis, Search and Machine Translation Connected in a Thriving Data-Value Chain*. This project takes the medical text analysis and search technologies resulting from the Khresmoi project (see below), develops them further, adapts them to the electronic medical record domain, and builds an ecosystem of end-users around the technology. I was coordinator of this project. Total project budget: €3.9 million of which €3.0 million funded by the EU. Own institute funding: €677.000.
- 10.2013–12.2017 **ADmIRE**: Austrian Science Fund (FWF) single partner project, *Abstracting Domain-Specific Information Retrieval and Evaluation (P25905-N23)*. This project is developing the use of systematic reviews and workflow frameworks for Information Retrieval evaluation. Total funding: €343.200.
- 6.2013–12.2013 **RSDD**: Austrian Research Promotion Agency (FFG) project, *Roadmap Study on the topic of Conquering Data*, with 2 partners (Project 840200). This project wrote the 10-year research roadmap for research in Intelligent Data Analytics in Austria. Total funding: €80.000. Own institute funding: €30.000.
- 11.2012–4.2015 **VISCERAL**: EU Support Action ICT-FP7-318068, *Visual Concept Extraction Challenge in Radiology*. This project built a cloud-based infrastructure for the evaluation of search and analysis algorithms on big data, and used this infrastructure in running benchmarks. The use case is the analysis and search of radiology records including text and high-dimensional images. I was coordinator of this project. Total project budget: €1.6 million of which €1.4 million funded by the EU. Own institute funding: €400.000.
- 10.2012–12.2015 **MUCKE**: CHIST-ERA project, *Multimedia and User Credibility Knowledge Extraction* in the “From Data to New Knowledge” topic. This project of 4 partners develops reliable knowledge extraction models and search algorithms designed for multilingual and multimodal data shared on social networks. I was coordinator of this project. Total funding: €1.1 million. Own institute funding: €498.000.
- 9.2011–8.2013 **PerFedPat**: *Pluggable Platform for Personalised Multilingual Patent Search*. Coordinator of this Marie Curie Intra-European Post-doctoral Fellowship. Total funding: €236.000.
- 1.2011–4.2013 **IMPEX**: Principal Investigator in the FIT-IT Visual Computing Project *Image Mining for Patent Exploration* with 3 partners (Project 825846). Total funding: €370.000. Own institute funding: €99.500.

- 9.2010–8.2014 **Khresmoi:** EU Integrated Project ICT-FP7-257528, *Knowledge Helper for Medical and Other Information users*. This project of 12 partners focused on multilingual and multi-modal biomedical information retrieval, aimed at members of the general public, medical doctors and radiologists. I coordinated the proposal writing, and was scientific coordinator of the project. Total project budget: €10 million of which €8 million funded by the EU. Own institute funding: €650.000.
- 9.2010–8.2013 **PROMISE:** EU Network of Excellence ICT-FP7-258191, *Participative Research laboratory for Multimedia and Multilingual Information Systems Evaluation*. This network of 14 partners coordinated Information Retrieval evaluation in Europe. Total project budget: €4.3 million of which €3.5 million funded by the EU. Own institute funding: €200.000.
- 3.2008–2.2011 **OMOR:** Coordinator of the FIT-IT Visual Computing Project *Optimisation Methods in Object Recognition* (Project 815994). Total funding: €87.000.
- 1.2008–7.2008 **SATCV:** Leader of the *Summer School on Advanced Techniques in Computer Vision* project funded by FIT-IT Visual Computing (Project 815993). Total funding: €5.000.
- 6.2004–5.2007 **SESAME:** Austrian Science Foundation (FWF) single partner project, *Effective Segmentation for Semantic Extraction* (P17189-N04). Total funding: €137.000.
- 3.2004–2.2008 **MUSCLE:** EU Network of Excellence IST-FP6-507752, *Multimedia Understanding through Semantics, Computation and Learning*. This network of over 40 partners focused on the automated extraction of semantic information from multimedia data. I was work package leader of the *Evaluation, Integration and Standards* work package and member of the steering committee. Total project funding: €6.9 million. Own institute funding: €275.000.

### **Projects funded by Industry:**

- 5.2019–12.2019 **Natural Language Understanding and Search for Chatbots:** funded by Jingle GmbH. Total funding: €35.000
- 2.2019–11.2019 **Machine Learning and Natural Language Processing for Legal Contract Analysis:** funded by JAAS GmbH. Total funding: €44.720
- 3.2019–9.2019 **Semi-automatic calculation and update of illness/symptom probabilities:** funded by XUND Solutions GmbH. Total funding: €21.000
- 6.2018–12.2018 **Siemens Call for Ideas: Data Analytics in Industrial Automation Environments:** funded by Siemens Austria. Total funding: €20.000
- 4.2008–7.2008 **Investigation of Features for Image Retrieval:** funded by the APA-IT (Austrian Press Agency). Total funding: €12.000

### **Networking Projects:**

- 8.2010–11.2014 **MUMIA:** COST Action IC1002, *Multilingual and Multifaceted Interactive Information Access*. I am substitute member of the Management Committee for Austria, and vice-chair of Working Group 2 on Processing Infrastructures for IR and MT.
- Since 10.2007 **CEEPUS** Network CIII-AT-0042-08-1213, *Image Processing, Information Engineering & Interdisciplinary Knowledge Exchange*. CEEPUS Networks support exchange of teachers and students in Central Europe. I have been a member of this network since 2007, and regularly contribute to its activities.

### ***Involvement in Projects (not as Principal Investigator):***

- 8.2015–8.2019 **Informatics Tools for Optimized Imaging Biomarkers for Cancer Research & Discovery:** National Cancer Institute (NCI) project 5U24CA180927-02. This project is being carried out at the Martinos Center for Biomedical Imaging at the Massachusetts General Hospital, USA. It is developing a research infrastructure for segmentation and characterisation of lesions for the development and use of imaging biomarkers in cancer. I am a consultant for this project.
- 7.2014-6.2017 **TisQuant:** Austrian Research Promotion Agency (FFG) project 844198. This project is developing procedures for a highly automated assessment and classification of cells in tissue sections by means of spatial marker profiles. I am a consultant for this project, with the main task of advising a PhD student working on automated nucleus segmentation in microscopy images.
- 2002 **Graph pyramids:** Austrian Science Foundation (FWF) project P14445-MAT. This project aimed at the application of methods from combinatorial optimization to a model based building and rebuilding of graph pyramids.
- 2002 **Geograph:** Austrian Science Foundation (FWF) project P14662-INF. This project aimed at developing methods for the use of graphs in geoinformatics.
- 1998–2000 **SCANMATCH:** EU project No. BES2-5314, IMT/SMT programme. In this project, we successfully developed an automated system for classifying and matching wood based on its colour and texture characteristics.

### ***Research Interests:***

Data Science, Information Retrieval, Semantic Analysis and Search, Domain-Specific and Multimodal Information Retrieval, Information Retrieval Evaluation, Recommender Systems, Data Mining, and Machine Learning.

### ***Professional Activities:***

- Member of the Scientific Advisory Board of the D4Dairy Project (Digitalisation, Data integration, Detection, Decision support for the Dairy Industry), 2019–2022
- Editorial Board Member of the journal *Information Processing & Management* (since September 2018)
- Programme Committee Chair of the *European Big Data Value Forum 2018*, Vienna, Austria
- Local Organizing Committee Member for the *Data Science, Statistics & Visualisation (DSSV) Conference 2018*, Vienna, Austria
- Short Paper Co-Chair of the *European Conference on Information Retrieval (ECIR) 2018*
- Programme Committee Member of the *European Big Data Value Forum 2017*, Versailles, France
- Co-Organiser of the *3rd KEYSTONE COST Action Training School on Keyword Search in Big Linked Data*, Vienna, 21-25 August 2017
- Member of the Austrian Computer Society (OCG) Working Group on Cloud Computing and Big Data (since 2015)
- Special Session Chair of the *ACM International Conference on Multimedia Retrieval (ICMR) 2017*
- Programme Committee co-chair for the *European Conference on Information Retrieval (ECIR) 2015*
- Co-organiser of the ICT Trends 2020 event with theme Big Data, held at the Austrian Computer Society on the 24<sup>th</sup> of November 2014

- Proceedings co-chair for the *Conference and Labs of the Evaluation Forum (CLEF)* 2014
- Co-Organiser of the 4<sup>th</sup> *Workshop on Building and Evaluating Resources for Health and Biomedical Text Processing*, collocated with the Language Resources and Evaluation Conference (LREC) 2014
- Member of the Best Papers Panel at the *European Conference on Information Retrieval (ECIR)* 2014
- Guest editor of the Information Retrieval Journal special issue on *Information Retrieval in the Intellectual Property Domain* (appeared September 2014)
- Member of the Advisory Board of the BioASQ FP7 project
- Member of the organising team of the *CLEF eHealth evaluation lab* in 2013, 2014 and 2015
- Co-organiser of the *Workshop on Integrating IR technologies for Professional Search*, collocated with the ECIR 2013
- Co-chair of the 20<sup>th</sup> *Summer School on Image Processing (SSIP)*, Vienna, July 2012
- Local organiser of the 3<sup>rd</sup> *IRF Conference* 2012
- Member of the working group *Large-Scale Data Management* of the Austrian Federal Ministry for Transport, Innovation and Technology, designing the new Austrian IT research funding programme in this area (2012)
- Co-opted member of the board of the Austrian Association for Research in IT (AARIT), the Austrian member of ERCIM (2011, 2012, 2013, 2014)
- Co-organiser of the *Patent Information Retrieval Workshop (PaIR)* 2011, in conjunction with the CIKM conference
- Co-organiser of the *CLEF-IP Evaluation Lab* on patent search in 2011, 2012 and 2013
- Guest editor of the *Methods of Information in Medicine* special issue on “Health Information Search – Combining Text, Visual Information and Knowledge Bases”
- Local organiser of the 2<sup>nd</sup> *IRF Conference* 2011
- General Chair of the *International Workshop on Advances in Patent Information Retrieval (AsPIRe'10)*, collocated with the ECIR 2010
- Publications Chair of the 1<sup>st</sup> *IRF Conference* 2010
- Demo Chair of the 7<sup>th</sup> *International Workshop on Content-Based Multimedia Indexing (CBMI)* 2009
- Special Session Chair of the *International Conference on Image and Video Retrieval (CIVR)* 2009
- Guest editor of the *Computer Vision and Image Understanding* special issue on the “Evaluation of Image and Video Retrieval Systems” (appeared April 2010)
- Organiser of the 16<sup>th</sup> *Summer School on Image Processing (SSIP)*, Vienna, July 2008
- Co-organiser of the 2<sup>nd</sup> International “Language Resources for Content-Based Image Retrieval” Workshop, held in conjunction with the 6<sup>th</sup> *International Conference on Language Resources and Evaluation (LREC'2008)*
- Member of the Steering Committee of the International Association of Pattern Recognition Technical Committee 5 (IAPR TC5) on Benchmarking & Software
- Co-organiser of the *ImageCLEF evaluation campaign* 2006, 2007 and 2008
- Demo chair of the *ACM International Conference on Image and Video Retrieval (CIVR)* 2007
- Co-chair of the *MUSCLE/ImageCLEF Workshop on Image and Video Retrieval Evaluation* in 2005, 2006 and 2007
- Co-chair of the *Computer Vision Winter Workshop (CVWW)* 2005

