

CONNECTING INNOVATIVE RESEARCH NETWORKS



Michela Magas, MPhil
Chair, Industry Commons Foundation, Stockholm
Founder & Creative Director, MTF Music Tech Fest,
Stockholm, Sweden

Michela Magas is one of Europe's leading innovation catalysts. She bridges the worlds of science and art, design and technology, and academic research and industry, with a track record of over 25 years of innovation. A dual Croatian-British citizen working from Sweden, Magas acts as innovation advisor to the European Commission and the G7 leaders. In 2019, she founded the Industry Commons and shortly after the MTF Music Tech Fest AB in order to support the Music Tech Fest, a global community platform which she founded in 2012.

The Music Tech Fest -MTF community counts over 7000 members and includes innovators from all areas of expertise, ages and social backgrounds. Regular week-long living labs focus on creative testbeds, showcases of innovation, and experimental co-creation with novel technological toolkits. Music Tech Fest large multi-day events have been supported by over 150 organisations, and hosted 17 times around the world by partners including Microsoft Research New England, Centre Pompidou in Paris, the London Symphony Orchestra at the Barbican in London and KTH Royal Institute of Technology in Stockholm. Music Tech Fest is multidisciplinary, international, enriching, inclusive, and prides itself on being a technology enabler with an even gender split. Key achievements include: (i) uniting artists and scientists, academia and industry in the space of common understanding; (ii) successfully facilitating technology transfer across knowledge silos (iii) surpassing 7000 global innovation community members; (iv) gathering support from over 150 global organisations; (v) taking grassroots specialist knowledge from applied expertise in real world case scenarios to directly inform and shape policy; (vi) scaling female participation to 53% at MTF Stockholm in 2018, making it the only known multi-gender technology platform with over 50% female participants; (vii) securing funding support for multiple successful outcomes of MTF collaboration activities.

As Innovation Director of #MusicBricks (2015-2016), Michela Magas conceived, coordinated and implemented an EU innovation action using musical building blocks for digital makers and content creators, which served as pilot for several innovation methodologies evolved to boost the innovation potential of the Music Tech Fest community. Key achievements include: (i) 11 new products targeting a range of industries from semiconductor to forestry; (ii) reducing the time from ideation to initiating patenting process to 4 months; (iii) increasing participation of women in technology activities from 17% in engineering-only events (STEM) to 33% in creative technology events (STEAM); (iv) 7 academic publications as byproduct of increased knowledge transfer; (v) substantial follow-up funding for evolved prototypes; (vi) Innovator and entrepreneur awards by MIT, Forbes and the European Commission. In 2017 Magas was awarded European Woman Innovator of the Year and in 2016 she was presented with an Innovation Luminary Award for Creative Innovation.

Innovation highlights include:

- Newspaper for the Digital Age (1994), implemented with the Financial Times over a 6 year period; later taken up by the Independent newspaper and evolved until 2013.
- Dynamic digital browsing system (2003), resulted in being headhunted by Apple and became the template for Apple's Coverflow.
- First iteration of the machine learning system for searching music using audio (2007), evolved with support from Innovate UK (TSB) into a patent for identifying the smallest cultural unit of music.
- Open Product Licenses (2011). Supported by Innovate UK (TSB) and endorsed by CERN, the Open Product Licenses build on CERN's Open Hardware to allow for Design by Attribution.
- #MusicBricks pilot (2014), supported by H2020, the first technology transfer toolkit including Tangible User Interfaces (TUIs), which has since been scaled to work across industry verticals.
- Industry Commons (2015), combining several mechanisms evolved over the years for a sustainable transversal system for Open Innovation, carried forward by the Industry Commons Foundation

CONTRIBUTOR PROFILE



Prof. Dr. Alois Ferscha
Director, Research Studio Pervasive Computer Applications;
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Linz, CEO & Scientific Director, Pro2Future GmbH, Linz, Austria

