

Fadi Al-Ghawanmeh

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Educatio

n

- Master's degree of Music in Music Technology (Ranked Excellent)- New York University, USA (2013).
Thesis :”Automatic Accompaniment to Arab Vocal Improvisation
‘Mawwāl’ Website: <http://www.mawaweel.com/>
- Bachelor’s degree of Fine Arts in Music(Excellent)-The University of Jordan, Jordan (2010).
- Bachelor’s degree of Computer Engineering (Very Good) -The University of Jordan, Jordan (2008).
- General Secondary Certificate (Tawjihi) 94.3%, Jubilee School/King Hussein Foundation.
(National school for gifted students), Jordan (2003).

Work Experience

- Faculty Member in Music Department, the University of Jordan (Since Jun. 2014)
- Full-time lecturer in Music Department, the University of Jordan (Jan. 2013- Jun. 2014).
- Adjunct lecturer at the German Jordanian University (Since Feb. 2019).
- Adjunct lecturer at the American University of Madaba (Sept. 2016 - Jan. 2019).
- Adjunct lecturer at the Jordan Academy of Music (Feb. 2013 - June 2013).
- Independent researcher (2009-2011).
- Teaching assistant, the University of Jordan(2010).
- Nay player with local groups. Amman/Jordan (2005-2008).

Educational Courses (Apart from obtained academic degrees)

- Technology:

- Advanced Statistics for Scientific Research, University of Jordan (2014).
- Digital Musical Signal Analysis, Berlin University of Technology, Germany (2009).
- Programming System on Chip (PSoC)/IEEE(2006).

- Culture and Administration:

- Digital Economy, CRM, and Individualism -Bogazici University. Istanbul-Turkey (2008).
- IT for Sustainable Development of Cultural Heritage - Munich University of Technology. Germany(2006).
- History of Germany and Europe- Munich University of Technology (2006).
- Training of Trainers in Leadership-Islamic Conference Youth Forum. Baku-Azerbaijan (2006).
- Cultural administration-Cultural Resource Organization/Belgium. Amman-Jordan (2006).
- Entrepreneurship -Bogazici University. Istanbul-Turkey (2005).
- Management of Youth Projects-Youth Leadership Programme-Cairo-Egypt (2002).

Languages and Tests

- Arabic, mother tongue.
- English, Fluent. TOEFL iBT score 98 (about 597 paper-based) (2017)
- French, Very good.
- German, Basics.
- GRE Test 302/320 (Quantitative 157/170) (2017)

Frequently used Programming Languages:

- Java
- MATLAB
- Max/MSP

- Csound

International Participation

- The International Conference on Natural language, Signal and Speech Processing, ICNLSSP. Higher Institute of Engineering and Business, Casablanca, Morocco December 5-6, 2017.
- The International Conference on Musical Cultures, University of Hull, UK, April 3-5, 2017
- The 9th Conference on Interdisciplinary Musicology – CIM14, Berlin, December 4-6, 2014
- The 2009 International Computer Music Conference, Montréal 16-21 August 2009
- World Congress on Engineering, WCE 2009. London, U.K., 1-3 July, 2009
- The Musical Festival of Sousse for Universities, Sousse/Tunisia (2004) and (2008)
- The Eleventh Conference of Students Creativity- Association of Arab Universities. Latakia, Syria (2008)
- Music and Theater Youth Meeting. The Euro-Mediterranean Programme. Tartu/ Estonia (2006)
- Leading the Jordanian Musical team participated in “The Common Show”, Euro-Mediterranean project. Cairo/Egypt (2005)
- International Youth Meeting of the arts. The Euro-Mediterranean Programme. Bordeaux/France (2004)
- The international Work Camp, Hurgada/Egypt(2003)
- The musical festival of Sultan Qabus University, Muskat/ Oman (2003).
- The Collective Singing Festival, Tripoli/ Lebanon (2002).
- The Rainbow Bridge Peace Camp, together with international political and cultural leaders, Poland (2001).

Awards, Scholarships, and Achievements

- Best paper award in the International Conference on Natural language, Signal and Speech Processing, ICNLSSP. Higher Institute of Engineering and Business, Casablanca, Morocco 2017.
- Full-Month Erasmus Mundus staff-exchange scholarship to Lorraine Research Laboratory in Computer Science and its Applications (2016).
- Four-Month Scientific visit in Lorraine Research Laboratory in Computer Science and its Applications, financed by the University of Jordan (2015).
- Erasmus Mundus staff-exchange full scholarship to the University of Bologna, Italy (October 2013).