## **Reviewing Activities:**

### **Journals:**

- **Communications of the ACM:** January 2016
- **Computer Vision and Image Understanding (CVIU):** December 2006, July 2008, August 2008, November 2014
- **Geoinformatica:** May 2008
- **IEE Electronics Letters:** August 2004, October 2004, December 2005, January 2006, April 2006, October 2006, November 2007, April 2008, November 2009
- **IEE Proceedings on Vision, Image and Signal Processing:** August 2002, May 2003, February 2006
- **IEEE Multimedia:** November 2011
- **IEEE Transactions on Image Processing:** February 2003, November 2004, May 2005, November 2005, April 2007, September 2007, July 2010, October 2012
- **ACM Transactions on Information Systems:** October 2010, November 2011, March 2012, July 2014
- **IEEE Transactions on Pattern Analysis and Machine Intelligence:** January 2007, August 2007, April 2019
- **Image and Vision Computing:** June 2010
- **Information Processing & Management:** March 2013, March 2014, July 2016, November 2016, December 2016, April 2019
- **Information Retrieval:** January 2015, May 2015, October 2016, February 2017
- **International Journal of Computer Assisted Radiology and Surgery:** May 2016
- **International Journal of Computer Vision:** January 2011, October 2012
- **International Journal of Shape Modelling:** August 2003
- **Journal of Electronic Imaging:** December 2006
- **Journal of Mathematical Imaging and Vision:** August 2010
- **Journal of Visual Languages and Computing:** December 2005
- **Machine Vision and Applications:** May 2007, February 2009, April 2009
- **Medical Image Analysis Journal:** April 2006
- **Methods of Information in Medicine:** October 2012
- **Multimedia Tools and Applications:** February 2010, May 2010, June 2010, July 2010, October 2014
- **Pattern Recognition:** May 2006, July 2006, October 2006, January 2007, September 2007, January 2008, April 2009, November 2010, July 2011, November 2011, May 2014
- **Pattern Recognition Letters:** August 2004, February 2006, June 2006, July 2007, September 2007, November 2007, December 2007, April 2008, July 2010
- **PLOS ONE:** April 2017
- **Soil Science Society of America Journal:** July 2004
- **World Patent Information:** November 2011, November 2015

### **Conference/Workshop Programme Committees**

- **ACM International Conference on Information and Knowledge Management (CIKM):** 2014, 2016
- **ACM International Conference on Research and Development in Information Retrieval (SIGIR):** 2016, 2017, 2018, 2019
- **ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR):** 2015

- **Austrian Association of Pattern Recognition (ÖAGM/AAPR) conference:** 2009, 2010
- **CLEF Conference on Multilingual and Multimodal Information Access Evaluation:** 2010, 2013, 2014, 2015, 2016, 2017
- **Computer Vision Winter Workshop (CVWW):** 2005, 2006, 2007, 2008
- **Conference on the Analysis of Images and Patterns (CAIP):** 2007
- **European Conference on Digital Libraries (ECDL):** 2005, 2006, 2007
- **European Conference on Information Retrieval (ECIR):** 2010, 2011, 2012, 2013, 2014, 2016, 2017, 2019
- **European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD):** 2018, 2019 (meta-reviewer)
- **ECCV Workshop on Information Fusion in Computer Vision for Concept Recognition:** 2012
- **Forum for Information Retrieval Evaluation:** 2018, 2019
- **IEEE eScience:** 2014, 2015
- **Iberoamerican Congress on Pattern Recognition (CIARP):** 2008, 2009, 2010
- **IEEE International Workshop on Data Semantics for Multimedia Systems and Applications (DSMSA):** 2009
- **International Conference on Multimedia Retrieval (ICMR):** 2013, 2014, 2015, 2016
- **International Conference on Signal-Image Technology and Internet-based Systems (SITIS):** 2010, 2011, 2013
- **International Multimedia Modelling Conference (MMM):** 2009, 2012, 2013, 2014, 2016
- **IEEE International conference on Big Data and Smart Computing (BigComp):** 2018
- **IEEE International Conference on Multimedia & Expo (ICME):** 2012, 2013, 2014
- **International Symposium on Mathematical Morphology (ISMM):** 2009, 2011, 2013
- **International Workshop on Combinatorial Image Analysis (IWCIA):** 2006, 2008
- **International Workshop on Content-Based Multimedia Indexing (CBMI):** 2010, 2011, 2012, 2013, 2014, 2015, 2016
- **International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS):** 2009, 2010, 2011, 2012, 2013
- **Language Resources and Evaluation Conference (LREC):** 2016, 2017
- **Workshop on Medical Content-based Retrieval for Clinical Decision Support (MCBR-CDS):** 2011, 2012
- **Workshop on Medical Computer Vision (MCV):** 2013, 2014
- **SIGIR Workshop on Medical Information Retrieval (MedIR):** 2014, 2016
- **ACM Multimedia:** 2011, 2012, 2014
- **International Workshop on Multimedia Signal Processing (MMSP):** 2007
- **International Workshop on Environmental Multimedia Retrieval (EMR):** 2014
- **International Workshop on Patent Information Retrieval (PaIR):** 2009, 2010
- **Mexican Workshop/Congress on Pattern Recognition (MCPR):** 2009, 2010
- **Multimedia Content Analysis and Mining (MCAM) Workshop:** 2007
- **Visual Information Engineering (VIE):** 2003
- **The Web Conference (was WWW):** 2018, 2019
- **IEEE/WIC/ACM International Conference on Web Intelligence (WI):** 2010, 2011, 2013



- **International Workshop on Very-Large-Scale Multimedia Corpus, Mining and Retrieval (VLS-MCMR):** 2010
- **Workshop on Economy and NLP (EcoNLP) at the Annual Meeting of the Association for Computational Linguistics (ACL):** 2018
- **Workshop on Professional Search (ProfS) co-located with SIGIR:** 2018

#### **Reviewer for Conference/Workshop**

- **Asian Conference on Computer Vision (ACCV):** 2009, 2010, 2012
- **British Machine Vision Conference (BMVC):** 2008, 2009, 2010, 2011, 2012, 2013, 2014
- **IEEE Conference on Computer Vision and Pattern Recognition (CVPR):** 2009, 2010, 2011, 2012, 2013, 2014
- **European Conference on Computer Vision (ECCV):** 2004, 2006, 2010
- **International Conference on Computer Vision (ICCV):** 2005, 2009, 2011, 2013
- **International Conference on Pattern Recognition (ICPR):** 2008, 2010, 2012, 2014, 2016
- **World Congress on Medical and Health Informatics (MedInfo):** 2013

#### **Reviews for Funding Agencies and Universities**

- **South African National Research Foundation:** Researcher evaluation in 2005, project proposal evaluation in 2013
- **Netherlands Organisation for Scientific Research (NWO):** Project proposal evaluation in 2007, 2011, 2017
- **European Commission:** X-Media FP6 project reviewer, 2007–2010
- **Agence Nationale de la Recherche, France:** CHIST-ERA Call 2011 (From Data to New Knowledge) reviewer
- **KU Leuven Industrial Research Fund:** project proposal review, 2013
- **Israel Science Foundation:** project proposal reviewer, 2016
- **University of Copenhagen:** external member of the assessment committee for the position of Professor of Information Retrieval, 2019

#### **Visiting Positions:**

- 1.–4. 2009 Intelligent Sensory Information Systems Laboratory, University of Amsterdam, the Netherlands.
10. 2001 Image and Pattern Analysis Group, Computer and Automation Research Institute, Hungarian Academy of Sciences, Budapest, Hungary.
- 7.–8. 1997 Centre for Vision, Speech and Signal Processing, University of Surrey, Guildford, United Kingdom.

#### **Languages:**

English	-	mother tongue
German	-	fluent
French	-	fluent
Afrikaans	-	good

## **Teaching:**

- 2018 Course lecturer for *E-Commerce* (Masters course, 188.427) at the TU Wien.
- 2018–2019 Course lecturer for *Innovation* (Masters course, 188.915) at the TU Wien.
- 2017–2018 Course lecturer for *Data-oriented Programming Paradigms* (Masters course, 188.995) at the TU Wien.
- 2017–2018 Course lecturer for *Experiment Design for Data Science* (Masters course, 188.992) at the TU Wien.
- 2017–2019 Leader of a group for the *Seminar on Scientific Work* (Bachelor course, 180.765) at the TU Wien.
- 2013–2018 Course lecturer for *Grundlagen des Information Retrieval* (Fundamentals of Information Retrieval) (Undergraduate course, 188.977) at the TU Wien (in German).
- 2012–2018 Course lecturer for *Advanced Information Retrieval* (Masters course, 188.412) at the TU Wien.
- 2011, 2015 Course lecturer for *Selected Topics in Interactive Systems* (Masters course, 623.412) with topic *Information Search and Interaction* at the University of Klagenfurt, Austria.
- 2011 Coordinator of the *Seminar in Media Informatics* (183.578) with topic *Domain-Specific Information Retrieval* at the TU Wien.
- 2010 Training sessions on Information Retrieval (6 hours) to members of the patent searching team of General Electric (GE) India (by video link).
- 2009 Selected lectures in the course *Advanced Multimedia Computing* (Masters course) at the University of Amsterdam.
- 2008–2009 Selected lectures in the course *Data Mining* (Undergraduate course, 188.464) at the TU Wien (in German).
- 2008–2009 Course lecturer for *Image Understanding* (Masters course, 183.040) at the TU Wien.
- 2008 Coordinator of the *Research Seminar in Computer Graphics and Image Processing* (183.255), at the TU Wien.
- 2005–2010 Lecture on *Content-based Image Retrieval* for the Image Management course at the Danube University, Krems (in German).
- 2004–2007 Course lecturer and laboratory coordinator for *Image Understanding* (Masters course, 183.040 and 183.051) at the TU Wien.
- 2004–2008 Course lecturer and laboratory coordinator for *Einführung in die Mustererkennung (Introduction to Pattern Recognition)* (Undergraduate course, 183.066 and 183.067) at the TU Wien (in German).
- 2003–2008 Supervision of practical work at the TU Wien (183.270, 183.272, 183.273 as well as previous versions of these courses).
- 2003–2005 Co-coordinator of the Computer Science Seminar (183.271) at the TU Wien.
- 2003 Contribution to laboratory exercises for *Introduction to Pattern Recognition* (Undergraduate course, 183.067) at the TU Wien.
- 2003 Selected lectures in *Einführung in die Mustererkennung (Introduction to Pattern Recognition)* (Undergraduate course, 183.066) at the TU Wien (in German).
- 1997–1998 Coordinator of the introductory physics laboratory course (PHY104W) at the University of Cape Town, South Africa.

