

Curriculum vitae

Updated: April 28, 2019

Tareq Hussein

Visiting Professor at University of Helsinki since February 2018
Professor of Physics at the University of Jordan since December 2015
Docent in Physics at University of Helsinki since October 2008

Personal Information

Full name: Tareq Hussein (طارق فتحي عبدالعزيز حسين)
Date and place of Birth: November 29, 1975, Amman, Jordan
Nationality: Jordanian / Finnish
Gender: Male
Marital status: Married, four kids
Spoken languages: Arabic, English, and Finnish
ORCID ID: 0000-0002-0241-6435
scopus: h-index = 29 (ID: 54402121000), more than 2867 citations.
scholar.google: h-index = 32; i10-index = 67, more than 3780 citations.



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Research interests: Atmospheric and Environmental Sciences; Air Pollution; Urban and Indoor Air Quality; Dynamics and Physical Characterization of Aerosol Particles; Emissions and Fate of Atmospheric Aerosols, Dry Deposition; Health Effects of Aerosols; Modeling, Analytical, and Numerical Methods.

الاهتمامات البحثية: علوم طبقات الجو والبيئة؛ تلوث الهواء؛ نوعية هواء المدينة والهواء المنزلي؛ ديناميكا العوالق الهوائية وخصائصها الفيزيائية؛ انبعاثات وفناء العوالق الهوائية؛ عمليات الترسيب؛ الآثار الصحية للعوالق الهوائية؛ الطرق التحليلية والرقمية والنماذج الرياضية.

Awards and honors

- Abdul Hameed Shoman Award for Arab Researchers (year 2014, round 33) in the field of “Applied Sciences including Water, Energy, and Environment”.
- Distinguished Researcher in year 2013 Award in the field of “Sciences of Energy, Environment, and Water”, awarded by the Scientific Research Support Fund.

1. Academic Qualifications and Degrees

Degree	Period	Field / Subject	Institution	Thesis
Ph.D. (**)	2000 – 2005	Physics, Atmospheric and Environmental Sciences	University of Helsinki, Department of Physics, Division of Atmospheric Sciences, Helsinki, Finland	<i>Indoor and Outdoor Aerosol Particle Size Characterization in Helsinki. Report Series in Aerosol Science, No. 74, 2005.</i> Published by the Finnish Association for Aerosol Research.
M.Sc.	1997 – 1999	Physics, Radiation and Environmental Physics	University of Jordan, Department of Physics, Amman, Jordan	<i>Modeling Exposure to Natural Radioactivity in Jordanian Buildings, 1999.</i>
B.Sc.	1993 – 1997	Physics	University of Jordan, Department of Physics, Amman, Jordan	<i>Rutherford Backscattering Spectroscopy, 1997.</i>

(**) Advanced Physics courses were transferred from the University of Windsor, Ontario, Canada during 1999 – 2000.

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2. Administration

Period	Position	Institution
2016 Sep – 2017 Aug	Member of committee “Scientific Research”	University of Jordan, Faculty of Science Amman, Jordan
Feb – June 2016	Head of supreme technical committee “University of Jordan Innovation Center”	University of Jordan, University of Jordan Innovation Center, Amman, Jordan
2013 Sep – 2014 Aug	Dean’s Assistant for Quality Assurance and Development Affairs	University of Jordan, Faculty of Science Amman, Jordan

3. Academic Experience

3.1. Ranks and titles

Period	Position	Institution	Duties
<i>since</i> Feb 1, 2018	Visiting Professor	University of Helsinki, Institute for Atmospheric and Earth System Research (INAR)	- Graduate Teaching - Graduate student supervision
<i>since</i> Dec 10, 2015 (*)	Professor	University of Jordan, Department of Physics, Amman, Jordan	- Teaching load of 9 credit hours - B.Sc., M.Sc., and Ph.D. physics and environmental courses - Graduate student supervision
2011 Feb – 2015 Nov (*)	Associate Professor	University of Jordan, Department of Physics, Amman, Jordan	- Teaching load of 12 credit hours - B.Sc., M.Sc., and Ph.D. physics and environmental courses - Graduate student supervision
2010 Feb – 2011 Jan (*)	Assistant Professor	University of Jordan, Department of Physics, Amman, Jordan	- Teaching load of 12 credit hours - B.Sc., M.Sc., and Ph.D. physics and environmental courses - Graduate student supervision
2008 Nov – 2010 Jan	Docent in Physics	University of Helsinki, Division of Atmospheric Sciences, Helsinki, Finland	- Up to 50% undergraduate/graduate teaching and supervision - Less than 10% administrative work.
2000 Aug – 2005 Dec	Teaching Assistant	University of Helsinki, Division of Atmospheric Sciences, Helsinki, Finland	- Up to 20% teaching and student supervision - Field courses in atmospheric science
1999 Aug – 2000 Jul	Teaching Assistant	University of Windsor, Department of Physics, Ontario, Canada	- Laboratory instructor for General Physics I and II
1998 Aug – 1999 Mar	Teacher	Jubilee School for gifted student Amman, Jordan	- Secondary School Teacher
1997 Aug – 1998 Jul	Teaching Assistant	University of Jordan, Department of Physics, Amman, Jordan	- Laboratory instructor for General Physics I and II.

