

## CURRICULUM VITAE TEMPLATE



Position/Designation: HoS, Associate Professor

Department: DMPS

College: CAS

University of Nizwa , Sultanate of Oman

<b>Personal Information</b>
Name: Abdul Adheem Mohamad Marital Status: Married Email Address: mohamad@unizwa.edu.om Contact Numbers:381
<b>Academic Qualifications</b>
Ph.D. in Mathematics
<b>Teaching Activities, Current / Previous Experience</b>
I have taught the following courses:  AT UNIVERSITY OF NIZWA <ul style="list-style-type: none"> <li>• - Advanced Mathematical Economics (Mathematical Finance)</li> <li>• - Mathematical Statistics &amp; Probability</li> <li>• - Introduction to Logic, Mathematical Economics for Postgraduates</li> <li>• - Metric Spaces, Mathematical Economics, Calculus I</li> <li>• - Group Theory, Linear Algebra I, Precalculus</li> <li>• - Number Theory, Linear Algebra II</li> <li>• - Complex Analysis for Sciences, Real Analysis</li> </ul>

- - Complex Analysis for Engineers

#### AT SULTAN QABOOS UNIVERSITY

- - Linear Algebra I & Linear Algebra II
- - Mathematics for Agriculture II
- - Mathematics for Commerce & Economics I
- - Mathematics for Commerce & Economics II
- - Mathematics for Business I and II
- - Discrete Mathematics for Computer Science
- - Calculus I (Course coordinator)
- - Calculus II & Calculus III
- - Metric and Topological spaces, Topology I & Topology II (M.Sc. Courses)
- - Real Analysis I, Real Analysis II & Complex Variables
- - Precalculus

#### AT UNIVERSITY OF AUCKLAND, NEW ZEALAND

- - Calculus and Algebra
- - Multivariable Calculus
- - Mathematics for Commerce
- - Linear Algebra
- - Metric Spaces
- - Variety of tutorials at first and second stages and other activities at all levels

#### Research Activities

(includes but not limited to research interests, conference attendance, conference presentations and publications, refereed journal, articles ,books, ect.)

1. **Research interests:** Geometry and Topology of Manifolds, Metric Spaces, Kntos Theory, Topology of DNA and its Replications, Applied Geometry and Topology include Geometrical and Topological Modeling of Experimental Sciences, and Geometrical and Topological Optimization.

#### conference presentations:

1. (1) A Topological Analysis of DNA Replication, The First International Scientific Conference of Iraqi Khawarizmi Society, Basra, March 2018 (Keynote Speaker).
2. (2) Topological Models for DNA and its Replication, 15<sup>th</sup> Devenport Tpology Festival (DTF), University of Auckland, New Zealand, February, 2017. (Special invited speaker)
3. (3) Property (a) and Friends, Symposium in Honour of David Gauld, University of Auckland, New Zealand, February 2017. (Special invited speaker)



(4) Property (a), Games and Manifolds, Third Nizwa Workshop on Knots, Manifolds and Analytic Topology, University of Nizwa, Oman, December, 2016.

4. (4) Program on Geometry, Topology, and Dynamics of Moduli Spaces, IMS, NUS, Singapore, August 2016.

5. (5) Oman Mathematics Day, SQU, Muacat, Oman, November, 2015

6. (6) Knots and Replication (Research Poster), Nizwa University Research Day,

Nizwa, Oman, 2015

7. (7) Uniform Continuity in Generalized Metric Spaces, Second Nizwa Workshop on Knots, Manifolds and Analytic Topology, University of Nizwa, Oman, May, 2014

8. (8) On Algebraic Structure of Manifolds, Second conference in Mathematics and Applications, Basra, Iraq, October, 2013 (Keynote Speaker).

(9) Singapore Workshop in Geometry & Topology, July 2012, National University of Singapore, Singapore.

(10) Manifolds and Minimum Groups, Workshop on Surfaces and Knots, February 2012, University of Nizwa, Oman.

(11) Hyperspaces, manifolds and Metrization, International Conference on Analysis and Applications, 24-26 January 2010, Sultan Qaboos University, Muscat Oman.

(12) Does the shadow tell us about surfaces in 4-space? Sultan Qaboos University University Day 2nd May 2010, Poster Presentation.

(13) Generalized Metric Spaces, 25<sup>th</sup> Summer Conference on Topology and its Application, Kielce, Poland, July, 2010

- (14) Generalized Quasi Metric Spaces, The Forty Three Annual Spring Topology and Dynamical Systems Conference, University of Florida, Gainesville, FL-USA, 7-9 March, 2009.
- (15) Property (a): Some Questions, 12<sup>th</sup> Galway Topological Colloquium, National University of Ireland, Galway, Ireland Republic, June, 2008.
- (16) Metrization by Weak  $g$ -Functions, The Forty First Annual Spring Topology and Dynamical Systems Conference, University of Missouri, Missouri-USA, 29-31 March, 2007.
- (17) A fixed point theorem in probabilistic quasi-metric spaces, 10<sup>th</sup> Prague Topological Symposium, Mathematical Institute of Czech Academy of Sciences, Prague, Czech Republic, August, 2006.
- (18) Games and metrization of Manifolds, UAE Math Day, University of Sharjah, Sharjah, UAE, April, 2006.
- (19) Spaces with property  $pp$ , 20<sup>th</sup> Summer conference on Topology and its Applications, Denison University, Ohio, USA, July, 2005.
- (20) Hyperspaces and metrization of Manifolds, UAE Math Day, UAE University, Al-Ain, UAE, March, 2005.
- (21) A Survey of metrization of Manifolds II, The First SQU Workshop on Topology and its Applications, SQU, Muscat, Oman, January, 2005.
- (22) A Survey of metrization of Manifolds I, Mathematical Symposium in Honour of Prof Gauld (on his sixtieth birth day), University of Auckland, Auckland, December, 2004.
- (23) Diagonal properties of topological spaces, 19<sup>th</sup> Summer Conference on Topology and its Applications, University of Cape Town, Cape Town, South Africa, 2004.
- (24) Symetric  $g$ -functions, 17<sup>th</sup> Summer Conference on Topology and its Applications, University of Auckland, Auckland, New Zealand, 2002.
- (25) Sharp bases, 9<sup>th</sup> Prague Topological Symposium, Mathematical Institute of Czech Academy of Sciences, Prague, Czech Republic, 2001.
- (26) On Homeomorphism groups of Manifolds, International Conference on Analysis and its Applications, American University of Sharjah, Sharjah, UAE, 2001.
- (27) Quasi-Developable Manifolds, 14<sup>th</sup> Summer Conference on Topology and its Applications, Long Island University, Brookville, New York, USA, 1999.
- (28) Metrization of Generalization of Developable and  $M$ -Spaces, International Conference on Topology and its Applications, Yokohama, Japan, 1999.

