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## Prof. Muhammad A. Natsheh

### Personal Data

- Nationality: Jordanian.
- Birth: Jerusalem, May 7.1943.

### Academic Qualifications

- Ph.D. in Maths. 1974. Michigan State Univ. USA.  
Thesis title: Piecewise Linear Involutions on  $P^2 \times S^1$ .
- M. Sc. in Maths. 1971, Michigan State Univ., USA.
- B.Sc. in Maths. 1967. Ain Shams Univ., Cairo.

### Research Interests

Algebraic topology. Geometric topology. General topology. Functional analysis. Commutative ring theory.

(have publications in all these fields of research).

### Teaching Experience

No	Place of work	Position	To	From
1	Univ. of Jordan	Professor	Till now	1989
2	Univ. of Jordan	Assoc. Prof.	1989	1983
3	Univ. of Jordan	Asst. Prof.	1983	1974
4	El-Quds Univ.	Visiting Assoc. Prof.	1980	1979
5	Michigan State Univ. ,USA	Visiting Assoc. Prof.	1986	1985
6	Univ. of Amman	Visiting Prof.	1994	1993
7	Applied Science Univ.	Visiting Prof.	1996	1995
8	Michigan State Univ. ,USA	Teaching Assistant	1974	1971
9	Teachers College of Education	Visiting Prof.	1999	1998
10	Queen Sumaya University	Visiting Prof.	2001	2002

Academic,  
Administrative  
or Relative  
Experience

1. Chairman Dept. of Math. , Univ. of Jordan, 1977-1979 and 1994-1995.
2. Chairman Dept. of Math. , El-Quds Univ., Palestine, 1979-1980.
3. Chairman Dept. of Math & Computer Science, Teachers College of Education, Ibri, Sultanate of Oman.
4. Member of Council of Faculty of Science, Univ. of Jordan, several terms, over five years.
5. Member of Council of Univ. of Jordan, 1992-1993
6. Member of Council of Univ. of Amman, 1993-1994.
7. Member of advisory committee for the president of the Univ. of Jordan, 1992-1993.
8. Member of the research and high studies committees. Faculty of Science Univ. of Jordan.
9. A referee for the promotion of over ten staff members in different Arab universities for the ranks of Professor and Associate Prof. in Math.
10. I refereed over 20 research papers in Maths. For publications in several Arab journals.
11. I was in the examination committees for over 50 master students in Maths. At the Univ. of Jordan.
12. I attended over 15 conferences and seminars about Maths, in several Arab and foreign countries.
13. Member of the American Math. Soc. and member of the Jordanian Association of Math Sciences.
14. I participated in many university committees such as plan committee. Improvement of teaching committee and library committee.

Other  
Experiences  
and  
Participations

1. I was a member of the Jordan national team for the improvement of teaching Math, and its curricula.
2. I participated in establishing the faculty of science. El-Quds University, Palestine.
3. I participated in training Maths, teachers in Jordan and UAE.

Thesis  
Supervised at  
Masters Level

1. The equivariant surgery on manifolds and its application to classify PL involutions of Klein bottle. 1979.
2. PL involutions of compact bordered surfaces. 1984.
3. Cardinal and ordinal numbers and related counterexamples in topology. 1985.
4. Continuity between supratopological spaces. 1988.
5. On Stone-Cech compactifications. 1989.
6. On semiregularization topology, 1991.
7. Topology on lattices. 1991.
8. On the fundamental group of orbit spaces. 1992.
9. Normed vector spaces. 1993.
10. On F and P spaces, 1993.

Courses  
Taught

- B.Sc. Level      Calculus courses. Linear Algebra. Ordinary differential equations. Foundations of Math., Euclidean and non-Euclidean geometry. Real and Complex analysis courses. Methods of Statistics Topology Algebra. Number theory and Applied Math.
- M. Sc. Level      General topology Algebraic topology. Real analysis. Complex analysis and Algebra.
- Ph.D. Level      General topology and Algebraic topology.

Research

1. On Pseudocompactness of Hyperspaces, Q. and A. in General Top. 16 No.1 (1998), 67-71.
2. A sufficient condition for a hyperspace to be Pseudo compact, Q. and A. in General Top. 16 No.2 (1998). 2/3 - 2/7.
3. Hyperspaces of P-spaces and extremely disconnected spaces, The forth International Jordanian Mathematics Conference, Aug. 24-26 1998.
4. Some results on Pseudocompactness of Hyperspaces and Product spaces, The forth International Jordanian Mathematics Conference, Aug. 24-26 1998.
5. Cyclic actions on some Klein bottle bundles over  $S^1$ , Periodica Mathematica Hungarica. 26(1993). 7-14.
6. PL involutions on the nonorientable 3-dim. Flat space forms, Ain Shams Sci. Bull. 29 (part A)(1992)3-18.
7. Alternate definitions of Br-complete topological vector spaces. Bull. Faculty of

- Sci, Alexandria Univ. (1992).
8.  $Z_n$ -actions on some Klein bottle bundles over  $S^1$ , proc. First Jordanian. Math. Conference, (1991).31-41.
  9. Characterization of pure ideals in  $C(X)$ , J. Fac. Sci. UAE Univ. 3(1991). 17-23 (With H. El-Ezeh).
  10. On finite group actions on the solid Klein bottle. Qatar Univ. Sci. Bull.9 (1989) 11-16.
  11. PL involutions on some nonorientable 3 dim. Manifolds. Dirasat. Natural Sci. The Univ. of Jordan research J.,15(1988). 234-237.
  12. On cyclic group actions of even order on the three dimensional torus. Bull. Austral Math. Soc. 37(1988). 189-196.
  13. Some Properties of the ring of continues functions. Arch. Math. (Basel). 51(1988). 60-64 (with H. El-Ezeh abd D. Hussein).
  14. On the involutions of closed surfaces. Arch. Math. (Basel). 46(1986). 179-183.
  15. Generalized  $L(f)$  spaces. Canad. J. Math. 27(1985), 700-709. (With D. Hussain and I. Qumsieh).
  16.  $Z_n$  actions on the twisted Klein bottle bundle over  $S^1$ . Dirasat. Natural Sci., the Univ. of Jordan research J. 10(1983). 7-15.
  17. PL involutions on the twisted Klein bottle bundle over  $S^1$  with a two dimension fixed point set component. Iraqi J. Sci. (1981). 631-637.
  18. PL involutions on  $K \times S^1$  with a two-dimensional fixed-point set component. Hustone J. Math. 7(1981). 531-535.
  19. PL involutions of  $K \times S^1$ , Arabian J. Sci. Engineering. 5(1980). 107-111.
  20. PL involutions Of the Klein bottle. Iraqi J. Sci., 21(1980). 251-258 (with F. Abi Diak).

#### كتب

1. مفاهيم الرياضيات في الصفوف الأربعة الأولى، وزارة التربية و التعليم اليمنية 1993م (بالاشتراك مع أ.د. محمد أبو صالح، أ.د. عبد الرحمن مقبل).
2. الهندسة الاقليدية. جامعة القدس المفتوحة 1997م (بالاشتراك مع أ.د. حسن العزة).
3. ساهمت في ترجمة كتاب التفاضل و التكامل لسفوكاوسكي الذي نشره مجمع اللغة العربية الأردني سنة 1980م.
4. ساهمت في تأليف أربعة كتب مدرسية للرياضيات في المرحلة الثانويةنشرتها وزارة التربية و التعليم الأردنية، استخدمت للتدريس لأكثر من عشرين عاما

في المرحلة الثانوية.

5. التبولوجيا العامة (لطلبة الرياضيات) 2002م.