(*) Also Adjunct Professor (Docent in Physics) at the University of Helsinki, Division of Atmospheric Sciences.

3.2. Students supervision

Student	Degree	Period	Institution	Role
Marwan Kloob	Ph.D.	2018 – current	University of Jordan Faculty of Science Department of Physics	Supervisor
Shatha Saleh		2017 – current		Supervisor
Mr. Abdulaziz Khalaf	M.Sc.	2019 – current	University of Jordan Faculty of Science Department of Physics	Supervisor
Mr. Ali Al-Amir		2018 – current		Supervisor
Miss Zein Shilbaieh		2017 – 2018		Supervisor
Miss Safaa Qaisi		2015 – 2016		Supervisor
Miss Sawsan Malik		2015 – 2016		Supervisor
Miss Ola Hassouneh		2010 – 2011		Supervisor
Miss Yasmin Al-Hussein	M.Sc.	2016 – 2019	University of Jordan	Co-supervisor
Miss Noor Yasiin		2016 – 2017		Supervisor

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Mr. Alaa Bitar		2015 – 2017	Environmental Sciences and Management	Supervisor
Mr. Mutasem Halayqa		2015 – 2016		Supervisor
Miss Arwa Jaradat	M.Sc.	2017 – 2018	University of Jordan Faculty of Engineering Mechanical Engineering	Co-supervisor
Miss Nerdin Abu Abboud		2015 – 2017		Main Supervisor
Mr. Pak lun FANG (Alan)	Ph.D.	2019 – current	University of Helsinki, INAR	Main Supervisor
Miss Salla Sillanpää		2019 – current		Main Supervisor
Mr. Qusay Al-Dulaimy	M.Sc.	2019 – current	University of Helsinki, INAR	Supervisor
Miss Xinyang Li (Olivia)		2019 – current		Supervisor
Miss Androniki Maragkidou	Ph.D.	2015 – 2018	University of Helsinki, Division of Atmospheric Sciences	Co-supervisor
Miss Lubna Dada		2015 – 2019		Co-supervisor
Mr. Bjarke Mølgaard		2010 – 2014		Co-supervisor
Mr. Bjarke Mølgaard	M.Sc.	2008 – 2009	University of Helsinki, Division of Atmospheric Sciences	Supervisor
Miss Hanna Hannuniemi		2007 – 2008		Co-supervisor
Mr. Kimmo Kallonen		2016 – 2017		Co-supervisor
Mr. Mikko Repo		2013 – 2014		Supervisor
Miss Tiina Naaranoja	B.Sc.	2012 – 2013	University of Helsinki, Division of Atmospheric Sciences	Co-supervisor
Mr. Juhani Takkunen		2012 – 2013		Supervisor
Mr. Bjarke Mølgaard		2007 – 2008		Supervisor
Mr. Mikael Ehn		2004 – 2005		Co-supervisor

4. Research Experience

4.1. Positions

Period	Position	Institution	Duties
2018 Feb –	Visiting Professor	University of Helsinki, Institute for Atmospheric and Earth System Research (INAR)	<i>Research projects</i> <i>National/international collaboration</i>
2015 Dec – (*)	Professor	University of Jordan, Department of Physics, Amman, Jordan	<i>Research projects</i> <i>National/international collaboration</i>
2011 Feb – 2015 Nov (*)	Associate Professor	University of Jordan, Department of Physics, Amman, Jordan	<i>Research projects</i> <i>National/international collaboration</i>
2010 Feb – 2011 Jan (*)	Assistant Professor	University of Jordan, Department of Physics, Amman, Jordan	<i>Research projects</i> <i>National/international collaboration</i>
2008 Nov – 2010 Jan	Docent in Physics	University of Helsinki, Division of Atmospheric Sciences, Helsinki, Finland	- <i>Up to 50% teaching and student supervision</i> - <i>Up to 10% administrative work</i> - <i>Research projects</i> - <i>National and international collaboration</i>
2007 Jun – 2008 Oct	Post-Doctor	University of Helsinki, Division of Atmospheric Sciences, Helsinki, Finland	- <i>Up to 80% research projects</i> - <i>National and international collaboration</i>
2007 Jan – May (**)	Air Pollution Scientist	Norwegian Meteorological Institute (met.no), MSC-W, Oslo, Norway	- <i>Research projects</i> - <i>RD in the EMEP model</i>
2006 Jan – Dec (**)	Post-Doctor	Stockholm University, Department of Applied Environmental Sciences, Stockholm, Sweden	- <i>Research project on resuspension of road dust</i> - <i>International collaboration</i>
2005 Oct – Dec	Post-Doctor	University of Helsinki, Division of Atmospheric Sciences, Helsinki, Finland	- <i>Up to 80% research projects</i> - <i>National and international collaboration</i>
2003 Jul – 2005 Sep	Researcher	University of Helsinki, Division of Atmospheric Sciences, Helsinki, Finland	- <i>Up to 90% research projects</i>
2003 Jan – 2003 Jun	Researcher	Finnish Institute of Occupational Health, Helsinki, Finland	- <i>Research project</i>
2000 Aug – 2002 Dec	Researcher	University of Helsinki Division of Atmospheric Sciences Helsinki, Finland	- <i>Up to 90% research projects</i>