## **Tutorials and Lectures:**

- **Kuala Lumpur**, Malaysia, IEEE-EMBS Conference on Biomedical Engineering and Science, 8<sup>th</sup> December 2016, full day tutorial on *Machine Learning for Healthcare Big Data*
- **Colchester**, UK, Big Data and Analytics Summer School, 26<sup>th</sup> August 2015, course on *Search in Big Data*.
- **Zagreb**, Croatia, 22<sup>nd</sup> Summer School on Image Processing, 16<sup>th</sup> July 2014, lecture on *Evaluation in Medical Image Processing and Search*.
- **Veszprém**, Hungary, 21<sup>st</sup> Summer School on Image Processing, 10<sup>th</sup> July 2013, lecture on *Features for Image Retrieval: from Perception to Emotion*.
- **Pisa**, Italy, 24<sup>th</sup> European Medical Informatics Conference (MIE 2012), 26<sup>th</sup> August 2012, tutorial on *Searching Text and Images in the Medical Domain* (with Henning Müller).
- **Yaroslavl**, Russia, 6<sup>th</sup> Russian Summer School in Information Retrieval (RuSSIR 2012), 6<sup>th</sup>–10<sup>th</sup> August 2012, course on *Domain-Specific Information Retrieval* (with Mihai Lupu) (see [http://videlectures.net/russir2012\\_hanbury\\_lupu\\_domain/](http://videlectures.net/russir2012_hanbury_lupu_domain/)).
- **Vienna**, Austria, 20<sup>th</sup> Summer School on Image Processing, 11<sup>th</sup> July 2012, lecture on *Medical Information Search*.
- **Szeged**, Hungary, 19<sup>th</sup> Summer School on Image Processing, 14<sup>th</sup> July 2011, lecture on *Multimodal Information Retrieval and Evaluation*.
- **Cluj-Napoca**, Romania, 18<sup>th</sup> Summer School on Image Processing, 10<sup>th</sup> July 2010, lecture on *Morphological Watershed Segmentation*.
- **Hagenberg**, Austria. Presentation entitled *Image Features for Content-Based Image Retrieval* at the Upper Austria University of Applied Sciences, 24<sup>th</sup> November 2008
- **Szeged**, Hungary. 14<sup>th</sup> Summer School on Image Processing, 6<sup>th</sup> July 2006, lecture on *Content-based Image Retrieval*.
- **Szeged**, Hungary. 13<sup>th</sup> Summer School on Image Processing, 5<sup>th</sup> July 2005, lecture on *Colour Image Analysis*.
- **Timișoara**, Romania. 11<sup>th</sup> Summer School on Image Processing, July 2003, lectures on *Mathematical Morphology and Colour Image Processing*.

## **Supervision of Masters and PhD Students:**

At the TU Wien (unless otherwise stated).

### **Masters Thesis (Co)-Supervision:**

Completed Masters Thesis Students:

- Jure Zuljevic, *Automatically predicting revenue from management reports*, January 2019
- Roland Honeder, *Boolean query characteristics in patent searching*, January 2019
- Tobias Fink, *Improving Multi Word Term Detection in the Patent Domain with Deep Learning*, November 2018
- Sebastian Hofstätter, *Adapting Word Embeddings for Domain-Specific Information Retrieval*, June 2018
- Krista Westphal, *Using Natural Language Processing to Automate the Bechdel Test*, February 2018
- Alexej Strelzow, *Language Model Driven Analysis - Simplifying text on an individual scale*, November 2016
- Markus Zlabinger, *Finding duplicate images in biology papers*, November 2016
- Michael Kunerth, *Optische Worterkennung mithilfe eines Wörterbuches*, March 2016

- Georg Petz, *FindMeEvidence - High precision, web-based information retrieval for decision support of physicians in their medical routine*, November 2015
- Tawan Sierek, *Using Health Statistics to Improve Medical and Health Search*, June 2015
- Clemens Nopp, *Risk Sentiment Analysis in Banking Supervision*, April 2015
- Navid Rekabsaz, *On Using Statistical Semantics on Domain Specific Information Retrieval*, April 2015 (co-supervised with Mihai Lupu)
- Thomas Kern, *Feature Selection with Mutual Information for Patent Categorization*, August 2011 (co-supervised with Linda Andersson)
- Jana Machajdik, *Affective Image Classification*, October 2009
- Katrien Beuls, *Automated Patent Categorization: The Effect of Different Input Formats and Learning Algorithms*, August 2009 (co-supervised with Rob Clark, University of Edinburgh, UK)
- Julian Stöttinger, *Local Colour Features for Image Retrieval*, April 2007
- Stefan Kuthan, *Extraction of Attributes, Nature and Context of Images*, December 2005
- Florian Seitner, *Robust Detection and Tracking of Objects*, December 2005

#### Masters Thesis Examination Committee

- Ross Foley, *Image Analysis Methods for the Identification of Hypertrophy in Histopathology Images*, March 2014 (University College Dublin, Ireland)

#### PhD Thesis (Co)-Supervision

##### Current PhD Thesis Students:

- Sebastian Hofstätter, *Neural Approaches to Ranking in Information Retrieval*
- Markus Zlabinger, *Approaches for Efficient Manual Annotation*
- Florian Kromp, *Expert-driven online learning for nucleus segmentation and classification*
- Linda Andersson, *The Essence of Patent Retrieval* (co-supervised with Andreas Rauber)

##### Completed PhD Thesis Students:

- João Palotti, *Understandability and Expertise in Consumer Health Search – Retrieving topically relevant and understandable health information on the Web*
- Navid Rekabsaz, *Word Representation for Text Analysis and Search - Document Retrieval, Sentiment Analysis, and Cross Lingual Word Sense Disambiguation*, December 2018 (co-supervised with Mihai Lupu)
- Aldo Lipani, *Systematic Reviews in the Information Retrieval Domain*, September 2018 (co-supervised with Mihai Lupu)
- Abdel Aziz Taha, *Addressing metric challenges: Bias and Selection - Efficient Computation - Hubness Explanation and Estimation*, December 2015 (co-supervised with Andreas Rauber)
- Naeem Bhatti, *On the Contextual Co-occurrence of Local Features in Images*, May 2012
- Rehan Ullah Khan, *Contextual Skin Segmentation For Content Filtering*, March 2011
- Julian Stöttinger, *Detection and Evaluation Methods for Local Image and Video Features*, December 2010 (co-supervised with Theo Gevers, University of Amsterdam and Nicu Sebe, University of Trento)
- Lech Szumilas, *Rotation and Scale Invariant Shape Matching*, February 2008 (with Robert Sablatnig)

## **PhD Committees:**

- Eva D'hondt, *CRACKING THE PATENT: Using phrasal features to aid patent classification*, Radboud University Nijmegen, June 2014
- Markus Diem, *Text Classification and Layout Analysis for Document Reassembling*, TU Wien, May 2014 (Chairman of the examination committee)
- Eduard Vazquez, *Unsupervised image segmentation based on material reflectance description and saliency*, Universitat Autònoma de Barcelona, October 2011 (Chairman of the examination tribunal)
- Christophe Millet, *Construction et utilisation de la sémantique dans le cadre de l'annotation automatique d'images* (Construction and use of semantics in automatic image annotation), Ecole Nationale Supérieure de Télécommunications, Paris, January 2008 (Examiner)

## **Invited Presentations and Contributions:**

- **Vienna**, Austria. Semantics 2018 conference. 12<sup>th</sup> September 2018. Invited talk entitled: “Lexical and Statistical Semantics in Professional Search”
- **Vienna**, Austria. VISS 2018 - Vienna International Summer School on Machine Learning Methods and Data Analytics in Risk and Insurance, 13<sup>th</sup> July 2018. Invited talk entitled: “Sentiment Analysis in Finance”
- **Kuala Lumpur**, Malaysia. IEEE-EMBS Conference on Biomedical Engineering and Science, 6<sup>th</sup> December 2016. Invited talk entitled “Big Data in Medicine”
- **Klagenfurt**, Austria. Smart Data Workshop at the Annual Meeting of the German Informatics Society, 29<sup>th</sup> September 2016. Invited talk entitled “Leitprojekt Data Market Austria” (in German)
- **Evora**, Portugal. CLEF eHealth Workshop 2016, 6<sup>th</sup> September 2016. Invited talk on “Medical Information Retrieval Evaluation: Overview and Challenges”
- **Vienna**, Austria. Austrian Press Agency Digital Business Trends event, 17<sup>th</sup> March 2016. Invited keynote talk on “Big Data nach dem Hype: Was bringt die Algorithmen-Wirtschaft?” (Big Data after the hype: what does the algorithm economy provide?)
- **Madrid**, Spain. Polytechnic University of Madrid (UPM), 11<sup>th</sup> November 2015. Big Data, Good Data Course (7<sup>th</sup> Edition), Presentation entitled “Bringing the Algorithms to the Data: Evaluation-as-a-Service and Living Labs”
- **Madrid**, Spain. Polytechnic University of Madrid (UPM), 10<sup>th</sup> November 2015. Big Data, Good Data Course (7<sup>th</sup> Edition), Presentation entitled “Insights from Big Medical Data”
- **Nijmegen**, The Netherlands. Radboud University Nijmegen, 8<sup>th</sup> December 2014. Invited presentation (as member of the shortlist of candidates for a professor position) on “Domain Specific Search and its Evaluation”
- **Vienna**, Austria. Austrian Press Agency E-Business Community big data event, 27<sup>th</sup> February 2014. Invited keynote on “Wie Daten zum Wasser auf die digitale Mühle werden” (How data turns to water on the digital mill)
- **Utrecht**, The Netherlands. Invited participation in the workshop on Big Data in Content and Media, in preparation for the European Commission Big Data Public Private Partnership (PPP), 18<sup>th</sup> February 2014
- **Madrid**, Spain. Invited participation in the workshop on Big Data and Health, in preparation for the European Commission Big Data Public Private Partnership (PPP), 11<sup>th</sup> February 2014