- Full Scholarship from The University of Jordan to pursue Master's Degree in Music Technology in New York University (2011).
- Erasmus Mundus Undergraduate-Exchange full Scholarship to Berlin University of Technology/Audio Communication Department (2009).
- First chair prize of The National Technology Parade, E-Learning theme. Jordan (2008).
- Third chair prize of The Contest of The Eleventh Conference of Students Creativity- Association of Arab Universities. Latakia, Syria (2008).
- Partial scholarship for the Summer-School at Munich University of Technology (2006).
- First chair prize of The Youth Creativity Contest for Music/ The Ministry of Culture (2004).
- Third chair prize of the Musical Contest of the Ministry of Education, and First chair price for Amman Governorate (2003).
- Qualified for the final stage of The National Olympics for Mathematics, and the second stage for physics/ Ministry of Education (2002).

Projects & Funds

- TRAM: Translating Arab Music (research initiative toward using machine translation methods to propose an automatic accompaniment to Arab vocal improvisation "Mawwāl"). Project Manager and research team co-leader. Fund (20k Euros) by the Agence Universitaire de la Francophonie (2016-2019).
- Designing Compositional Algorithms for an Improved Automatic Accompaniment to Arab Vocal Improvisation "Mawwāl". Project Manager and research team leader. Fund (21K \$) by the University of Jordan and the Arab Fund for Arts and Culture (AFAC), (2014-2015).
- Digital Melody Indexing of Jordanian Musical Libraries. Project Manager and research team co-leader. Fund (40K \$) by the European Commission and Shoman Foundation (2008-2009).

Publications

Articles in Journals:

1. Al-Ghawanmeh F., Al-Ghawanmeh M. and Abed M. Real-Time Maqam Estimation Model in Max/MSP Configured for the Nay (2016). International Journal of Communications, Network and System Sciences. 09 (02) , pp.39-52. Delaware (USA): Scientific Research Publishing.
2. Al-Ghawanmeh F. & Shannak Z. (2015) Automatic Accompaniment to Arab Vocal Improvisation: From the Technical to the Commercial Perspectives. Journal of Software Engineering and Applications. 8(1) pp. 16-25. Delaware (USA): Scientific Research Publishing.
3. AL-Ghawanmeh, F., , R. & AL-Ghawanmeh, M. (2014). Proposing a Process for Using Music Analysis Software to Improve Teaching Authentic Arab Singing and Ornamenting. International Journal of Humanities and Social Science. 4(6). Los Angeles (USA): Centre for Promoting Ideas.
4. Tayseer, A., Haddad, R., Sukkarieh, H. and Al-Ghawanmeh, F. (2014). “Modes (Maqamat) in Contemporary Arab Songs”. Dirassat Journal of Human Sciences, 41(1),pp. 598-611 Amman (Jordan): University of Jordan. (In Arabic)
5. Haddad, R., AL-Ghawanmeh, F., and AL-Ghawanmeh, M. (2010).” Educational Tools Based on MIR System for Arabian Woodwinds”, Journal of Music, Technology and Education, Volume 3.1. Bristol (UK) :Intellect
6. Al-Taee, M., Al-Ghawanmeh F. (2010). Analysis and Features Recognition of Arabian Flute (Nay) Musical Tones, Jordan Journal of the Arts, Vol. 3(2) pp. 95-110. Irbid (Jordan): Yarmouk University. (In Arabic)
7. Al-Taee, M., Al-Ghawanmeh, M., Al-Ghawanmeh F., and Omar, B. (2009) Analysis and Pattern Recognition of Arabian Woodwind Musical Tones Applied to Query-By-Playing Information Retrieval. Published in the Journal: Lecture Notes in Engineering and Computer Science. Volume: 2176- Issue: 1, Hong Kong.
8. Al-Momani, M. & Al-Ghawanmeh, F. The Impact of an Arab-Influenced Piano Curriculum on Students with an Arab Background. International Education Studies. Toronto: Canadian Center of Science and Education. (Accepted with minor edits).