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1999 Aug –2000 Jul	Research Assistant	University of Windsor, Department of Physics, Ontario, Canada	- <i>Ph.D. student research</i>
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(*) Also Adjunct Professor at the University of Helsinki, Division of Atmospheric Sciences.

(**) Also affiliated at the University of Helsinki, Division of Atmospheric Sciences.

4.2. Scientific training

Period / Role	Course / Workshop	Organizer	Location
2013 November 3 – 7 <i>(Lecturer)</i>	Regional training course on atmospheric aerosol sampling procedures and analysis techniques	University of Jordan Department of Physics <i>Supported by the IAEA</i>	Amman, Jordan
2004 May 22 – 27 <i>(Participant)</i>	<i>Measurements of Atmospheric Aerosols: aerosol physics, sampling and measurement techniques</i>	University of Helsinki Division of Atmospheric Sciences	<i>Hyytiälä, Finland</i>
1999 Apr 19 – May 21 <i>(Participant)</i>	<i>School on Synchrotron Radiation</i>	<i>The Abdus Salam International Centre for Theoretical Physics</i>	<i>Trieste, Italy</i>

4.3. Other Training and Certificates

- Basic Security in the Field II (BSITF II) certificate by the United Nations Department of Safety & Security. *Issued on March 26, 2014 and valid for three years.*
- Advanced Security in the Field (ASITF) certificate by the United Nations Department of Safety & Security. *Issued on March 11, 2014 and valid for three years.*

4.4. Scientific and Research visits

Period	Host	Financial Support
Jan 8 – Feb 3, 2018	Institute for Advanced Research, Nagoya University	Nagoya IAR, Short-term Fellowship Program
Aug 5 – 24, 2017	Leibniz Institute for Tropospheric Research (TROPOS)	TROPOS
Apr 30 – May 13, 2017	e-RASMUS exchange mobility spent at the University of Helsinki	e-RASMUS
Aug 17 – 23 2009	Queensland University of Technology Brisbane, Australia	Queensland University Chancellor's Grant / University of Helsinki
Jun 1 – 15 2009	Institute of Chemical Process Fundamentals Lab. of Aerosol Chemistry and Physics Prague, Czech Republic	Czech Academy of Science
Apr 8 – May 7 2009	University of Jordan Department of Physics Amman, Jordan	University of Helsinki
Apr 19 – 27 2009	King Abdulaziz University Jeddah, Saudi Arabia	University of Helsinki Finnish Meteorological Institute
Jul 1 – Aug 31 2008	Institute of Chemical Process Fundamentals Lab. of Aerosol Chemistry and Physics Prague, Czech Republic	Institute of Chemical Process Fundamentals Väisälän Rahasto
Nov 21 – 30 2007	Institute of Chemical Process Fundamentals Lab. of Aerosol Chemistry and Physics Prague, Czech Republic	University of Helsinki Institute of Chemical Process Fundamentals
Oct 10 – 15 2006	Institute of Chemical Process Fundamentals Lab. of Aerosol Chemistry and Physics Prague, Czech Republic	University of Helsinki Institute of Chemical Process Fundamentals
Nov 1 – 12 2005	Stockholm University Dep. of Applied Environ. Sciences Stockholm, Sweden	ACCENT
Sep 10 – Oct 2	Technical University of Crete	University of Helsinki

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2005 Department of Environmental Engineering
Crete, Greece

5. Memberships and Committees

5.1. Organizations and Associations

Aerosol Association for the Middle East and north Africa (AAMENA). *Co-founder* and co-chair since 2014.
Board Member and member.

The Finnish Physical Society: member since 2014.

Finnish Association for Aerosol Research (FAAR): member since 2000.