- **São Paulo**, Brazil. Latin American eScience Workshop 2013 (Microsoft Faculty Summit), 14<sup>th</sup> May 2013. Invited talk on “Cloud-based evaluation infrastructure for medical image analysis and search”
- **Brussels**, Belgium. I-Health workshop, 3<sup>rd</sup> October 2011. Invited statement.
- **Oslo**, Norway. Medical Informatics Europe (MIE) Conference, 29<sup>th</sup> August 2011. Invited speaker in the workshop “Towards ‘Ideal Healthcare’: optimised and personalised future medicine”
- **Amsterdam**, The Netherlands. Workshop on “Enabling 21st Century Healthcare by Advanced Informatics”, a satellite meeting of the European Human Genetics Conference 2011, 27<sup>th</sup> May 2011. Invited presentation entitled “KHRESMOI: Towards improved health information access”
- **Padua**, Italy. Conference on Multilingual and Multimodal Information Access Evaluation, 20<sup>th</sup> September 2010. Member of the panel on “A PROMISE for the Experimental Evaluation”
- **Grenoble**, France. 8th International Workshop on Content-Based Multimedia Indexing (CBMI), 24<sup>th</sup> June 2010. Member of the panel discussing “Content-based multimedia search: what about large scale challenges?”
- **Paris**, France. Mathematical Morphology, Structure and Connections, 2<sup>nd</sup> April 2010. Invited Presentation entitled “Structure spatiale de couleur et sentiment évoqué” (Colour and Emotion in Images)
- **Graz**, Austria. PASCAL Visual Object Classes Challenge Workshop, a workshop of the ECCV 2006, 7<sup>th</sup> May 2006. Invited presentation entitled “The MUSCLE / ImageCLEF Image Retrieval Evaluation Campaigns”

### ***Awards at Conferences:***

- Best Systems Short Paper at the 41<sup>st</sup> European Conference on Information Retrieval, 2019 [C126] (with S. Hofstätter, N. Rekabsaz, M. Lupu, and C. Eickhoff)
- Best Poster Award at the 32<sup>nd</sup> ACM SIGAPP Symposium On Applied Computing, 2017 [C112] (with M. Zlabinger)
- Best Paper Award at the Conference and Labs of the Evaluation Forum (CLEF), 2016 [C103] (with J. Palotti, G. Zuccon, J. Bernhardt-Melischnig, and L. Goeuriot)
- First prize at the ACM Multimedia Grand Challenge, 2010 [A10] (with J. Machajdik and J. Stöttinger)
- Best Poster Prize, British Machine Vision Conference, 2001 [C2] (with J. Serra)

## ***Presentations at National & International Meetings:***

[References are to the list of publications at the end of the CV. For completeness, the invited presentations listed above are also included in the list below.]

### **2000:**

- **Paris**, France. Journée de l'ISS (International Society for Stereology), February 2000, Presentation
- **Strasbourg**, France. Frontiers of Mathematical Morphology workshop, April 2000, Presentation
- **Le Creusot**, France. Journée “Signal et Image pour le Contrôle en Industrie” (Signals and Images for Industrial Control), May 2000, Poster

### **2001:**

- **Paris**, France. Journée de l'ISS (International Society for Stereology), February 2001, Presentation
- **Pau**, France. Spring School on Colour Imaging, Ecole des Mines d'Alès, March 2001, Two presentations
- **Le Creusot**, France. 5<sup>th</sup> International Conference on Quality Control by Artificial Vision, May 2001, Presentation [C1]
- **Bordeaux**, France. 8<sup>th</sup> European Congress for Stereology and Image Analysis, September 2001, Presentation [A2]
- **Manchester**, United Kingdom. 12<sup>th</sup> British Machine Vision Conference, September 2001, Poster (chosen as the best poster) [C2]

### **2002:**

- **Bad Aussee**, Austria. 7<sup>th</sup> Computer Vision Winter Workshop, February 2002, Presentation [C3]
- **Graz**, Austria. Vision with Non-Traditional Sensors, 26<sup>th</sup> ÖAGM conference, 11 September 2002, Presentation [A3]

### **2003:**

- **Valtice**, Czech Republic. 8<sup>th</sup> Computer Vision Winter Workshop, 5 February 2003, Presentation [C4]
- **Laxenburg**, Austria. Vision in a Dynamic World, 27<sup>th</sup> ÖAGM conference, 5 June 2003, Presentation [A4]
- **Göteborg**, Sweden. Scandinavian Conference on Image Analysis, 2 July 2003, Presentation [C5]
- **Magdeburg**, Germany. German Pattern Recognition Association (DAGM) conference, 10 September 2003, Poster [C6]
- **Mantua**, Italy. International Conference on Image Analysis and Processing (ICIAP'2003), 18 September 2003, Poster [C7]
- **Vienna**, Austria. Österreichische Statistiktage 2003, 31 October 2003, presentation entitled “Biometric Identification”

### **2004:**

- **Aachen**, Germany. Second European Conference on Color in Graphics, Imaging and Vision (CGIV'2004), 5 April 2004, Poster [A5]
- **Hagenberg**, Austria. 28<sup>th</sup> ÖAGM conference, 17 June 2004, Presentation [A7].
- **Cambridge**, United Kingdom. 17<sup>th</sup> International Conference on Pattern Recognition (ICPR'2004), 23 August 2004, Poster [C10]

**2005:**

- **Paris**, France. 7<sup>th</sup> International Symposium on Mathematical Morphology (ISMM'2005), 19<sup>th</sup> April 2005, Presentation [C13]
- **Versailles**, France. 11th International Conference on Computer Analysis of Images and Patterns (CAIP'2005), 8<sup>th</sup> September 2005, Presentation [C15]

**2006:**

- **Hyderabad**, India. 7<sup>th</sup> Asian Conference on Computer Vision (ACCV'2006), 15<sup>th</sup> January 2006, Poster [C16]
- **Fontainebleau**, France. Presentation entitled "Segmentation Evaluation" at the Centre for Mathematical Morphology, 21<sup>st</sup> April 2006
- **Graz**, Austria. PASCAL Visual Object Classes Challenge Workshop, a workshop of the ECCV 2006, 7<sup>th</sup> May 2006. Invited presentation entitled "The MUSCLE / ImageCLEF Image Retrieval Evaluation Campaigns"
- **Genoa**, Italy. OntoImage International Workshop, 22<sup>nd</sup> May 2006, Presentation [A8]
- **Berlin**, Germany. MUSCLE CIS Coin Competition Workshop, 11<sup>th</sup> September 2006, Presentation [U1]
- **Alicante**, Spain. Second MUSCLE/ImageCLEF Workshop on Image and Video Retrieval Evaluation, 19<sup>th</sup> September 2006, Presentation [U2]
- **Barcelona**, Spain. Presentations entitled "Hierarchical Morphological Segmentation on Learned Boundaries" and "Content-Based Image Retrieval" at the Computer Vision Center, UAB (26<sup>th</sup> and 27<sup>th</sup> September 2006) and a presentation entitled "Hierarchical Morphological Segmentation on Learned Boundaries" at the Image and Video Processing Group, UPC (27<sup>th</sup> September 2006)

**2007:**

- **Amsterdam**, the Netherlands. Presentation entitled "Segmentation on Learned Boundaries" at the Intelligent Systems Lab Amsterdam, University of Amsterdam, 12<sup>th</sup> April 2007
- **Amsterdam**, the Netherlands. ACM International Conference on Image and Video Retrieval (CIVR 2007), 9<sup>th</sup> July 2007, Demo presentation
- **Amsterdam**, the Netherlands. ImageVAL Workshop, 12<sup>th</sup> July 2007, Presentation [A9]
- **Vienna**, Austria. 12<sup>th</sup> Conference on the Computer Analysis of Images and Patterns (CAIP 2007), 28<sup>th</sup> August 2007, Presentation [C28]
- **Budapest**, Hungary. Third MUSCLE/ImageCLEF Workshop on Image and Video Retrieval Evaluation, 18<sup>th</sup> September 2007, Presentation [U3]
- **Vina del Mar**, Chile. 12th Iberoamerican Congress on Pattern Recognition (CIARP 2007), 14<sup>th</sup> November 2007, Presentation [C31]
- **Genoa**, Italy. 2nd International Conference on Semantics And digital Media Technologies (SAMT 2007), 5<sup>th</sup> December 2007, Poster [C33]

**2008:**

- **Cannes**, France. Presentation entitled "Recognising Animals" at the MUSCLE Conference joint with VITALAS Conference, 11<sup>th</sup> February 2008 (see [http://videolectures.net/mcvc08\\_hanbury\\_ran/](http://videolectures.net/mcvc08_hanbury_ran/)).
- **Szeged**, Hungary. Presentation entitled "Hierarchical Morphological Segmentation" at the Image Processing and Computer Graphics Dept., University of Szeged, 21<sup>st</sup> May 2007



- **Havana**, Cuba. 13th Iberoamerican Congress on Pattern Recognition (CIARP 2008), 10<sup>th</sup> September 2008, Presentation [C36]
- **Novi Sad**, Serbia. Presentation entitled “Features for Content-Based Image Retrieval” at the Faculty of Technical Sciences, University of Novi Sad, 13<sup>th</sup> November 2008
- **Tampa**, Florida, USA. 19<sup>th</sup> International Conference on Pattern Recognition (ICPR 2008), 9<sup>th</sup> December 2008, Poster [C38]

#### 2009:

- **Boston**, Massachusetts, USA. SIGIR Workshop on the Future of IR Evaluation, 23<sup>rd</sup> July 2009, Poster [C41]
- **Graz**, Austria. 9th International Conference on Knowledge Management and Knowledge Technologies, 4<sup>th</sup> September 2009, presentation entitled “Patentsuche – Die Menge macht’s”.
- **Berlin**, Germany. Multilingual Information Access (MLIA) Technology Day, 8<sup>th</sup> December 2009, Member of the discussion panel.

#### 2010:

- **Nijmegen**, the Netherlands. 10<sup>th</sup> Dutch-Belgian Information Retrieval Workshop (DIR), 25<sup>th</sup> January 2010, Presentation [C44]
- **Paris**, France. Mathematical Morphology, Structure and Connections, 2<sup>nd</sup> April 2010. Invited Presentation entitled “Structure spatiale de couleur et sentiment évoqué” (Colour and Emotion in Images)
- **Grenoble**, France. 8th International Workshop on Content-Based Multimedia Indexing (CBMI), 24<sup>th</sup> June 2010. Member of the panel discussing “Content-based multimedia search: what about large scale challenges?”
- **Padua**, Italy. CLEF – Conference on Multilingual and Multimodal Information Access Evaluation, 20<sup>th</sup> September 2010. Member of the panel on “A PROMISE for the Experimental Evaluation”
- **Padua**, Italy. CLEF – Conference on Multilingual and Multimodal Information Access Evaluation, 21<sup>st</sup> September 2010, Presentation [C51]
- **Vienna**, Austria. KHRESMOI Kick-off meeting, 12<sup>th</sup> October 2010, *KHRESMOI Vision* presentation (see <http://khresmoi.eu/videos/kick-off-meeting/mueller-hanbury/>).