Papers in Conferences:

9. Al-Ghawanmeh F., Smaili K. and Menacer M. (2019). Accompaniment to Arab Vocal Improvisation Based on Statistical Machine Translation: Objective and Subjective Evaluation. Accepted in the Conference on Interdisciplinary Musicology - CIM 19, Graz, Austria, Sept. 26-28.
10. Al-Ghawanmeh F. and Smaili K. (2017). Statistical Machine Translation from Arab Vocal Improvisation to Instrumental Melodic Accompaniment. Proceedings of the International Conference on Natural language, Signal and Speech Processing, ICNLSSP. Higher Institute of Engineering and Business, Casablanca, Morocco December 5-6. (Best paper award).
11. Al-Ghawanmeh, F., Al-Ghawanmeh, M., Haddad, R. and Nsairat N. (2017). Adhan as an Improvisation Material toward Better Educational Process: Bridging the gap between educators, practitioners and students from both Sharia and music backgrounds”. Abstract in the International Conference on Musical Cultures, University of Hull, UK, April 3-5.
12. Al-Ghawanmeh, F., Al-Ghawanmeh, M. & Obeidat, N. (2014). Toward an Improved Automatic Melodic Accompaniment to Arab Vocal Improvisation, Mawwāl. Proceedings of the 9th Conference on Interdisciplinary Musicology – CIM14, Berlin, 4-6 December.
13. Al-Ghawanmeh, F., Jafar, I., Al-Taee, M., Al-Ghawanmeh, M., and Muhsin, Z. (2011) “Development of Improved Automatic Music Transcription System for the Arabian Flute (Nay)”. Proceedings of the 8th International Multi-Conference on Systems, Signals and Devices (SSD-11). Sousse, Tunisia, March 22-25.
14. AL-Ghawanmeh, F., AL-Ghawanmeh, M., Haddad, R. (2009). “Appliance of Music Information Retrieval System for Arabian Woodwinds in E-Learning and Music Education”. Proc. of the International Computer Music Conference, ICMC09, Montréal 16-21 August.
15. Al-Taee, M., Al-Ghawanmeh, M., Al-Ghawanmeh F., and Omar, B. (2009). “Analysis and Pattern Recognition of Woodwind Musical Tones Applied to Query-By-Playing Information Retrieval”. Proc. of the International Conference of Computer Science and Engineering, ICCSE_59, World Congress on Engineering, WCE 2009. London, U.K., 1-3 July.
16. Al-Taee, M., Al-Rawi, M., and AL-Ghawanmeh, F. (2008). “Time-Frequency Analysis of the Arabian Flute (Nay) Tone Applied to Automatic Music Transcription”, Proc. of The 6th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-08), Doha, Qatar, March 31 - April 4.

Art Works:

i. Andalusian Fragrance (SMT Based Musical Accompaniment)

Full citation:

Al-Ghawanmeh F. and Smaili K. (2018). Andalusian Fragrance (SMT Based Musical Accompaniment) NIPS 2018 Creativity Art Gallery, Machine Learning for Creativity and Design Workshop, Montreal, Canada.

Machine learning based automatic instrumental response to vocally improvised (mawwāl) narrative poetry. The work features the new AI-based mawaweel music accompaniment application. Throughout this artwork, the improviser Muhannad Alkhateeb used elaborative expressiveness, maqam modulation and choice of register all to convey the deep and diverse feelings expressed in the poetry, such as: passion, doubt, anger, sorrow and hope. The computer successfully stood as a peer while translating the creative vocal sentences. As this was a studio recordings, we had the privilege of recording several takes and selecting the best ones from two perspectives: vocal and instrumental. We then applied slight reverb, EQ, and compression. However, the model is robust for live performances.

Available via this link:

<http://www.aiartonline.com/music/fadi-al-ghawanmeh-and-kamel-smaili/>

ii. Ryan the New Yorker 2012: un-tuned natural sounds used in a modal structure and sequenced automatically. The audio samples used in this composition are vocal expressions (laughing, breathing, crying, etc.) of my lovely little son Ryan when he was 2 months old. The modal structure here is that of the Mawaweel accompaniment system (presented in my master thesis). i.e. this music is the automatic instrumental accompaniment to a given vocal improvisation, but with muting the vocal and substituting instrumental samples by the un-tuned natural samples.

Available via this link: http://mawaweel.com/Portfolio_Fadi_AlGhawanmeh/Ryan%20Piece

iii. 30 seconds 2012: piece for nay and piano I wrote in twelve-tone serialism.

Available via this link: http://mawaweel.com/Portfolio_Fadi_AlGhawanmeh/30%20seconds

Audio Recording Samples:

- Arab Takht recordings as well as recordings of automatically accompanied vocal

improvisations are available via the following link:

<http://www.mawaweel.com/AudioRecording/>