National Committee in Jordan, International Geosphere-Biosphere Programme (IGBP). *Co-founder* and co-chair. Board Member and member.

Integrated Land Ecosystem-Atmosphere Processes Study (iLEAPS): member.

5.2. Conferences Committees

“AEROSOLS 2018” the 5th Workplace and Indoor Aerosols Conference, April 18–20 2018, Cassino, Italy.
Scientific Committee Member.

“DUSTworkshop9” the 9th International Workshop on Sand/Dust Storms and Associated Dust fall, Tenerife Island, Spain. Scientific Committee Member.

International Workshop on Middle East (Regional) Dust Sources and their Impacts., October 23–25 2017, Istanbul, Turkey. Scientific Committee Member.

5.3. National Committees

Member of the “Evaluation Committee for the Prize of innovation and Creativity in Science and Technology”.
Scientific Research Fund Support, Ministry of Higher Education, Amman, Jordan 2017.

Member of the “Scientific Committee for Water and Environment”. Scientific Research Fund Support,
Ministry of Higher Education, Amman, Jordan 2017 – 2018.

5.4. Local Committees

Department – member of “Scientific Research Committee”, Department of Physics, Faculty of Science, the
University of Jordan, Amman, Jordan 2016 – 2017.

Faculty – member of “Scientific Research Committee”, Faculty of Science, the University of Jordan, Amman,
Jordan 2016 – 2017.

University – head of “Supreme Technical Committee” for the “University of Jordan Innovation Center”, the
University of Jordan, Amman, Jordan 2016.

6. Editorial

Period	Role	Journal / Special Issue	Publisher
2015 Sep – present	Editorial Board Member	Aerosol and Air Quality Research	Taiwan Association for Aerosol Research
2015 Feb – present	Editor	Advances in Meteorology	Hindawi Publishing Corporation
2012 Feb – present	Editorial Board Member	Dataset Papers in Science <i>Previously “Dataset Papers in Geosciences”</i> <i>Previously “Dataset Papers in Atmospheric Sciences”</i>	Hindawi Publishing Corporation
2011 Dec – 2015 Aug	Editor	Aerosol and Air Quality Research	Taiwan Association for Aerosol Research
2011 Jun – 2012 Oct	Lead Guest Editor	Advances in Meteorology - Special Issue: <i>Forecasting the Urban Air Quality</i>	Hindawi Publishing Corporation

Reviewer for many journals: Aerosol and Air Quality Research; Aerosol Science Technology; Atmospheric Chemistry and Physics; Atmospheric Environment; Atmospheric Research; Boundary-Layer Meteorology; Chemosphere; Environmental Pollution; Environmental Science and Technology; Indoor Air; International Journal of Environmental Research and Public Health; International Journal of Heat and Mass Transfer; Jordan Journal of Earth and Environmental Sciences; Jordan Journal of Physics; Journal of Aerosol Science; Journal of Environmental Science and Health Part A;

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Journal of Geophysical Research – Atmospheres; Meteorology and Atmospheric Physics; Particology; Science of the Total Environment; Tellus B; Water, Air, and Soil Pollution.

7. Funding and Grants

7.1. International Research Projects

2019–2021: “*Healthy Outdoor Premises for Everyone*”. (EU Urban Innovative Actions, Coordinator: City of Helsinki, **4.6 M€** with **1.2 M€** for University of Helsinki). <https://www.helsinki.fi/en/news/data-science-news/in-future-helsinki-residents-can-receive-real-time-and-detailed-air-quality-data-the-hope-project-receives-large-eu-funding>, <https://www.helsinki.fi/en/news/science-news/hope-project-received-4.6-m-euros-eu-urban-innovative-actions-funding-to-produce-5g-air-quality-data>.

2010–2014: “*Characterization of Regional and Urban Aerosols in the Western Side of the Kingdom of Saudi Arabia with a focus on Dust Particles*”. International collaboration project between the Kingdom of Saudi Arabia and Finland funded by the Deanship of Scientific Research (DSR, Grant no. 1220/430, total amount **570 k€**) at the King Abdulaziz University (KAU, Saudi Arabia).

2016: Personal research grant funded by INTROP to partially cover postdoctoral fellowship at the Stockholm University.

7.2. National Research Projects

up-coming 2018-2020: “*Measurement and modeling of indoor aerosols and their emissions in Jordanian urban dwellings*”. To be funded by the Scientific Research Fund Support, Ministry of Higher Education, Jordan (total amount **~175 kJD (210 k€)**, project# WE/2/2/2017).

2016–2017: “*Measurement and Characterization of Urban Background Fine Particle Number Size Distributions in Amman*”. Funded by the Scientific Research Fund Support, Ministry of Higher Education, Jordan (total amount **92 kJD (110 k€)**, project# BAS-1-2-2015).