#### 2011:

- **Luxemburg**. Med-e-Tel 2011 Conference, 7<sup>th</sup> April 2011, Presentation [A11]
- **Amsterdam**, the Netherlands. Workshop on “Enabling 21st Century Healthcare by Advanced Informatics”, a satellite meeting of the European Human Genetics Conference 2011, 27<sup>th</sup> May 2011. Invited presentation entitled “KHRESMOI: Towards improved health information access”
- **Oslo**, Norway. Medical Informatics Europe (MIE) Conference, 29<sup>th</sup> August 2011. Invited speaker in the panel “Towards ‘Ideal Healthcare’: optimised and personalised future medicine”
- **Oslo**, Norway. Medical Informatics Europe (MIE) Conference, 30<sup>th</sup> August 2011. Chair of the workshop on “Aspects of Medical Information Search”
- **Cape Town**, South Africa. Presentation entitled “Searching for Medical Information on the Internet” at the Department of Computer Science, University of Cape Town, 13<sup>th</sup> September 2011
- **Cape Town**, South Africa. 2nd Southern African Telemedicine Conference, 15<sup>th</sup> September 2011, Presentation [A14]
- **Brussels**, Belgium. I-Health workshop, 3<sup>rd</sup> October 2011. Invited statement.

- **Barcelona**, Spain. Presentation entitled “Affective Image Classification using Features Inspired by Psychology and Art Theory” at the Computer Vision Centre, Universitat Autònoma de Barcelona, 7<sup>th</sup> October 2011

## 2012:

- **Vienna**, Austria. Presentation introducing the Khresmoi project, LOD2 project meeting, 21<sup>st</sup> March 2012
- **Worldwide** (teleconference). Presentation introducing the Khresmoi project, Presentation for Wolters Kluwer staff, 4<sup>th</sup> June 2012
- **Portland**, Oregon, USA. SIGIR Workshop on Community IR Evaluations using Private Data, 16<sup>th</sup> August 2012, Presentation entitled “A Cloud-based Approach for Evaluation on Private Data”
- **Pisa**, Italy. Medical Informatics Europe 2012 (MIE2012), 28<sup>th</sup> August 2012, Presentation [A17]
- **Graz**, Austria. I-Know – 12<sup>th</sup> International Conference on Knowledge Management and Knowledge Technologies, 7<sup>th</sup> September 2012, Presentation [C67]
- **Brussels**, Belgium. International Workshop on Search Computing, 25<sup>th</sup> September 2012, Presentation entitled “Enterprise Search in Medical Data” (see [http://videlectures.net/searchcomputing2012\\_hanbury\\_data/](http://videlectures.net/searchcomputing2012_hanbury_data/))
- **Vienna**, Austria. Vienna Semantic Web Meetup, 17<sup>th</sup> October 2012, Lightning talk entitled “Using semantic search to improve medical care”
- **Berlin**, Germany. Health 2.0 Conference, 6<sup>th</sup> November 2012, Demo of the Khresmoi prototype and panel discussion (see <http://www.health2con.com/tv/from-global-data-to-unique-decisions-pt-2-health-professionals-krhesmoi-project/>)
- **Zagreb**, Croatia. University of Zagreb, 29<sup>th</sup>–30<sup>th</sup> November 2012, two presentations on “Features for Image Retrieval: from Perception to Emotion”
- **Thessaloniki**, Greece. MUMIA Workshop on Integrating IR/MT technologies for Professional Search, 13<sup>th</sup> December 2012, Presentation entitled “Toward a Cloud-Based Integration of IR Tools”

## 2013:

- **Moscow**, Russia. Workshop on Integrating IR Technologies for Professional Search, 24<sup>th</sup> March 2013, Presentation [C71]
- **Dublin**, Ireland. European Data Forum, 10<sup>th</sup> April 2013, Presentation entitled “Algorithm any good? A Cloud-based Infrastructure for Evaluation on Big Data”
- **São Paulo**, Brazil. Latin American eScience Workshop 2013 (Microsoft Faculty Summit), 14<sup>th</sup> May 2013. Invited talk on “Cloud-based evaluation infrastructure for medical image analysis and search”
- **Lisbon**, Portugal. Conference on Open Areas in Information Retrieval (OAIR, previously RIAO), 22<sup>nd</sup> May 2013, Presentation [C72]
- **Nairobi**, Kenya. IST-Africa Conference, 30<sup>th</sup> May 2013, Presentation [C73]
- **Gmunden**, Austria. Retreat on NeuroIS, 2<sup>nd</sup> June 2013. Member of the panel on “Methodologies for Analyzing Neurospatial Activation Patterns Associated with Information Retrieval Tasks Conducted on Search Engines”
- **Vienna**, Austria. VRVis Research Centre, 27<sup>th</sup> June 2013. Presentation on “Search in Medical Texts and Images”
- **Copenhagen**, Denmark. 14<sup>th</sup> World Congress on Medical and Health Informatics (MedInfo), 21<sup>st</sup> August 2013, Presentation [A21]

- **Vienna**, Austria. FFG, BMVIT and OCG Workshop on Energie-Informatik: Potenziale für Österreich (Energy-Informatics: Potential in Austria), 28<sup>th</sup> August 2013. Talk on “Datenmodelle und Datenverarbeitung” (Data Models and Data Processing)
- **Valencia**, Spain. Conference and Labs of the Evaluation Forum (CLEF). 23<sup>rd</sup> September 2013, Presentation [C78]
- **Salzburg**, Austria. Workshop on Data-Future 2020, 17<sup>th</sup> October 2013. Talk on “Datendurchdringen mit intelligenten Systemen” (Conquering Data with Intelligent Systems)
- **Graz**, Austria. Workshop on Data-Future 2020, 21<sup>st</sup> October 2013. Talk on “Datendurchdringen mit intelligenten Systemen” (Conquering Data with Intelligent Systems)
- **Vienna**, Austria. Workshop on Data-Future 2020, 4<sup>th</sup> November 2013. Talk on “Datendurchdringen mit intelligenten Systemen” (Conquering Data with Intelligent Systems)
- **Vienna**, Austria. European Space Agency (ESA) Technology Transfer Day, 5<sup>th</sup> December 2013. Talk on “Conquering Data: The State of Play in Intelligent Data Analytics”

## 2014

- **Vienna**, Austria. Federal Ministry of Transport, Innovation and Technology, 29<sup>th</sup> January 2014. Final presentation of the study on Conquering Data with Intelligent Systems
- **Vienna**, Austria. Austrian Press Agency E-Business Community big data event, 27<sup>th</sup> February 2014. Invited keynote on “Wie Daten zum Wasser auf die digitale Mühle werden” (How data turns to water on the digital mill)
- **Athens**, Greece. European Data Forum (EDF), 19<sup>th</sup> March 2014. Presentation of the results of the Khresmoi project to Commissioner Neelie Kroes, Vice President of the European Commission and responsible for the Digital Agenda.
- **Athens**, Greece. European Data Forum (EDF), 19<sup>th</sup> March 2014. Talk entitled “Conquering Data in Austria: a technology roadmap”
- **Seoul**, Korea. Big Data Innovators Gathering (BIG), 8<sup>th</sup> April 2014. Talk entitled “A Cloud-Based Framework for Evaluation on Big Data”
- **Vienna**, Austria. Advisory Board for the ICT of the Future Funding Programme, Federal Ministry of Transport, Innovation and Technology, 8<sup>th</sup> May 2014. Presentation on “Conquering Data in Austria”
- **Vienna**, Austria. Digital Networked Data Technology Platform Meeting, 15<sup>th</sup> May 2014. Presentation entitled “Conquering Data: a technology roadmap for Austria”
- **Vienna**, Austria. IMAGINE Conference (Austrian ICT Conference), 4<sup>th</sup> June 2014. Participant in the panel discussion “Big Data Austria – Hype und Hybris”
- **Nijmegen**, The Netherlands. Radboud University Nijmegen, 17<sup>th</sup> June 2014. Presentation entitled “Abstracting Domain-Specific Information Retrieval”
- **Vienna**, Austria. Advisory Council on the Information Society of the Austrian Federal Chancellery (Bundeskanzleramt), 23<sup>rd</sup> June 2014. Presentation on the next steps in the big data technology roadmap in Austria.
- **Zagreb**, Croatia. University of Zagreb, 17<sup>th</sup> July 2014. Presentation entitled “Domain-specific Search: What do doctors and patent searchers have in common?”
- **Istanbul**, Turkey. Boğaziçi University, 7<sup>th</sup> November 2014. Presentation entitled “Domain-specific Search: What do doctors and patent searchers have in common?”

- **Nijmegen**, The Netherlands. Radboud University Nijmegen, 8<sup>th</sup> December 2014. Invited presentation (as member of the shortlist of candidates for a professor position) on “Domain Specific Search and its Evaluation”

## 2015

- **Vienna**, Austria. Big Data Management Conference, 3<sup>rd</sup> March 2015. Presentation entitled “Roadmap into the Future: Data Science als Motor von Innovation”
- **Vienna**, Austria. IDC Data Hub, 21<sup>st</sup> May 2015. Presentation entitled “Extracting Knowledge from Data in Medicine”
- **Vienna**, Austria. Workshop Cloud & Big Data, OCG Jahrestagung 2015, 10<sup>th</sup> June 2015, Presentation entitled “Big Data: Überblick und Herausforderungen”
- **Vienna**, Austria. MLKRep – 2015, 1st International Workshop on the Use of Multilingual Language Resources in Knowledge Representation Systems, 10<sup>th</sup> July 2015, Presentation entitled “Sustainable language resources in multilingual medical text analysis and search”
- **Vienna**, Austria. Predictive Analytics Conference, 7<sup>th</sup> October 2015, Presentation entitled “Insights from Big Medical Data”
- **Madrid**, Spain. Polytechnic University of Madrid (UPM), 10<sup>th</sup> November 2015. Big Data, Good Data Course (7<sup>th</sup> Edition), Presentation entitled “Insights from Big Medical Data”
- **Madrid**, Spain. Polytechnic University of Madrid (UPM), 11<sup>th</sup> November 2015. Big Data, Good Data Course (7<sup>th</sup> Edition), Presentation entitled “Bringing the Algorithms to the Data: Evaluation-as-a-Service and Living Labs”

## 2016

- **Vienna**, Austria. IDC Financial Insights, 15<sup>th</sup> March 2016. Presentation entitled “Taking advantage of text data in financial analysis”
- **Vienna**, Austria. Austrian Press Agency Digital Business Trends event, 17<sup>th</sup> March 2016. Invited keynote talk on “Big Data nach dem Hype: Was bringt die Algorithmen-Wirtschaft?” (Big Data after the hype: what does the algorithm economy provide?)
- **Geneva**, Switzerland. 13<sup>th</sup> International Conference in Nursing Informatics, 27<sup>th</sup> June 2016. Workshop presentation entitled “Assessing Quality Online Health Information: What is the Solution?”
- **Pisa**, Italy. Medical Information Retrieval (MedIR) Workshop at SIGIR 2016, 21<sup>st</sup> July 2016. Presentation entitled “What remains to be evaluated in Multilingual Medical Search?” [C105]
- **Stockholm**, Sweden. Uppdragshuset Innovation Day Seminar, 24<sup>th</sup> August 2016. Invited talk entitled “Evaluation methods of semantic search tools”
- **Evora**, Portugal. CLEF eHealth Workshop 2016, 6<sup>th</sup> September 2016. Invited talk on “Medical Information Retrieval Evaluation: Overview and Challenges”
- **Klagenfurt**, Austria. Smart Data Workshop at the Annual Meeting of the German Informatics Society, 29<sup>th</sup> September 2016. Invited talk entitled “Leitprojekt Data Market Austria” (in German)
- **Berlin**, Germany. Data Natives Berlin, 28<sup>th</sup> October 2016. Talk entitled “Analysing and Searching Unstructured Medical Data”
- **Vienna**, Austria. Public Kick-off meeting of the Data Market Austria project, 3<sup>rd</sup> November 2016. Talk entitled “Data Market Austria Überblick” (in German)
- **Barcelona**, Spain. World of Health IT symposium, 21<sup>st</sup> November 2016. Talk entitled “Multilingual Medical Text Analysis and Search”

