

# Mohammad Khalil

Ph.D. Dr. techn.

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## Personal Details

### Date of Birth

May.1986

### Nationality

Jordanian

### Residency

Norway

## Research Interests

Learning Analytics, Massive Open Online Courses (MOOCs), Big Data, Visualizations, Learning Technologies, Technology Enhanced Learning, Educational Technology, Privacy & Ethics.

## Education

### **Ph.D. (with Distinction), Engineering Sciences - Computer Science, Graz University of Technology, Graz, Austria.**

Sept. 2014 - May. 2017

Supervisor: Associate Professor. Martin Ebner

Research Topics:

- ★ Learning Analytics
- ★ Massive Open Online Courses

### **M.Sc, Information Security, Princess Sumaya University for Technology, Amman, Jordan.**

2011 - 2013

GPA: 87 out of 100.

Thesis: A Hybrid Approach for Appraising E-Business Reliability Using Forensic and Social Network Analysis

### **B.Sc, Computer Science, Princess Sumaya University for Technology, Amman, Jordan.**

2005- 2009

Top 10 graduates of 2009 batch

Project: Electronic Magazine Using Interactive Technologies

## Employment

### [Academia] **Senior Researcher, University of Bergen, Norway.**

September.2018 - Present

- Center for the Science of Learning and Technology (SLATE)

### [Academia] **PostDoctoral, Delft University of Technology, Netherlands.**

March.2017 - August.2018

- Leiden, Delft, Erasmus Center for Education and Learning (LDE CEL)
- Erasmus Rotterdam, Delft University of Technology, and Leiden University alliance research projects.

[Academia] **Research Assistant, Graz University of Technology, Austria.**

Sep.2014 - March.2017

- Research activities
- Master students co-supervision.
- Teaching Assistant.
- Lecturing

[Industrial] **System Analyst, Eskadenia Software, Jordan.**

2009-2011

- Systems architecture analysis and reporting
- Working closely with data analysts
- Testing products in control

## Languages

### English

B2 Level

### Arabic

Native Speaker

## Publications

### A) Peer-Reviewed Journals

1. Kalz, M., **Khalil, M.**, & Ebner, M. (2017). Editorial for the special issue on advancing research on open education. *Journal of Computing in Higher Education*, pp. 1-19. DOI: 10.1007/s12528-017-9143-3
2. **Khalil, M.** & Ebner, M. (2017). "Clustering Patterns of Engagement in Massive Open Online Courses (MOOCs): The Use of Learning Analytics to Reveal Student Categories". *Journal of Computing in Higher Education*, pp. 1-19. DOI: 10.1007/s12528-016-9126-9
3. **Khalil, M.**, Ebner, M. (2017). "Driving Student Motivation in MOOCs through a Conceptual Activity-Motivation Framework". *Journal for Development of Higher Education Institutions (ZFHE)*, 12(1), pp.101-122.
4. Lackner, E., **Khalil, M.** & Ebner, M. (2016). "How to foster forum discussions within MOOCs. A case study". *International Journal of Academic Research in Education*, 2(2). DOI: 10.17985/ijare.31432
5. **Khalil, M.** & Ebner, M. (2016). "De-Identification in Learning Analytics". *Journal of Learning Analytics*, 3 (1), pp. 129-138.
6. Lackner, E., Ebner, M., & **Khalil, M.** (2015). "MOOCs as granular systems: design patterns to foster participant activity". *eLearning Papers*, 42, pp. 28-37.
7. **Khalil, M.**, Brunner, H., & Ebner, M. (2015). "Evaluation Grid for xMOOCs". *International Journal of Emerging Technologies in Learning (iJET)*, 10(4), pp. 40-45.

### B) Peer-Reviewed Conferences

8. **Khalil, M.**, Prinsloo, P., and Slade, S. (2018). The unbearable lightness of consent: Mapping MOOC providers' response to consent. In *Proceedings of the Learning @ Scale Conference (L@S)*, London, 26-28 June 2018. ACM.
9. Prinsloo, P., Slade, S., and **Khalil M.** (2018). Stuck in the middle? Making sense of the impact of micro, meso and macro institutional, structural and organisational factors on implementing learning analytics. In *Proceedings of the 27Th EDEN Annual Conference*, pp. 326-334, Genova, Italy, 17–20 June

2018.