7.3. Internal Research Projects

2017–2019: “*Particulate mass (PM) concentrations of fine and coarse aerosols in the urban background atmosphere of Amman*”. Funded by the Deanship of Academic Research, the University of Jordan (total amount **17 kJD**, project# 1994).

2017–2018: “*Measurements of Fine and Coarse Aerosols Concentrations at the University of Jordan*”. Funded by the Deanship of Academic Research, the University of Jordan (total amount **4.5 kJD (6 k€)**, project# 2016).

2013–2016: “*Measurement and Characterization of Urban Background Coarse Particle Number Size Distributions in Amman*”. Funded by the Deanship of Academic Research, the University of Jordan (total amount **27 kJD (35 k€)**, project# 1516). Extended to another year with additional funding of **5.4 kJD (7 k€)**.

7.4. Graduate Students’ Research Grants

2015–2016: “*Spatial-Temporal Variation of Fine Aerosol Particles in Amman during the Spring Season of Year 2014*”. Funded by the Deanship of Academic Research, the University of Jordan (**1500 JD (1850 €)**, grant# 705).

2015–2016: “*Modeling Electrostatic Drifting of Aerosol Particles towards Smooth Surfaces*”. Funded by the Deanship of Academic Research, the University of Jordan (**1500 JD (1850 €)**, grant# 770).

2015–2016: “*Modeling Thermophoresis of Aerosol Particles onto Smooth Surfaces*”. Funded by the Deanship of Academic Research, the University of Jordan (**1500 JD (1850 €)**, grant# 771).

8. List of Publications

Theses & Monographs

[1] Ph.D. Thesis, 2005: “*Indoor and Outdoor Aerosol Particle Size Characterization in Helsinki*.” Report Series in Aerosol Science, No. 74. Finnish Association for Aerosol Research, University of Helsinki, Helsinki – Finland.

Curriculum vitae

- [2] M.Sc. Thesis, 1999: “*Modeling Exposure to Natural Radioactivity in Jordanian Buildings.*” University of Jordan, Amman – Jordan.
- [3] B.Sc. Monograph, 1997: “*Rutherford Backscattering Spectroscopy.*” University of Jordan, Amman – Jordan (not published).

Books and Book Chapters

- [1] **Hussein T**, Kulmala M. Chapter 8: Micro-Environmental Modeling. In Human Exposure to Pollutants via Dermal Absorption and Inhalation, editors: Lazaridis M and Colbeck I. Series: Environmental Pollution, Volume 17. Springer Science and Business Media B. V. 2010. [ISBN 978-90-481-8662-2, e-ISBN 978-90-481-8663-1, DOI 10.1007/978-481-8663-1].

Articles Published in Peer Reviewed Journals

2019 [5 articles, 1 first author, 0 single author, 2 corresponding author]

- [1] Alghamdi MA, Al-Hunaiti A, Arar S, Khoder M, Abdelmaksoud AS, Al-Jeelani H, Lihavainen H, Hyvärinen A, Shabbaj II, Almehmadi FM, Zaidan MA, **Hussein T**, Dada L. A predictive model for steady state ozone concentration at an urban-coastal site. *International Journal of Environmental Research and Public Health* 2019, 16, 256.
- [2] Ali-Saleh SS, Shilbayeh Z, Alkattan H, Al-Refie MR, Jaghbeir O, **Hussein T**. Temporal Variations of Submicron Particle Number Concentrations at an Urban Background Site in Amman – Jordan. *Jordan Journal of Earth and Environmental Sciences* 2019 (*In Press*).
- [3] Hakala S, Alghamdi MA, Paasonen P, Khoder M, Neitola K, Vakkari V, Sundström A-M, Kontkanen J, Abdelmaksoud AS, Al-Jeelani H, Lihavainen H, Hussein T, Kulmala M, Kerminen V-M, Hyvärinen A-P, Shabbaj II, Almehmadi FM. New particle formation, growth and shrinkage at a rural background site in western Saudi Arabia. *Atmospheric Chemistry and Physics Discussion* 2019, doi.org/10.5194/acp-2018-1357
- [4] **Hussein T**, Ibrahim S, Malek S. Particle-Surface Interaction: a Unified Three-Layer Dry Deposition Model. *Jordan Journal of Physics* 2019 (*In Press*).
- [5] Koivisto AJ, Kling KI, Hänninen O, Jayjock M, Löndahl J, Wierzbicka A, Fonseca AS, Uhrbrand K, Boor BB, Jiménez AS, Hämeri K, Dal Maso M, Arnold SF, Jensen KA, Viana M, Morawska L, **Hussein T**. Source specific exposure and risk assessment for indoor aerosols *Science of the Total Environment* 2019, 668, 13–24.