- **Vienna**, Austria. Workshop on networking data science activities in Austria, 24<sup>th</sup> November 2016. Talk entitled “Data Market Austria Überblick” (in German)
- **Amsterdam**, The Netherlands. BBMRI-ERIC Text Mining Meeting, 28<sup>th</sup> November 2016. Invited talk entitled “KConnect – Knowledge base, Information extraction, Semantic search, and Machine translation”
- **Kuala Lumpur**, Malaysia. IEEE-EMBS Conference on Biomedical Engineering and Science, 6<sup>th</sup> December 2016. Invited talk entitled “Big Data in Medicine”
- **Kuala Lumpur**, Malaysia. Department of Radiology, National University of Malaysia, 9<sup>th</sup> December 2016. Presentation entitled “Insights from Medical Text and Image Data”
- **Kuala Lumpur**, Malaysia. Faculty of Information Science and Technology, National University of Malaysia, 9<sup>th</sup> December 2016. Presentation entitled “Bringing the Algorithms to the Data: Evaluation-as-a-Service and Living Labs”

## 2017

- **Berlin**, Germany. Member of the Big Data Austrian Delegation to the German Ministry of Economics and Energy, 24<sup>th</sup> February 2017. Presentation entitled “Data Market Austria” (in German)
- **Shenzhen, Guangzho, Shanghai, Beijing**, China. Presentations of TU Wien Data Science research at Chinese Academy of Science Research Centres as member of the Austrian ICT Delegation to China, 13<sup>th</sup>–17<sup>th</sup> March 2017.
- **Salzburg**, Austria. Salzburg Big Data Meetup and Data Market Austria public meeting, 6<sup>th</sup> April 2017. Presentation entitled “Getting Data Markets to perform and deliver” (in German)
- **Vienna**, Austria. E-Day:17, 12<sup>th</sup> April 2017. Presentation entitled “Mobilitätsdaten in Data Market Austria” (in German)
- **Vienna**, Austria. Fachkonferenz Big Data: von Big zu Smart, 24<sup>th</sup> April 2017. Presentation entitled “Data Market Austria – die Technologiebasis für Digitale Geschäftsmodelle” (in German)
- **Vienna**, Austria. Austrian Computer Science Day, 20<sup>th</sup> June 2017. Invited Presentation entitled “Domain-Specific Text Analysis and Search”
- **Graz**, Austria. iKnow workshop on Platform Economy and Business Models, 11<sup>th</sup> October 2017. Presentation entitled “Data Market Austria – Setting up a Data-Service Ecosystem in Austria”
- **Graz**, Austria. iKnow conference, 12<sup>th</sup> October 2017. Keynote presentation entitled: “Implementing the Data Economy”
- **Vienna**, Austria. Accelerate Innovation by Automation Workshop. 25<sup>th</sup> October 2017. Presentation entitled: “Introduction to the Semantic World”

## 2018

- **Berlin**, Germany. TU Berlin, 15<sup>th</sup> January 2018. Invited talk entitled: “Word relatedness from Word Embedding in text analysis and information retrieval”
- **Vienna**, Austria. Data Science Society Meet-Up, 14<sup>th</sup> March 2018. Invited talk entitled: “Unstructured Information in Data Science: Word Relatedness from Word Embedding”
- **Vienna**, Austria. TU Wien Inter-Faculty Research Centre on Computational Complex Systems Meeting: Drawing Insights from Complex Data, 11<sup>th</sup> April 2018. Talk entitled: “Word Embedding and Applications”

- **Vienna**, Austria. VISS 2018 - Vienna International Summer School on Machine Learning Methods and Data Analytics in Risk and Insurance, 13<sup>th</sup> July 2018. Invited talk entitled: “Sentiment Analysis in Finance”
- **Vienna**, Austria. Semantics 2018 conference. 12<sup>th</sup> September 2018. Invited talk entitled: “Lexical and Statistical Semantics in Professional Search”
- **Vienna**, Austria. Austrian Press Agency Digital Business Trends event, 24<sup>th</sup> October 2018. Invited panel member for discussion on “Maschinen als Begleiter: Wie digitale Assistenten zum Alltag werden” (Machines as companions: how digital assistants are becoming routine)
- **Vienna**, Austria. Invited presentation entitled “Data Intelligence und Recht” to the working group “Perspektiven der Rechtsetzung” (Perspectives of Legislation) of the Directorate of the Austrian Parliament. 5<sup>th</sup> November 2018.
- **Vienna**, Austria. Fake News and other AI Challenges for the News Media in the 21st Century, 30<sup>th</sup> November 2018. Invited Presentation entitled “Credibility of sources, content, and algorithms” and panel member for the discussion on “Solving Ethical & Technical Challenges of Fake News”
- **Gandhinagar**, India. Forum for Information Retrieval Evaluation (FIRE), 7<sup>th</sup> December 2018. Invited talk entitled “Word Relatedness from Word Embedding in Information Retrieval”

## 2019

- **Vienna**, Austria. Invited member of the panel with the topic “Alexa, wir müssen reden!” (Alexa, we must discuss!), International Forum for Business Communication. 25<sup>th</sup> March 2019
- **Vienna**, Austria. Second Austrian Data Governance Conference, 4<sup>th</sup> April 2019. Invited presentation on “Datengetriebene Innovation zwischen Forschung & Wirtschaft: Kooperative Projekte, Spin-offs, Crowd-Solving” (Data-driven Innovation between Research and Industry: Cooperative Projects, Spin-Offs, Crowd-Solving)
- **Cologne**, Germany. European Conference on Information Retrieval (ECIR) Industry Day, 18<sup>th</sup> April 2019. Presentation entitled “Challenges in developing a search system to support radiologists”

## Upcoming

- **Vienna**, Austria. Austrian Computer Science Day, 3<sup>rd</sup> June 2019. Invited Presentation entitled “Bias in Data Science”

## Publications – Allan Hanbury

### *Journal papers (peer reviewed)*

- [J1] **D. W. Kurtz, P. Martinez, P. Tripe and A. Hanbury**, *The oblique dipole pulsation mode of the rapidly oscillating AP star HD80316*, Monthly Notices of the Royal Astronomical Society, Vol. 289, Issue 3, pages 645-650, 1997.
- [J2] **A. Hanbury and J. Serra**, *Morphological Operators on the Unit Circle*, IEEE Transactions on Image Processing, Vol. 10, No. 12, pages 1842–1850, 2001.
- [J3] **D. Chetverikov and A. Hanbury**, *Finding Defects in Texture using Regularity and Local Orientation*, Pattern Recognition, Vol. 35, No. 10, pages 2165–2180, 2002.
- [J4] **A. Hanbury and J. Serra**, *Mathematical Morphology in the CIELAB Space*, Image Analysis and Stereology, Vol. 21, No. 3, pages 201–206, 2002.
- [J5] **M. Kampel, H. Wildenauer, P. Blauensteiner and A. Hanbury**, *Improved motion segmentation based on shadow detection*, Electronic Letters on Computer Vision and Image Analysis, Vol. 6, No. 3, pages 1–12, 2007.
- [J6] **A. Hanbury**, *Constructing Cylindrical Coordinate Colour Spaces*, Pattern Recognition Letters, Vol. 29, No. 4, pages 494–500, 2008.
- [J7] **A. Hanbury**, *A Survey of Methods for Image Annotation*, Journal of Visual Languages and Computing, Vol. 19, No. 5, pages 617–627, 2008.
- [J8] **A. Hanbury and B. Marcotegui**, *Morphological Segmentation on Learned Boundaries*, Image and Vision Computing, Vol. 27, No. 4, Pages 480–488, 2009.
- [J9] **U. Kandaswamy, D. A. Adjeroh, S. Schuckers and A. Hanbury**, *Robust Color Texture Features Under Varying Illumination Conditions*, IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics, Vol. 42, No. 1, pages 58–68, 2012.
- [J10] **R. Khan, A. Hanbury, J. Stöttinger and A. Bais**, *Color based skin classification*, Pattern Recognition Letters, Vol. 33, No. 2, pages 157–163, 2012.
- [J11] **J. Stöttinger, A. Hanbury, N. Sebe and T. Gevers**, *Sparse Color Interest Points for Object Retrieval and Categorization*, IEEE Transactions on Image Processing, Vol. 21, No. 5, pages 2681–2692, 2012.
- [J12] **N. Bhatti and A. Hanbury**, *Image Search in Patents: a Review*, International Journal on Document Analysis and Recognition, Vol. 16, No. 4, pages 309–329, 2013.
- [J13] **M. Lupu and A. Hanbury**, *Patent Retrieval*, Foundations and Trends in Information Retrieval, Vol. 7, No. 1, pages 1–97, 2013.
- [J14] **M. Kritz, M. Gschwandtner, V. Stefanov, A. Hanbury and M. Samwald**, *Utilization and Perceived Problems of Online Medical Resources and Search Tools among Different Groups of European Physicians*, Journal of Medical Internet Research, 15(6):e122, 2013.
- [J15] **R. Khan, A. Hanbury, R. Sablatnig, J. Stöttinger, F. Ali Khan and F. Alam Khan**, *Systematic skin segmentation: merging spatial and non-spatial data*, Multimedia Tools and Applications, Vol. 69, No. 3, pages 717–741, 2014.
- [J16] **M. Salamasis and A. Hanbury**, *PerFedPat: An Integrated Federated System for Patent Search*, World Patent Information, Vol. 38, pages 4–11, 2014.
- [J17] **B. Alsallakh, A. Hanbury, H. Hauser, S. Miksch and A. Rauber**, *Visual Methods for Analyzing Probabilistic Classification Data*, IEEE Transactions on Visualization and Computer Graphics, 20(12), 2014