Alois Ferscha focuses his research on pervasive and ubiquitous computing, embedded AI, cognitive systems and high performance simulation. He has (co-)authored more than 300 technical papers on topics related to pervasive, ubiquitous, mobile, wearable and distributed computing. Alois Ferscha is an active consultant to the FET group within the European Commission (Directorate-General for Communications Networks, Content and Technology), and to the Austrian Ministries of Science and Research as well as Innovation and Technology. He is Austria's representative in IFIP TC-10 (International Federation for Information Processing, TC10 – Computer Systems Technology). As an invited researcher or guest professor he was visiting the Dipartimento di Informatica, Università di Torino, Italy, at the Dipartimento di Informatica, Università di Genova, Italy, the Computer Science Department, University of Maryland at College Park, Maryland, USA, and at the Department of Computer and Information Sciences, University of Oregon, Oregon, USA. Alois Ferscha is member of the OCG, GI, ACM, IEEE and holds the Heinz-Zemanek Award for distinguished contributions in Computer Science, the Cross Border Award 2009, the Innovationspreis 2009, the "Innovationspreis" of the "Multimedia Staatspreis 2011", and the "Ö-WGP Zukunftspreis 2018". Ferscha is the master mind and research leader of the Austrian national competency centre, Pro2Future GmbH, which does research and development in the area of industrial information and communication technologies, particularly in the fields of cognitive products, cognitive production systems, Industry 4.0, smart production and related fields as well as services associated with the R&D activities.

Selected publications:

- G. Weichhart, A. Ferscha et al. Human/machine/roboter: technologies for cognitive processes. e & i Elektrotechnik und Informationstechnik, Springer Vienna, 5 pages, October 2019
- M. Haslgrübler, B. Gollan, A. Ferscha Towards Industrial Assistance Systems: Experiences of Applying Multi-sensor Fusion in Harsh Environments Physiological Computing Systems, 11 pages, ISBN: 978-3-030-27950-9, August 2019.
- K. Zia, A. Ferscha, D. Trendafilov Conceptualization of Cultural Diversity for Efficient and Flexible Manufacturing Systems of the Future COGSCI '19 Proceedings, pp. 1290-1296, July 2019.
- K. Zia, D. Saini, U. Farooq, A. Ferscha Web of Social Things: Socially-Influenced Interaction Modeling. Proceedings of the 15th Intn. Conf. on Advances in Mobile Computing & MM, ACM DL, New York, pp. 123-130, Dec. 2017.
- Gollan B. and Ferscha, A.: Pupil Dilation as Online Input for non-laboratory Attention-aware systems. 8th International Conference on Advanced Cognitive Technologies and Applications (Cognitive 2016), March 2016.
- A. Ferscha A Research Agenda for Human Computer Confluence. Human Computer Confluence Transforming Human Experience Through Symbiotic Technologies, Editors: Gaggioli Andrea, Ferscha Alois, Riva Giuseppe, Dunne Stephen, Viaud-Delmon Isabelle, DE GRUYTER OPEN, pp. 7-17, ISBN: 978-3-11-047113-7, June 2016.
- Ferscha, A.: Attention, Please! IEEE Pervasive Computing, Editors: Maria R. Ebling, IEEE Computer Society, Los Alamitos, CA, USA, Vol. 13, No. 1, pp. 48-54, 7 pages, ISSN: 1536-1268, DOI: 10.1109/MPRV.2014.3, February 2014.
- P. Lukowicz, A. Pentland, A. Ferscha.: From Context Awareness to Socially Aware Computing. IEEE Pervasive Computing, Vol. 11, No. 1, pp. 32-41, January 2012.
- Ferscha, A. and Vogl, S.: Wearable Displays for Everyone! IEEE Pervasive Computing, Editors: Paul Lukowicz, IEEE Computer Society, Los Alamitos, CA, USA, Vol. 9, No. 1, pp. 7-10, January 2010.
- A. Ferscha, S. Resmerita. Gestural interaction in the pervasive computing landscape. e & i Elektrotechnik und Informationstechnik, Springer-Verlag Wien, Vol. 124, No. 1-2, pp. 17-25, February 2007.