10. Ebner, M., **Khalil, M.**, Gütl, C., Aschemann, B., Frei, W., and Röthler, D. (in press). How Inverse Blended Learning can Turn Up Learning with MOOCs?. In *Proceedings of the international conference Mooc Maker 2017*, Guatemala.
11. Khalil, M., Ebner, M., & Admiraal, W. (2017). How can Gamification Improve MOOC Student Engagement?. In *Proceedings of the 11th European Conference on Games Based Learning: ECGBL 2017*, Graz, Austria, (pp. 819-828).
12. Reischer M., **Khalil M.**, Ebner M. (2017). “Does Gamification in MOOC Discussion Forums Work?”. In: Delgado Kloos C., Jermann P., Pérez-Sanagustín M., Seaton D., White S. (eds) Digital Education: Out to the World and Back to the Campus. EMOOCs 2017. *Lecture Notes in Computer Science*, vol 10254. Springer, Cham, pp. 95-101. doi: 10.1007/978-3-319-59044-8\_1
13. **Khalil, M.** & Ebner, M. (2016). “When Learning Analytics Meets MOOCs - a Review on iMooX Case Studies”. In Proceedings of the 16th International Conference on Innovations for Community Services (I4CS), 2016. Vienna, Austria, pp. 3-19. DOI: 10.1007/978-3-319-49466-1\_1. (**Invited Talk**)
14. Ebner, M., Schön, S., & **Khalil, M.** (2016). “Maker-MOOC – How to Foster STEM Education with an Open Online Course on Creative Digital Development and Construction with Children”. In *Proceedings of 2016 International Conference on Interactive Collaborative Learning (ICL 2016)*, Belfast, United Kingdom, (pp. 1233-1240).
13. **Khalil, M.** & Ebner, M. (2016). “Learning Analytics in MOOCs: Can Data Improve Students Retention and Learning?”. In *Proceedings of the World Conference on Educational Media and Technology, EdMedia 2016*. Vancouver, Canada, 28-30 June, 2016 (pp. 569-576). Association for the Advancement of Computing in Education (AACE).
14. **Khalil, M.**, Taraghi, B., & Ebner, M. (2016). “Engaging Learning Analytics in MOOCs: the good, the bad, and the ugly”. In *Proceedings of the International Conference on Education and New Developments (END 2016)*, Ljubljana, Slovenia, pp. 3-7.
15. **Khalil, M.** & Ebner, M. (2016). “What is Learning Analytics about? A Survey of Different Methods Used in 2013-2015”. In *Proceedings of Smart Learning Conference, Dubai, UAE, 7-9 March, 2016 (pp. 294-304)*. Dubai: HBMSU Publishing House.
16. Ebner, M., Gailer, C., **Khalil, M.**, Kopp, M., Lackner, E., & Raunig, M. (2016). “Potential of EPUB3 for Digital Textbooks in Higher Education”. In *Proceedings of Smart Learning Conference, Dubai, UAE, 7-9 March, 2016 (pp. 324-336)*. Dubai: HBMSU Publishing House.
17. **Khalil, M.**, Kastl, C., & Ebner, M. (2016). “Portraying MOOCs Learners: a Clustering Experience Using Learning Analytics”. In *Khalil, M., Ebner, M., Kopp, M., Lorenz, A. & Kalz, M. (Eds.), Proceedings of the European Stakeholder Summit on experiences and best practices in and around MOOCs (EMOOCs 2016)*, Graz, Austria, pp.265-278. (**Outstanding Paper & Video Award**).
18. **Khalil, M.**, & Ebner, M. (2015). “A STEM MOOC for School Children—What Does Learning Analytics Tell us?”. In *Proceedings of 2015 International Conference on Interactive Collaborative Learning (ICL 2015)*, Florence, Italy, pp. 1217-1221. IEEE.
19. **Khalil, M.**, & Ebner, M. (2015). “Learning Analytics: Principles and Constraints”. In S. Carliner, C. Fulford, & N. Ostashewski (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications*, Canada, pp. 1789-1799. (**Outstanding Paper Award**).

### C) Peer-Reviewed Book Chapters

20. **Khalil, M.** & Ebner, M. (2018). Can Learning Analytics Find Success in Didactical Measurements? Results from a MOOC Case Study. In: Ifenthaler D. (eds) Digital Workplace Learning. Springer, Cham, pp. 211-225. doi: 10.1007/978-3-319-46215-8\_12
21. Ebner, M., **Khalil, M.**, Wachtler, J. (2017) Chancen und Grenzen von Learning Analytics: Projektergebnisse bzgl. der automatischen Datenerhebung. In: Dr. Internet –Forschungsbericht zum Projekt, Zimmermann, C. (Hrsg.), Verlag Mayer, S. 88-99 (15) Chancen und Grenzen von Learning Analytics: Projektergebnisse bzgl. der automatischen Datenerhebung.
22. Leitner, P., **Khalil, M.** & Ebner, M. (2017). “Learning Analytics in Higher Education - A literature Review”. *Learning analytics: Fundaments, applications, and trends: A view of the current state of the art* . Springer International Publishing.
23. **Khalil, M.**, & Ebner, M. (2016). “What Massive Open Online Course (MOOC) Stakeholders Can Learn from Learning Analytics?”. In *Spector, M., Lockee, B., Childress, M. (Eds.), Learning, Design, and Technology: An International Compendium of Theory, Research, Practice, and Policy*, Springer International Publishing. (pp. 1-30). [http://dx.doi.org/10.1007/978-3-319-17727-4\\_3-1](http://dx.doi.org/10.1007/978-3-319-17727-4_3-1)

