



# FACULTY FULL NAME: Mubarak Alqahtani

POSITION: Assistant Professor

## Personal Data

Nationality | Saudi

Department | Physics Department - College of Science

Official IOU Email | [maqhtani@iau.edu.sa](mailto:maqhtani@iau.edu.sa)

Office Phone No. | 32277

## Language Proficiency

Language	Read	Write	Speak
Arabic	Native	Native	Native
English	Fluent	Fluent	Fluent

## Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
Dec 2017	PhD Physics	USA	Kent State University, Kent, OH
2014	MA Physics	USA	Kent State University, Kent, OH
2006	Bachelor	SA	University of Dammam, Dammam

## PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Quasiparticle anisotropic hydrodynamics in relativistic heavy-ion collisions
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## Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Assistant professor	IAU	1/1/2018

## Administrative Positions Held: (Beginning with the most recent)

Administrative Position	Office	Date
Vice Dean for Academic Affairs	College of Applied Studies and Community Service	Jan 2019
Vice Dean for Distance Learning	College of Applied Studies and Community Service	Oct 2018



## Scientific Achievements

### Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	M. Alqahtani and M. Strickland	Kaonic Hanbury-Brown-Twiss radii at 200 GeV and 5.02 TeV	arXiv:2209.10894 (2022)
2	M. Alqahtani, N. Demir, and M. Strickland	Nonextensive hydrodynamics of boost-invariant plasmas	arXiv:2203.14968 (2022)
3	H. Alalawi, M. Alqahtani, and M. Strickland	Resummed relativistic dissipative hydrodynamics	Symmetry 2022, 14, 329 (Invited Review).
4	M. Alqahtani and M. Strickland	Bulk observables at 5.02 TeV using quasiparticle anisotropic hydrodynamics	Eur. Phys. J. C 81, 11, 1022 (2021).
5	P. Bhaduri, M. Alqahtani, N. Borghini, A. Jaiswal, M. Strickland	Fireball tomography from bottomonia elliptic flow in relativistic heavy-ion collisions	Eur. Phys. J. C 81, 585 (2021).
6	M. Alqahtani and M. Strickland	Pion interferometry at 200 GeV using anisotropic hydrodynamics	Phys. Rev. C 102, 064902, (2020).
7	D. Almaalol, M. Alqahtani, and M. Strickland	Anisotropic hydrodynamics with number-conserving kernels	Phys. Rev. C 99, 014903, (2019).
8	D. Almaalol, M. Alqahtani, and M. Strickland	Anisotropic hydrodynamic modeling of 200 GeV Au-Au collisions	Phys. Rev. C 99, 044902, (2019).
9	M. Alqahtani, M. Nopoush, and M. Strickland	Relativistic anisotropic hydrodynamics	Progress in Particle and Nuclear Physics 101, 204-248, (2018) (Invited Review).
10	M. Alqahtani, M. Nopoush, R. Ryblewski, and M. Strickland	Anisotropic hydrodynamic modeling of 2.76 TeV Pb-Pb collisions	Phys. Rev. C 96, 044910, (2017).
11	M. Alqahtani, M. Nopoush, R. Ryblewski, and M. Strickland	(3+1)D Quasiparticle Anisotropic Hydrodynamics for Ultrarelativistic Heavy-Ion Collisions	Phys. Rev. Lett. 119, 042301, (2017).
12	M. Alqahtani, M. Nopoush, and M. Strickland	Quasiparticle anisotropic hydrodynamics for central collisions	Phys. Rev. C 95, 034906, (2017).
13	M. Alqahtani, M. Nopoush, and M. Strickland	Quasiparticle equation of state for anisotropic hydrodynamics	Phys. Rev. C 92, 054910, (2015).



### Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	M. Alqahtani, D. Almaalol, and M. Strickland	Anisotropic hydrodynamics for Au-Au collisions at 200 GeV	MDPI Proc. 10, 38 (2019).
2	M. Alqahtani, D. Almaalol, M. Nopoush, R. Ryblewski, and M. Strickland	Anisotropic hydrodynamic modeling of heavy-ion collisions at LHC and RHIC	Nuclear Physics A 982 (2019).
3	M. Alqahtani, M. Nopoush, R. Ryblewski, and M. Strickland	Quasiparticle anisotropic hydrodynamics for ultrarelativistic heavy-ion collisions	PoS CPOD2017 070 (2018).
4	M. Alqahtani and M. Strickland	Quasiparticle anisotropic hydrodynamics	J. Phys. Conf. Ser. 832 012051 (2017).

### Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	supported by DSR under grant number 2020-080-CED, award amount 33,450 SR	Developments on 3+1d quasiparticle anisotropic hydrodynamics	2020-2021.

### Current Researches

#	Research Title	Name of Investigator(s)
1	Kaons Interferometry	
2	Tsallis Statistics of Boost-Invariant Plasmas	
3	Event-by-Event Anisotropic Hydrodynamics	

### Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	Kaons femtoscopy at 5.023 TeV, the 29th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (Quark Matter 2022)	April 4-10, 2022, Krakow, Poland.	poster
2	Hanbury-Brown-Twiss radii at 200 GeV using anisotropic hydrodynamics, the	November 3-9, 2019, Wuhan, China.	poster



	28th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (Quark Matter 2019)		
3	Anisotropic hydrodynamic modeling of heavy-ion collisions at RHIC, the 8th workshop in the Hot Quarks	September 7-14, 2018, Texel, The Netherlands.	talk
4	Anisotropic hydrodynamic modeling of heavy-ion collisions at LHC and RHIC, the 27th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (Quark Matter 2018)	May 13-19, 2018, Venice, Italy.	talk
5	Anisotropic hydrodynamic modeling of 2.76 TeV Pb-Pb collisions, Fall Meeting of the Division of Nuclear Physics of the American Physical Society	October 25-28, 2017, Pittsburgh, PA, USA.	talk
6	Quasiparticle anisotropic hydrodynamics for ultrarelativistic heavy-ion collisions, Critical Point and Onset of Deconfinement Conference (CPOD 2017)	August 7-11, 2017, Stony Brook University, NY, USA.	talk
7	Quasiparticle anisotropic hydrodynamics for heavy-ion collisions, the 15th International Conference on QCD in Extreme Conditions (XQCD 2017)	June 26-28, 2017, Pisa, Italy.	talk
8	Quasiparticle anisotropic hydrodynamics, XXVI international conference on ultrarelativistic heavy-ion collisions (Quark Matter 2017)	February 5-11, 2017, Chicago, US.	poster
9	Quasiparticle anisotropic hydrodynamics, XXIX Midwest Theory Get-Together, Argonne National Laboratory	30 Sep - 1 Oct 2016.	talk
10	Quasiparticle anisotropic hydrodynamics for central collisions, Hot Quarks 2016 Workshop, South Padre Island, TX	September 12-17, 2016.	talk
11	Quasiparticle equation of state for anisotropic hydrodynamics, APS Ohio Region Section Meeting (OSAPS)	Cleveland State U., Oct 17 2015.	talk
12	APS Ohio Region Section Meeting (OSAPS)	Kent State U., Mar 2015.	



## Journal Referee

- Physics Letters B, Physical Review C, Symmetry, Universe

## Teaching Activities

### Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Classical Mechanics	PHYS 402	3 credit hours
2	Modern Physics and Introduction to Quantum Mechanics	PHRE 305	8 weeks, 4 credit hours
3	Atomic and Nuclear Physics	PHRE 402	8 weeks, 4 credit hours
4	Differential Equations	Math 331	3 credit hours
5	Physics II	PHYS 272	4 credit hours
6	Physics I	PHYS 271	4 credit hours

### Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	Mathematica
2	C++

### Last Update

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