(29) On Metrizable Manifolds, The First International Conference on Mathematical Sciences, UAE University, Al-Ain, UAE, 1999.

(30) Nonmetrizable Manifolds, N.Z. Mathematics Colloquium, Christchurch, New Zealand, 1999.

(31) Autohomeomorphism Groups of Manifolds, Convergence and Topology, Erice, Sicily, Italy, 1999.

(32) Autohomeomorphism Groups of Peano Curves, 2nd Oxford-Galway Coll., Oxford, U.K., September 1998.

(33) p-adic Analytic Manifolds, 2nd Galway-Oxford Coll., Oxford, U.K., September 1998.

(34) Homeomorphism Groups of Manifolds, 12th Summer Conference on Topology and its Applications, Nipissing University, North Bay, Canada, 1997.

(35) On generalized metric spaces, N.Z. Mathematics Colloquium Palmerston North, N. Z., 1996.

conference attendance:

publications:

Selected Refereed Journal Papers:

(18) C. Good, R.W. Knight and A. Mohamad, On the Metrizable Spaces with a Sharp Base, *Topology Appl.* 123 (2002), 543-552.

(19) P. Gartside and A. Mohamad, Diversity of p-adic analytic manifolds, *Topology Appl.* 125 (2002), 323-333.

(21) C. Good, D. Jennings and A. Mohamad, Symmetric g-functions, *Topology Appl.* 134 (2003), 111-122.

(22) A. Mohamad, A note on Generalized Metric Spaces, *New Zealand J. Math.* 34 (2005), 67- 69.

(23) A. Mohamad, Heath g-functions and Metrization, *J. Austral. Math. Soc.* 78 (2005), 103- 107.

(24) P.M. Gartside, D. Gauld and A. Mohamad, Spaces with property pp, *Topology Appl.* 153 (2006), 3029-3037.

(26) J. Cao, D. Gauld, Greenwood and A. Mohamad, Games and Metrizable Manifolds, *New Zealand J. Math.* 37 (2008), 1-8.

- (27) A. Mohamad and T. Yashiro, On triple point numbers of 5-colourable 2-knots, Journal of Knot Theory and its Ramifications 18 (2009), 1493-1508.
- (28) A. Mohamad and T. Yashiro, Surface diagrams with at most two triple points, Journal of Knot Theory and its Ramifications 21, 2012, 1250013-1-17.
- (29) J. Cao and A. Mohamad, Metrizable Manifolds and Hyperspace Topologies, JP Journal of Geometry and Topology 14 (2013), 1-12
- (30) A. Mohamad and T. Yashiro, On construction of surface-knots, Journal of Knot Theory and its Ramifications, (doi: 10.1142/S021821651650053X), 2016
- (31) Abdul Adheem Mohamad and Tsukasa Yashiro, TOPOLOGICAL MODEL OF DNA REPLICATION WITH DNA-LINKS, FJMS 107, 2018, 241-255.
- (32) Abdul Adheem Mohamad, QUESTIONS ABOUT PROPERTY (a) AND FRIENDS, BAMS 33, 2018, 155-166
- (33) Abdul Mohamad and T. Yashiro, Topological Study of Generalized Metric Spaces, JP Journal of Geometry and Topology Volume 22, Number 2, 2019, 165-188.
- (34) Abdul Adheem Mohamad & T. Yashiro, A rewinding model for replicons with DNA-links, BioMath 9, 1-8, 2020. <http://dx.doi.org/10.11145/j.biomath.2020.01.047>

#### Faculty Administrative Experience

1. Member of College of Arts and Sciences Board, 2011 – 2013, 2018- 2021
2. Chair of Mathematics Section Board, 2011 - to present
3. Chair of MS Curriculum Committee, 2011 - to present
4. Chair of MS Timetable Committee, 2011 - to present
5. Chair of MS Appointment Committee, 2011 - to present
6. Member of the University Foundations Program Committee, 2012 – to present
7. Chair of the Mathematics Foundations Program Supervision Committee, 2011– to present
8. Member of Department Promotion Committee, 2011 – 2018
9. Chair/Member of College Promotion Committee, 2018-2021
10. Member of Department Appointment Committee, 2015 – to present

11. Chair and member of Department Curriculum Committee, 2014 - to present
Community Services
Consultancy Activities
Membership in Professional Bodies
<ol style="list-style-type: none"><li>1. NZ Mathematical Society</li><li>2. American Mathematical Society</li></ol>
Awards and recognitions