### D) Peer-Reviewed Workshops

24. **Khalil, M.** (2017). “Why Undergraduates Enroll in MOOCs?”. In *Rayyan, S., Pérez-Sanagustín, M., Delgado Kloos, C., Sandland, J. (Eds.), Proceedings of the EMOOCs 2017 HybridEd Workshop*, Madrid, Spain.
25. Wachtler, J., **Khalil, M.**, Taraghi, B. & Ebner, M. (2016). “On Using Learning Analytics to Track Activity of Interactive MOOC Videos”. In *M. Giannakos, D.G. Sampson, L. Kidzinski, A. Pardo (Eds.), Proceedings of the LAK 2016 Workshop on Smart Environments and Analytics in Video-Based Learning (pp.8–17) Edinburgh, Scotland: CEURS-WS*.

### E) Non Peer-Reviewed Articles

1. Lackner, E., Ebner, M. & **Khalil, M.** (2015). “Design a MOOC - Think Granular!: Why do students drop-out of MOOCs? What can be done to improve MOOC completion rates?”. Class Central. Article is available online at: <https://www.class-central.com/report/design-mooc-think-granular/>

### Scholarships

- ★ Full Doctoral scholarship provided by the AVEMPACE III project, Erasmus Mundus, Action II (**60,000 €**).
  - Period: 32 Months.
  - Extension: 2 Months.

### Awards

- ★ Best Research Paper Award at the European Distance and E-Learning Network Conference, June 2018, Genova, Italy
- ★ Doctoral Degree with Distinction/honor (mit Auszeichnung bestanden).
- ★ Outstanding Paper and Video Award at the European Stakeholder Summit on experiences and best practices in and around MOOCs, EMOOCs 2016. Graz, Austria.
- ★ Outstanding Paper Award at the 2015 World Conference on Educational Media and Technology, EdMedia 2015. Montreal, Canada.

## Presentations & Talks

- Invited speaker at the Center for Education and Learning 10th Innovation Room, (13 October 2017), Delft, Netherlands.
- Invited panelist at Edraak Regional Conference on Educational Technology in MENA region, 13th August, 2017, Amman, Jordan.
- Invited speaker at the Center for Education and Learning 9th Innovation Room, (9 June, 2017), Rotterdam, Netherlands.
- Presented “Does Gamification in MOOC Discussion Forums Work?” at the European Stakeholder Summit on experiences and best practices in and around MOOCs, EMOOCs 2017. (22 May, 2017). Madrid, Spain.
- Presented “Why Undergraduates Enroll in MOOCs?” at the European Stakeholder Summit on experiences and best practices in and around MOOCs, EMOOCs 2017. (23 May, 2017). Madrid, Spain.
- Invited Keynote speaker at the 16th International Conference on Innovations for Community Services (I4CS), (June 29, 2016), Vienna, Austria.
- Presented “Engaging Learning Analytics in MOOCs: the good, the bad, and the ugly” at the International Conference on Education and New Developments, (June 12, 2016)., Ljubljana, Slovenia.
- Presented “What is Learning Analytics about? A Survey of Different Methods Used in 2013-2015” at the 8th e-Learning Excellence Conference, Innovation Arabia, (March 07, 2016). Dubai, UAE.
- Presented “Potential of EPUB3 for Digital Textbooks in Higher Education” at the 8th e-Learning Excellence Conference, Innovation Arabia, (March 08, 2016). Dubai, UAE.
- Moderated Flipped MOOC Panel and presented “Portraying MOOCs Learners: a Clustering Experience Using Learning Analytics” at the European Stakeholder Summit on experiences and best practices in and around MOOCs, EMOOCs 2016. (23 Feb, 2016). Graz, Austria.
- Presented “A STEM MOOC for School Children—What Does Learning Analytics Tell us?” at the International Conference on Interactive Collaborative Learning (ICL 2015), (21 September, 2015). Florence, Italy.
- Presented “De-Identification in Learning Analytics” at Ethics and Privacy in Learning Analytics workshop held at the 5th Learning Analytics and Knowledge, LAK 15, (16 March, 2015). Poughkeepsie, NY, USA.