2018 [5 articles, 2 first author, 0 single author, 3 corresponding author]

- [6] Deng Y, Kagami S, Ogawa S, Kawana K, Nakayama T, Kubodera R, Adachi K, **Hussein T**, Miyazaki Y, Mochida M. Hygroscopicity of organic aerosols and their contributions to CCN concentrations over a mid-latitude forest in Japan. *Journal of Geophysical Research: Atmospheres* 2018, 123, 9703–9723.
- [7] **Hussein T**, Juwhari H, Al Kuisi M, Alkattan H, Lahlouh B, Al-Hunaiti A. Accumulation and Coarse Modes Aerosols Concentrations and Carbonaceous Contents in the Urban Background Atmosphere in Amman – Jordan. *Arabian Journal of Geosciences* 2018, 11, 617.
- [8] **Hussein T**, Sogacheva L, Petäjä T. Accumulation and Coarse Modes Particle Concentrations during Dew Formation and Precipitation. *Aerosol and Air Quality Research* 2018, 18: 2929–2938.
- [9] Koivisto A J, Jensen A C Ø, Kling K I, Kling J, Budtz H C, Koponen I K, Tuinman I, **Hussein T**, Jensen K A, Nørgaard A, Levin M. Particle emission rates during electrostatic spray deposition of TiO₂ nanoparticle-based photoactive coating. *Journal of Hazardous Materials* 2018, 341: 218–227.
- [10] Maragkidou A, Jaghbeir O, Hämeri K, **Hussein T**. Aerosol Particles (0.3–10 µm) inside an Educational Workshop–Emission Rate and Inhaled Deposited Dose. *Building Environment* 2018, 140: 80–89.

2017 [9 articles, 3 first author, 1 single author, 6 corresponding author]

- [11] Al-Hunaiti A, Arar S, Täubel M, Wraith D, Maragkidou A, Hyvärinen A, **Hussein T**. Floor dust bacteria and fungi and their coexistence with PAHs in Jordanian indoor environments. *Science of the Total Environment* 2017, 601–602: 940–945.
- [12] Dada L, Paasonen P, Nieminen T, Mazon S B, Kontkanen J, Peräkylä O, **Hussein T**, Petäjä T, Kerminen V-M, Bäck J, Kulmala M. Long-term analysis of clear-sky new particle formation events and non-events in Hyytiälä. *Atmospheric Chemistry and Physics* 2017, 17: 6227–6241.
Dada L, Paasonen P, Nieminen T, Mazon S B, Kontkanen J, Peräkylä O, Hussein T, Petäjä T, Kerminen V-M, Bäck J, Kulmala M. Long-term analysis of clear-sky new particle formation events and non-events in Hyytiälä. Atmospheric Chemistry and Physics Discussion 2016, doi:10.5194/acp-2016-859.

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- [13] **Hussein T.** Indoor-to-Outdoor Relationship of Aerosol Particles inside a Naturally Ventilated Apartment – A Comparison between Single-Parameter Analysis and Indoor Aerosol Model Simulation. *Science of the Total Environment* 2017, 596–597: 321–330.
- [14] **Hussein T,** Betar A. Size-Fractionated Number and Mass Concentrations in the Urban Background Atmosphere during Spring 2014 in Amman – Jordan. *Jordan Journal of Physics* 2017, 10: 51–60.
- [15] **Hussein T,** Boor B E, dos Santos V N, Kangasluoma J, Petäjä T, Lihavainen H. Mobile Aerosol Measurement in the Eastern Mediterranean – A Utilization of Portable Instruments. *Aerosol and Air Quality Research* 2017, 17: 1875–1886.
- [16] Lazaridis M, Eleftheriadis K, Ždímal V, Schwarz J, Wagner Z, Ondráček J, Drossinos Y, Glytsos T, Vratolis S, Torseth K, Moravec P, **Hussein T,** Smolík J. Number concentrations and modal structure of indoor/outdoor fine particles in four European Cities. *Aerosol and Air Quality Research* 2017, 17: 131–146.
- [17] Lihavainen H, Alghamdi M A, Hyvärinen A, **Hussein T,** Neitola K, Khoder M, Abdelmaksoud A S, Al-Jeelani H, Shabbaj I I, Almeahadi F M. Aerosol optical properties at rural background area in Western Saudi Arabia. *Atmospheric Research* 2017, 197: 370–378.
- [18] Maragkidou A, Arar S, Al-Hunaiti A, Ma Y, Harrad S, Jaghbeir O, Faouri D, Hämeri K, **Hussein T.** Occupational Health Risk Assessment and Exposure to Floor Dust PAHs inside an Educational Building. *Science of the Total Environment* 2017, 579: 1050–1056.
- [19] Odeh I, Arar S, Al-Hunaiti A, Sa'aydeh H, Hammad G, Duplissy J, Vuollekoski H, Korpela A, Petäjä T, Kulmala M, **Hussein T.** Chemical Investigation and Quality of Urban Dew Collections with Dust Precipitates. *Environmental Science and Pollution Research* 2017, 24: 12312–12318.