UPDATE
KICK-OFF FOR RESEARCH COOPERATION:
INTERNATIONAL WORKSHOP CONFERENCE ON
INTERACTIVE MUSIC TECHNOLOGIES

23 JANUARY 2020
HOTEL BILLROTH
ST. GILGEN AM WOLFGANGSEE
AUSTRIA

10:30 – 11:00	WARM-UP AND WELCOME
11:00 – 11:20	Interactive Music Technologies and Digital Intelligence Prof. Dr. Peter A. Bruck, CEO and Chief Researcher, RSA FG Music & Art & Innovation Rector Prof. Elisabeth Gutjahr, University Mozarteum Salzburg
11:20 – 12:05	Aware Systems: Reversing Interaction Principles Prof. Dr. Alois Ferscha, Studio Director, Pervasive Computer Applications Head, Institute for Pervasive Computing, Johannes Kepler University Linz, Austria
12:05 – 12:40	Show and Tell I Electronic Music Performance and Real-Time Interaction with Intelligent Music Systems Prof. Dr. Sergi Jordà, Head, Music & Advanced Interaction (MAIn) team and Music Technology Group, Universitat Pompeu Fabra, Barcelona, Spain
12:40 – 12:45	VIDEO: Musical Practice: Movement Science and Kinesiology Prof. Dr. Stefania Serafin, Multisensory Experience Laboratory, Department of Architecture, Design and Media Technology; Aalborg University, Denmark
12:45 – 13:00	VIDEO and SPOT Input: Music Performance: Technology Undressed of its Everyday Understanding Prof. Helmi Vent, Director of Lab Inter Arts – LIA, University Mozarteum Salzburg, Austria
13:00 – 14:00	NETWORKING LUNCH
14:00 – 14:45	Show and Tell II Music Tech Fest and Technology Transfer Toolkit: Guidelines for Deployment of Technologies to Innovators and Early Adopters Michela Magas, MPhil, Founder and Chair, Industry Commons Foundation, Sweden
14:45 – 15:00	Show and Tell III Information Retrieval and Music: An Introduction Dr. Petr Knuth, Senior Research Fellow, Text and Data Mining and Head of the Big Scientific Data Ana- lytics Group; Open University; Milton Keynes; Studio Director Data Science, RSA FG
15:00 – 15:35	Music Information Retrieval for Intelligent Music Creation Tools Prof. Dr. Peter Knees, Information and Software Engineering Group Technical University of Vienna, Austria
15:35 – 16:10	Music Data Science: Semantic Web Representations for Music and Machine Learning Dr. Tillman Weyde, Senior Lecturer, Department of Computing, City University of London; UK

16:10 – 16:20	COFFEE BREAK
16:20 – 16:25	Show and Tell IV VIDEO and SPOT Input: Category Theory and Compositional Music Interaction Dr. Maria Mannone, Theoretical physics, PhD in Composition, Dept. of Mathematics and Informatics; Università di Palermo, Italy
16:25 – 17:00	Concert Formats as Scientific Experiments: Applying Fundamental Research in Music Practice to Audience Emotion Prof. Dr. Hauke Egermann, Professor in Music Psychology and Director of York Music Psychology Group, Department of Music, University of York; UK
17:00 – 17:20	Digital Intelligence in Music Research: Awareness as the Basis for Music Technologies of the Future? DI Dr. Benedikt Gollan, Operational Director, Research Studio Pervasive Computing RSA FG
17:20 – 18:15	Digital Intelligence in Music Research: Outlook and the Way ahead Fish Bowl discussion with all presenters and participants
18:15 – 18:45	Towards Data Driven Research: Using Blockchain Technology for Innovative Services for Academia and Music Research: The Bloxberg Project as Trusted Research Infrastructure Dr. Sandra Vengadasalam, Division Manager Max Planck Digital Labs, Max-Planck-Gesellschaft zur Förderung der Wissenschaften, München, Germany
18:45 – 19:00	Connecting Innovative Research Networks in Interactive Music Technologies: The Road Ahead Prof. Dr. Peter A. Bruck, CEO and Chief Researcher, RSA FG
19:00	END OF CONFERENCE

Web Videos via YouTube: <https://bit.ly/2FKy8vd>



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