- [J18] **A. A. Taha and A Hanbury**, *An Efficient Algorithm for Calculating the Exact Hausdorff Distance*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 37(11), pages 2153–2163, 2015.
- [J19] **A. A. Taha and A. Hanbury**. *Metrics for evaluating 3D medical image segmentation: analysis, selection, and tool*. BMC Medical Imaging, 15(29), 2015.
- [J20] **J. Palotti, A. Hanbury, H. Müller and C. E. Kahn Jr.**, *How Users Search and What They Search for in the Medical Domain: Understanding Laypeople and Experts through Query Logs*, Information Retrieval Journal 19(1), pages 189–224, 2016.
- [J21] **C. Auffray, R. Balling, I. Barroso, L. Bencze, M. Benson, J. Bergeron, E. Bernal-Delgado, N. Blomberg, C. Bock, A. Conesa, S. Del Signore, C. Delogne, P. Devilee, A. Di Meglio, R. Eijkemans, P. Flicek, N. Graf, V. Grimm, H.-J. Guchelaar, Y. Guo, I. G. Gut, A. Hanbury, S. Hanif, R.-D. Hilgers, Á. Honrado, D. R. Hose, J. Houwing-Duistermaat, T. Hubbard, S. H. Janacek, H. Karanikas, T. Kievits, M. Kohler, A. Kremer, J. Lanfear, T. Lengauer, E. Maes, T. Meert, W. Muller, D. Nickel, P. Oledzki, B. Pedersen, M. Petkovic, K. Pliakos, M. Rattray, J. Redón i Màs, R. Schneider, T. Sengstag, X. Serra Picamal, W. Spek, M. Tome, L. A. I. Vaas, O. van Batenburg, M. Vandelaer, P. Varnai, P. Villoslada, J. A. Vizcaíno, J. P. M. Wubbe, G. Zanetti**, *Making sense of big data in health research: Towards a European Union action plan*, Genome Medicine, 8:71, 2016.
- [J22] **O. Alfonso Jiménez-del-Toro, H. Müller, M. Krenn, K. Gruenberg, A. A. Taha, M. Winterstein, I. Eggel, A. Foncubierta-Rodríguez, O. Goksel, A. Jakab, G. Kontokotsios, G. Langs, B. H. Menze, T. Salas Fernandez, R. Schaer, A. Walleyo, M.-A. Weber, Y. Dicente Cid, T. Gass, M. Heinrich, F. Jia, F. Kahl, R. Kechichian, D. Mai, A. B. Spanier, G. Vincent, C. Wang, D. Wyeth and A. Hanbury**, *Cloud-based Evaluation of Anatomical Structure Segmentation and Landmark Detection Algorithms: VISCERAL Anatomy Benchmarks*, IEEE Transactions on Medical Imaging, 35:11, pages 2459-2475, 2016.
- [J23] **N. Bhatti, A. Hanbury and J. Stöttinger**, *Contextual local primitives for binary patent image retrieval*, Multimedia Tools and Applications, Volume 77, Issue 7, pages 9111–9151, 2018
- [J24] **A. Lipani, T. Roelleke, M. Lupu and A. Hanbury**, *A systematic approach to normalization in probabilistic models*, Information Retrieval Journal, Volume 21, Issue 6, pages 565–596, 2018.
- [J25] **F. Hopfgartner, A. Hanbury, H. Müller, I. Eggel, K. Balog, T. Brodt, G. V. Cormack, J. Lin, J. Kalpathy-Cramer, N. Kando, M. P. Kato, A. Krithara, T. Gollub, M. Potthast, E. Viegas and S. Mercer**, *Evaluation-as-a-Service for the Computational Sciences: Overview and Outlook*, Journal of Data and Information Quality, Volume 10, Issue 4, 2018.
- [J26] **L. Maier-Hein, M. Eisenmann, A. Reinke, S. Onogur, M. Stankovic, P. Scholz, T. Arbel, H. Bogunovic, A. P. Bradley, A. Carass, C. Feldmann, A. F. Frangi, P. M. Full, B. van Ginneken, A. Hanbury, K. Honauer, M. Kozubek, B. A. Landman, K. März, O. Maier, K. Maier-Hein, B. H. Menze, H. Müller, P. F. Neher, W. Niessen, N. Rajpoot, G. C. Sharp, K. Sirinukunwattana, S. Speidel, C. Stock, D. Stoyanov, A. A. Taha, F. van der Sommen, C.-W. Wang, M.-A. Weber, G. Zheng, P. Jannin, A. Kopp-Schneider**, *Why rankings of biomedical image analysis competitions should be interpreted with care*, Nature Communications, Volume 9, Article number: 5217, 2018.



- [J27] **J. Palotti, G. Zuccon and A. Hanbury**, *A Study of Web Page Understandability for Consumer Health Search*, *Journal of Medical Internet Research*, 21(1):e10986, 2019.

### **Journal Papers (not peer reviewed)**

- [N1] **A. Hanbury, H. Müller and P. Clough**, *Editorial: Special issue on image and video retrieval evaluation*, *Computer Vision and Image Understanding*, Vol. 114, No. 4, pages 409–410, 2010.
- [N2] **A. Hanbury, V. Zenz and H. Berger**, *1st International Workshop on Advances in Patent Information Retrieval (AsPIRe'10)*, *SIGIR Forum*, Vol. 44, No. 1, pages 19–22, 2010.
- [N3] **H. Müller, A. Hanbury and N. Al Shorbaji**, *Health Information Search to Deal with the Exploding Amount of Health Information Produced*, *Methods of Information in Medicine*, Vol. 51, No. 6, pages 516–518, 2012.
- [N4] **M. Agosti, R. Berendsen, T. Bogers, M. Braschler, P. Buitelaar, K. Choukri, G. M. Di Nunzio, N. Ferro, P. Forner, A. Hanbury, K. Friberg Heppin, P. Hansen, A. Järvelin, B. Larsen, M. Lupu, I. Masiero, H. Müller, S. Peruzzo, V. Petras, F. Piroi, M. de Rijke, G. Santucci, G. Silvello and E. Toms**, *PROMISE Retreat Report: Prospects and Opportunities for Information Access Evaluation*, *SIGIR Forum*, Vol. 46, No. 2, pages 60–84, 2012.
- [N5] **P. Forner, L. Bentivogli, M. Braschler, K. Choukri, N. Ferro, A. Hanbury, J. Karlgren and H. Müller**, *PROMISE technology transfer day: spreading the word on information access evaluation at an industrial event*, *SIGIR Forum*, Vol. 47, No. 1, pages 53–58, 2013.
- [N6] **A. Hanbury, M. Lupu, N. Kando, B. Diallo and S. Adams**, *Guest editorial: Special issue on information retrieval in the intellectual property domain*, *Information Retrieval*, Vol. 17, No. 5, pages 407–411, 2014.
- [N7] **F. Hopfgartner, A. Hanbury, H. Müller, N. Kando, S. Mercer, J. Kalpathy-Cramer, M. Potthast, T. Gollub, A. Krithara, J. Lin, K. Balog and I. Eggel**, *Report on the Evaluation-as-a-Service (EaaS) Expert Workshop*, *SIGIR Forum*, Vol. 49, No. 1, pages 57–65, 2015.
- [N8] **H. Müller and A. Hanbury**, *Forschungsanwendungen in der digitalen Radiologie: Big data und Co.: Wie Forschungsanwendungen und große Datenmengen in der Radiologie der Zukunft helfen können*, *Der Radiologe* 56(2), pages 176–180, 2016.
- [N9] **A. Hanbury, G. Kazai, A. Rauber and N. Fuhr**, *ECIR 2015: 37th European Conference on Information Retrieval*, *SIGIR Forum*, Vol. 49, No. 2, pages 36–46, 2015.
- [N10] **H. Müller, J. Kalpathy-Cramer, A. Hanbury, K. Farahani, R. Sergeev, J. H. Paik, A. Klein, A. Criminisi, A. Trister, T. Norman, D. Kennedy, G. Srinivasa, A. Mamonov, N. Preuss**, *Report on the Cloud-Based Evaluation Approaches Workshop 2015*, *SIGIR Forum*, Vol. 50, No. 1, pages 35–41, 2016.

### **Book Chapters (peer reviewed)**

- [I1] **A. Hanbury**, *Image Segmentation by Region-based and Watershed Algorithms*, In: *Encyclopedia of Computer Science and Engineering*, Ed. Benjamin W. Wah, Wiley Interscience, Vol. 3, pages 1543–1552, 2009.
- [I2] **A. Hanbury, H. Müller, G. Langs and B. H. Menze**, *Cloud-based Evaluation Framework for Big Data*, In: *The Future Internet – Future Internet Assembly 2013: Validated Results and New Horizons*, Springer LNCS 7858, pages 104–114, 2013.

- [I3] **M. Lupu, M. Salampasis and A. Hanbury**, *Domain Specific Search*, In: Professional Search in the Modern World, Ed. G. Paltoglou, F. Loizides, P. Hansen, Springer, pages 96–117, 2014.
- [I4] **R. Bierig, A. Hanbury, F. Piroi, M. Haas, H. Berger, M. Lupu and M. Dittenbach**, *A Researcher’s View on (Big) Data Analytics in Austria: Results from an Online Survey*, In: Data Management Technologies and Applications, Volume 178 of the series Communications in Computer and Information Science, pp 45–61, 2015
- [I5] **A. Hanbury and H. Müller**, *VISCERAL: Evaluation-as-a-Service for Medical Imaging*, In: Cloud-Based Benchmarking of Medical Image Analysis, Ed. A. Hanbury, H. Müller and G. Langs, Springer, pages 3–13, 2017.
- [I6] **A. A. Taha and A. Hanbury**, *Evaluation Metrics for Medical Organ Segmentation and Lesion Detection*, In: Cloud-Based Benchmarking of Medical Image Analysis, Ed. A. Hanbury, H. Müller and G. Langs, Springer, pages 87–105, 2017.
- [I7] **O. Jimenez-del-Toro, H. Müller, A. Foncubierta-Rodriguez, G. Langs and A. Hanbury**, *Retrieval of Medical Cases for Diagnostic Decisions: VISCERAL Retrieval Benchmark*, In: Cloud-Based Benchmarking of Medical Image Analysis, Ed. A. Hanbury, H. Müller and G. Langs, Springer, pages 127–141, 2017.
- [I8] **F. Piroi and A. Hanbury**, *Evaluating Information Retrieval Systems on European Patent Data: The CLEF-IP Campaign*, In: Current Challenges in Patent Information Retrieval, 2<sup>nd</sup> edition, Ed. M. Lupu, K. Mayer, N. Kando and A. J. Trippe, Springer, pages 113–142, 2017
- [I9] **L. Andersson, A. Hanbury and A. Rauber**, *The Portability of Three Types of Text Mining Techniques into the Patent Text Genre*, In: Current Challenges in Patent Information Retrieval, 2<sup>nd</sup> edition, Ed. M. Lupu, K. Mayer, N. Kando and A. J. Trippe, Springer, pages 241–280, 2017

### **Book Chapters (not peer reviewed)**

- [H1] **A. Hanbury**, *Mathematical Morphology Applied to Circular Data*, In: Advances in Imaging and Electron Physics, Ed. P. W. Hawkes, Academic Press, Vol. 128, pages 123–205, 2003.
- [H2] **S. Nowak, A. Hanbury and T. Deselaers**, *Object and Concept Recognition for Image Retrieval*, In: ImageCLEF – Experimental evaluation of visual information retrieval, pages 199–216, Springer, 2010.