2016 [6 articles, 1 first author, 4 corresponding author]

- [20] **Hussein T,** Halayka M, Abu Al-Ruz R, Abdullah H, Mølgaard B, Petäjä T. Fine Particle Number Concentrations in Amman and Zarqa during Spring 2014. *Jordan Journal of Physics* 2016, 9: 31–46.
- [21] Lihavainen H, Alghamdi MA, Hyvärinen A-P, **Hussein T,** Aaltonen V, Abdelmaksoud AS, Al-Jeelani H, Almazroui M, Almeahadi FM, Al Zawad FM, Hakala J, Khoder M, Neitola K, Petäjä T, Shabbaj II, Hämeri K. Aerosols Physical properties at Hada Al Sham, Western Saudi Arabia. *Atmospheric Environment* 2016, 135: 109–117.
- [22] Karl M, Kukkonen J, Keuken MP, Lützenkirchen S, Pirjola L, **Hussein T.** Modelling and measurements of urban aerosol processes on the neighborhood scale in Rotterdam, Oslo and Helsinki. *Atmospheric Chemistry and Physics* 2016, 16: 4817–4835.
- Karl M, Kukkonen J, Keuken M P, Lützenkirchen S, Pirjola L, Hussein T. Modelling and measurements of urban aerosol processes on the neighborhood scale in Rotterdam, Oslo and Helsinki. Atmospheric Chemistry and Physics Discussion 2015, 15: 35157–35200.*
- [23] Maragkidou A, Ma Y, Jaghbeir O, Faouri D, Harrad S, Al-Hunaiti A, Arar S, Hameri K, **Hussein T.** PAHs in Household Floor Dust Collected in Amman, Jordan. *Journal of Chemical Engineering and Process Technology* 2016, 7, 292.
- [24] Odeh I, **Hussein T.** Activity pattern of urban adult students in an Eastern Mediterranean Society. *International Journal of Environmental Research and Public Health* 2016, 13, 960 (doi: 10.3390/ijerph13100960).
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2015 [6 articles, 2 first author, 2 corresponding author]

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9. Invited speaker, plenary speech, and keynote speaker

- 2019 Regional symposium on combating air pollution of black carbon, Amman, Jordan, 26-27 March 2019 [organized by UNEP and Ministry of Environment], **National Consultant and Keynote Speaker** “Black Carbon measurements and assessment – a combination between experiment and analysis.”
- 2019 INDAIRPOLLNET eCOST WG1 WG2 meeting, Budapest, Hungary, 21-22 March 2019. **Invited Speaker** “Particulate Matter and Gaseous Concentrations inside Jordanian Dwellings – a Closer Look at an Eastern Mediterranean Indoor Air Quality and Occupants Behavior.”
- 2019 InDUST eCOST meeting “Desert Dust impacts on Air Quality in Europe: narrowing the gap between current scientific knowledge and users needs”, Rome, Italy, 11-12 March 2019. **Invited Speaker** “Dust Contribution in Jordan.”
- 2019 MegaSense workshop, Hyytiälä, Finland, 31 January-1 February 2019, **Keynote Speaker** “Air Quality”
- 2018 The 8th Environmental Symposium of German-Arab Scientific Forum for Environmental Studies, Amman, Jordan, 8-9 October 2018, **Keynote Speaker** “Seasonal Variation of Urban Accumulation and Coarse Modes in Amman – Jordan”
- 2018 WPMN Expert Meeting on Exposure Measurement and Exposure Mitigation of Nanomaterials, Ottawa, Canada, 25-26 August 2018], **Invited Speaker** “Mass balance modelling, airborne particles, and pollution forecasts”
- 2018 Meeting of the Science Advisory Group (SAG) for Aerosols Global Atmospheric Watch (GAW) Program, World Meteorological Organization (WMO) [WMO Secretariat, Geneva, Switzerland, 9-11 July 2018], **Invited Speaker** “Middle East Aerosol Network”
- 2018 Workshop: Mediterranean & Middle East air pollution in a changing climate [the Cyprus Institute, Nicosia, Cyprus, 16-17 May 2018], **Invited Speaker** “Aerosol Association for the Middle East and North Africa - AAMENA”
- 2018 1st InDUST eCOST joint Working Group Meeting [Technical University of Barcelona, Barcelona, Spain, 14-15 March 2018], **Invited Speaker** “Aerosol Association for the Middle East and North Africa - AAMENA”