## Professional Activities

### Editor

- Associate Editor, International Journal of Emerging Technologies in Learning (IJET), 2017-present
- Guest Editor in a Special Issue on Advancing Research on Open Education, Journal of Computing in Higher Education (JCHE), Springer. Marco Kalz, Martin Ebner & **Mohammad Khalil**.
- Proceedings of the EUROPEAN STAKEHOLDERS SUMMIT on experiences and best practices in and around MOOCs (EMOOCs 2016). **Mohammad Khalil**, Martin Ebner, Michael Kopp, Anja Lorenz & Marco Kalz.

### Event Organization

- Sixth European MOOCs Stakeholders Summit 2018 (EMOOCs 2018), Delft, Netherlands. April, 23rd, 2018.
- The 10th Center for Education and Learning Innovation Room. Delft, Netherlands. October, 13, 2017.
- Fourth European MOOCs Stakeholders Summit 2016 (EMOOCs 2016), Graz, Austria. February 22-24, 2016.

## Program Committee

- International Conference on Teaching, Assessment, and Learning for Engineering. Wollongong, Australia. December, 2018.
- The Open Education Global Conference 2018, Delft, Netherlands. April 24-26, 2018.
- The international MOOC Maker Conference, Antigua Guatemala. November 16-17, 2017..
- User Modelling, Adaptation and Personalization (UMAP '17), Bratislava, Slovakia. July 9-12, 2017.
- Wearable Technologies, Knowledge Development, and Learning (aWEAR'16), California, United States. November 14-15, 2016.
- Fourth European MOOCS Stakeholders Summit (EMOOCs 2016), Graz, Austria. February 22-24, 2016.
- Third European MOOCS Stakeholders Summit (EMOOCs 2015), 18-20 May, 2015, Belgium.
- 23rd European Conference on Information Systems (ECIS 2015), Münster, Germany. 26-29 May, 2015.

## Reviewer

- The International Review of Research in Open and Distributed Learning.
- International Journal of Emerging Technologies in Learning (iJET).
- Journal of Research in Innovative Teaching & Learning, Markus Ebner & Martin Ebner (Eds).
- Digital Workplace Learning- Bridging Formal and Informal Learning with Digital Technologies book, Dirk Ifenthaler (Eds). Springer.
- Journal of Computing in Higher Education, 2016. Kalz, M., Ebner, M., Khalil, M. (Eds).
- Handbook of Learning Analytics and Educational Data Mining 2016. George Siemens and Charles Lang (Eds).
- Special Issue on Learning Analytics in Higher Education in Journal for Development of Higher Education Institutions (ZFHE), 2016-2017. Wolfgang Greller and Ulrich Hoppe (Eds).
- Special Issue on Smart Environments and Analytics on Video-Based Learning in Smart Learning Environments Journal, 2016, Springer.
- IEEE Transactions on Learning Technologies, 2016. Brusilovsky, P. (Eds).
- Handbook of Research on Digital Tools for Seamless Learning 2016. Martin Ebner & Süleyman Nihat Şad (Eds). IGI Global.

## Teaching

- Learning Analytics and Massive Open Online Courses to BSc and teacher trainee diploma students, 2016.
- Lecture on Big Data and Learning Analytics. In course: Social Aspects of Information Technology online course, 2016.
- Lecture on iOS Human Interface Guidelines for designing iOS Apps for master and bachelor students, 2016.
- Moderating Preconference (EMOOCs 2016) MOOC, and Lecturing about clustering MOOC participants, 2016.

## Supervision and Student Advisor

- Master thesis: Gamification Elements in Online Courses-A Potential Analysis.
- Master thesis: Using gamification in MOOC discussion forums

- Master project: Anonymization of Learning Analytics Data.

### **Session Chair**

- Fourth European MOOCS Stakeholders Summit 2016, Dropout and Retention in MOOCs session, 23 Feb, 2016.
- Fourth European MOOCS Stakeholders Summit 2016, MOOCs Evaluations session, 24 Feb, 2016.

## Technical Skills

### **Statistics**

Descriptive Statistics (R)

### **Computer Science**

Logs Analysis and Exploratory Analysis (R)

Visualizations (ggplot2, plotly, shinyR, Edraw)

DataBase Queries (SQL, Postgres)

Text Analysis (R)

Machine Learning (Basic Level, R)