### **Books (editor and author)**

- [B1] **A. Hanbury and H. Bischof** (Eds.), *Proceedings of the 10<sup>th</sup> Computer Vision Winter Workshop (CVWW’2005)*, February 2–4, Zell an der Pram, Austria.
- [B2] **W. G. Kropatsch, R. Sablatnig and A. Hanbury** (Eds.), *Pattern Recognition – Proceedings of the 27th DAGM Symposium*, Springer LNCS 3663, 2005.
- [B3] **W. G. Kropatsch, M. Kampel and A. Hanbury** (Eds.), *Computer Analysis of Images and Patterns – Proceedings of the 12th International CAIP Conference*, Springer LNCS 4673, 2007.
- [B4] **H. Cunningham, A. Hanbury and S. Rueger** (Eds.), *Advances in Multidisciplinary Retrieval*. 1<sup>st</sup> Information Retrieval Facility Conference, Springer LNCS 6107, 2010.
- [B5] **A. Hanbury, A. Rauber and A. P. de Vries** (Eds.), *Multidisciplinary Information Retrieval*, 2<sup>nd</sup> Information Retrieval Facility Conference, Springer LNCS 6653, 2011.

- [B6] **M. Agosti, R. Berendsen, T. Bogers, M. Braschler, P. Buitelaar, K. Choukri, G. M. Di Nunzio, N. Ferro, P. Forner, A. Hanbury, K. Friberg Heppin, P. Hansen, A. Järvelin, B. Larsen, M. Lupu, I. Masiero, H. Müller, S. Peruzzo, V. Petras, F. Piroi, M. de Rijke, G. Santucci, G. Silvello and E. Toms**, *PROMISE Retreat Report: Prospects and Opportunities for Information Access Evaluation*, PROMISE Network of Excellence, ISBN 978-88-6321-039-2, 2012.
- [B7] **H. Berger, M. Dittenbach, M. Haas, R. Bierig, A. Hanbury, M. Lupu and F. Piroi**, *Conquering Data in Austria: Technologie-Roadmap für das Programm IKT der Zukunft: Daten durchdringen – Intelligente Systeme*, 2014.
- [B8] **E. Kanoulas, M. Lupu, P. Clough, M. Sanderson, M. Hall, A. Hanbury, and E. Toms** (Eds.), *Information Access Evaluation meets Multilinguality, Multimodality, and Interaction*, 5<sup>th</sup> Conference and Labs of the Evaluation Forum, Springer LNCS 8685, 2014.
- [B9] **A. Hanbury, G. Kazai, A. Rauber, and N. Fuhr** (Eds.), *Advances in Information Retrieval*, 37<sup>th</sup> European Conference on Information Retrieval, Springer LNCS 9022, 2015.
- [B10] **H. Müller, O. A. Jimenez del Toro, A. Hanbury, G. Langs and A. Foncubierta Rodríguez** (Eds.), *Multimodal Retrieval in the Medical Domain*, Springer LNCS 9059, 2015.
- [B11] **A. Hanbury, H. Müller and G. Langs** (Eds.), *Cloud-Based Benchmarking of Medical Image Analysis*, Springer, 2017.
- [B12] **G. Pasi, B. Piwowarski, L. Azzopardi and A. Hanbury** (Eds.), *Advances in Information Retrieval*, 40<sup>th</sup> European Conference on Information Retrieval, Springer LNCS 10772, 2018.

### **Conference Papers (full paper peer reviewed)**

- [C1] **A. Hanbury and F. Gardeux**, *A Quantitative Description of Wood Texture*, 5<sup>th</sup> International Conference on Quality Control by Artificial Vision, Le Creusot, France, pages 200–205, 2001.
- [C2] **A. Hanbury and J. Serra**, *Mathematical Morphology in the HLS Colour Space*, 12<sup>th</sup> British Machine Vision Conference, Manchester, UK, pages 451–460, 2001.
- [C3] **A. Hanbury**, *The Taming of the Hue, Saturation and Brightness Colour Space*, 7<sup>th</sup> Computer Vision Winter Workshop, Bad Aussee, Austria, pages 234–243, 2002.
- [C4] **A. Hanbury**, *Circular Statistics Applied to Colour Images*, Proceedings of the 8<sup>th</sup> Computer Vision Winter Workshop, Valtice, Czech Republic, pages 55–60, 2003.
- [C5] **A. Hanbury**, *A 3D-polar Coordinate Colour Representation Well Adapted to Image Analysis*, Scandinavian Conference on Image Analysis, Springer LNCS 2749, pages 804–811, Göteborg, Sweden.
- [C6] **A. Hanbury and J. Serra**, *Colour Image Analysis in 3D-polar Coordinates*, Proceedings of the Symposium of the German Association for Pattern Recognition (DAGM 2003), Springer LNCS 2781, pages 124–131, Magdeburg, Germany.
- [C7] **A. Hanbury, P. Kammerer and E. Zolda**, *Painting Crack Elimination Using Viscous Morphological Reconstruction*, Proceedings of the IEEE International Conference on Image Analysis and Processing (ICIAP 2003), pages 226–231, Mantua, Italy.

- [C8] **J. Marchadier, W. G. Kropatsch and A. Hanbury**, *Homotopic Transformations of Combinatorial Maps*, Proceedings of the Conference on Discrete Geometry for Computer Imagery (DGCI 2003), Springer LNCS 2886, pages 134–146, Naples, Italy.
- [C9] **H. Pottmann, T. Steiner, M. Hofer, C. Haider and A. Hanbury**, *The Isophotic Metric and its Application to Feature Sensitive Morphology on Surfaces*, Proceedings of the European Conference on Computer Vision (ECCV 2004), Springer LNCS 3024, pages 4:561-572, Prague, Czech Republic.
- [C10] **A. Hanbury**, *The Morphological Top-Hat Operator Generalised to Multi-channel Images*, Proceedings of the International Conference on Pattern Recognition (ICPR 2004), pages 672-675, Cambridge, United Kingdom.
- [C11] **J. Marchadier, W. G. Kropatsch and A. Hanbury**, *The Redundancy Pyramid and Its Application to Segmentation on an Image Sequence*, Proceedings of the Symposium of the German Association for Pattern Recognition (DAGM 2004), Springer LNCS 3175, pages 432-439, Tübingen, Germany.
- [C12] **B. Mičušík and A. Hanbury**, *Semi-Automatic Segmentation of Textured Images*, Proceedings of the 10<sup>th</sup> Computer Vision Winter Workshop (2005), pages 53-62, Zell an der Pram, Austria.
- [C13] **A. Hanbury, U. Kandaswamy and D. A. Adjeroh**, *Illumination-invariant Morphological Texture Classification*, Proceedings of the 7<sup>th</sup> International Symposium on Mathematical Morphology (2005), pages 377–386, Paris, France.
- [C14] **B. Mičušík and A. Hanbury**, *Steerable Semi-Automatic Segmentation of Textured Images*, Proceedings of the Scandinavian Conference on Image Analysis (SCIA 2005), Springer LNCS 3540, pages 35–44, Joensuu, Finland.
- [C15] **B. Mičušík and A. Hanbury**, *Supervised Texture Detection in Images*, Proceedings of the Conference on the Computer Analysis of Images and Patterns (CAIP 2005), Springer LNCS 3691, pages 441–448, Versailles, France.
- [C16] **A. Hanbury and B. Marcotegui**, *Waterfall Segmentation of Complex Scenes*, Proceedings of the Asian Conference on Computer Vision (ACCV 2006), Springer LNCS 3851, pages I:888–897, Hyderabad, India.
- [C17] **S. Kuthan and A. Hanbury**, *Extraction of Attributes, Nature and Context of Images*, Proceedings of the 11<sup>th</sup> Computer Vision Winter Workshop (2006), pages 28–33, Telč, Czech Republic.
- [C18] **F. H. Seitner and A. Hanbury**, *Fast Pedestrian Tracking based on Spatial Features and Colour*, Proceedings of the 11<sup>th</sup> Computer Vision Winter Workshop (2006), pages 105–110, Telč, Czech Republic.
- [C19] **L. Szumilas, B. Mičušík and A. Hanbury**, *Texture Segmentation through Salient Texture Patches*, Proceedings of the 11<sup>th</sup> Computer Vision Winter Workshop (2006), pages 111–116, Telč, Czech Republic.
- [C20] **P. Blauensteiner, H. Wildenauer, A. Hanbury and M. Kampel**, *On Colour Spaces for Change Detection and Shadow Suppression*, Proceedings of the 11<sup>th</sup> Computer Vision Winter Workshop (2006), pages 117–122, Telč, Czech Republic.
- [C21] **B. Mičušík and A. Hanbury**, *Automatic Image Segmentation by Positioning a Seed*, Proceedings of the European Conference on Computer Vision (ECCV 2006), Springer LNCS 3952, pages II: 468–480, Graz, Austria.

- [C22] **B. Mičušík and A. Hanbury**, *Template Patch Driven Image Segmentation*, Proceedings of the British Machine Vision Conference (BMVC 2006), pages II:819–828, Edinburgh, UK.
- [C23] **L. Szumilas and A. Hanbury**, *Color Pair Clustering for Texture Detection*, Second International Symposium on Visual Computing (ISVC 2006), Springer LNCS 4292, pages II:255–264, Lake Tahoe, Nevada, USA.
- [C24] **H. Wildenauer, P. Blauensteiner, A. Hanbury and M. Kampel**, *Motion Detection using an Improved Colour Model*, 2<sup>nd</sup> International Symposium on Visual Computing (ISVC 2006), Springer LNCS 4292, pages II:607–616, Lake Tahoe, Nevada, USA.
- [C25] **P. Blauensteiner, H. Wildenauer, A. Hanbury and M. Kampel**, *Motion and Shadow Detection with an Improved Colour Model*, IEEE International Conference on Signal and Image Processing (ICSIP 2006), Hubli, India.
- [C26] **J. Stöttinger, N. Sebe, T. Gevers and A. Hanbury**, *Colour Interest Points for Image Retrieval*, Proceedings of the 12<sup>th</sup> Computer Vision Winter Workshop (CVWW'07), St. Lambrecht, Austria.
- [C27] **L. Szumilas, R. Donner, G. Langs and A. Hanbury**, *Local Image Structure Detection with Orientation-invariant Radial Configuration*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2007), Minneapolis, USA.
- [C28] **A. Hanbury and B. Marcotegui**, *Colour Adjacency Histograms for Image Matching*, Proceedings of the International Conference on the Computer Analysis of Images and Patterns (CAIP 2007), Springer LNCS 4673, pages 424-431, Vienna, Austria.
- [C29] **J. Stöttinger, A. Hanbury, N. Sebe and T. Gevers**, *Do Colour Interest Points Improve Image Retrieval?*, Proceedings of the IEEE International Conference on Image Processing (ICIP 2007), pages I-169–I-172, San Antonio, Texas, USA.
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