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- 2018 Symposium: Frontiers of Atmospheric Aerosol Studies: Towards the Understanding of the Health and Climate Effects [Nagoya University, Nagoya, Japan, 23-24 January 2018], **Keynote Speaker** “*New Particle Formation in the Urban Atmosphere*”
- 2017 International Workshop on Middle East (Regional) Dust Sources and Their Impacts [Istanbul, Turkey, 23-25 October 2017], **Invited Speaker** “*SDS-WAS Regional Cooperation in the Middle East*”
- 2016 RAS0076 - Investigating Atmospheric Particulate Matter and Pollution Source Contributions in Urban Environments Using Nuclear Analytical Techniques (ARASIA), Regional Training Course on the Use of IBA Techniques to Analyze Atmospheric Aerosols [the University of Jordan, Amman, Jordan, 20-24 November 2016], **Lecturer** “*Aerosols: Physical and Chemical Properties, and Effects of APM on Environment and Human Health*”
- 2016 4th workplace and Indoor Aerosols [Barcelona, Spain, 20-22, April 2016], **Keynote Speaker** “*Real-Time Assessment for Exposure to Aerosols Indoors and Outdoors – a Combined Approach between Modelling and Measurement*”
- 2016 8th International Petra School of Physics [Amman, Jordan, 11-14 April 2016], **Lecture** “*Dry Deposition onto Surfaces – Model Development*”
- 2015 1st Africa / Middle East Expert Meeting and Workshop on the Health Impact of Airborne Dust [Amman, Jordan, 2-5, November 2015], **Interactive Talk** “*Research on Air Quality and Health in the Middle East and North Africa*”
- 2015 Workshop – Interaction between Indoor and Atmospheric Chemistry [Lille, France, 15-17 May 2015], **Invited Speaker** “*Dynamic Behavior of Indoor Aerosols*”
- 2015 Science Day at the Faculty of Science, the University of Jordan [Amman, Jordan, 13 December 2015], **Keynote Speaker** “*Aerosols in Jordan – Challenges and Needs*”
- 2014 Special Symposium – Atmospheric Aerosol Emission and Deposition Fluxes – International Aerosol Conference [Busan, South Korea, 28 August - 2 September 2014], **Invited Speaker** “*Modeling Dry Deposition onto Environmental Surfaces*”
- 2014 RAS0072 - Evaluating and Mapping Air Pollutants Using Nuclear Analytical Techniques (ARASIA), Regional workshop to establish strategy and procedures for atmospheric aerosol sampling, analyses and interpretation of the results [IAEA headquarter, Vienna, Austria, 7-10 April 2014], 3x**Tutorial** “*Overview of Indoor and Outdoor Atmospheric Aerosols*”, “*Critical Aspects of Atmospheric Aerosol Sampling*”, and “*International Standards for Atmospheric Aerosol Sampling*”
- 2013 Regional Training Course on Atmospheric Aerosol Sampling – Procedure and Analysis Techniques [the University of Jordan, Amman, Jordan, 3-7 November 2013], 2x**Lecturer** “*Urban Aerosols*” and “*Dynamics of Indoor Aerosols*”
- 2012 50-years anniversary of the University of Jordan – Jordan: soil, water, and air [Amman, Jordan, 13 December 2012], **Keynote Speaker** “*Urban Aerosols - Jordan*”
- 2010 Science Day at the Faculty of Science, the University of Jordan [Amman, Jordan, 9 May 2010], **Keynote Speaker** “*Direct and Indirect Effects of Aerosols*”

10. Innovations

	Description	Published
Inhaled Dose	A combined approach between modeling and experiment to calculate the inhaled deposited dose in the lungs	- Hussein et al. <i>Atmos. Environ.</i> 2015, 106: 402. - Hussein et al. <i>Sci. Total Environ.</i> 2013, 458–460: 140.
MC-SIAM	- Multi-Compartment and Size-resolved Indoor Aerosol Model - A novel procedure to estimate the emission rates of indoor aerosol particles	- Hussein et al. <i>Aerosol Sci. Tech.</i> 2005, 39: 1111. - Hussein et al. <i>Atmos. Environ.</i> 2006, 40: 4285.
DO-FIT	An automatic algorithm to parameterize particle number size distributions	- Hussein et al. <i>Boreal Environ. Res.</i> 2005, 10: 337.
FUAQ	Forecasting the Urban Air Quality	- Hussein et al. <i>Atmos. Environ.</i> 2006, 40: 1427.

Curriculum vitae

		- Mølgaard et al. Atmos. Environ. 2012, 46: 155.
TLDM-AP	Three-Layer Deposition Model for Aerosol Particles on Environmental Surfaces	- Hussein et al. Aerosol Sci. Technol. 2012, 46: 44.
