Curriculum Vitae

Dr Faryad Ali
Professor of Mathematics
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Education and Qualifications

- **Ph. D. (Mathematics)**, University of Natal, Pietermaritzburg, South Africa,2001
  Dissertation: *Fischer-Clifford theory for split and non-split group extensions*
  Advisor: Professor J. Moori.

- **M. Phil. (Mathematics),** Quaid-i-Azam University, Islamabad, Pakistan, 1990
  Dissertation: *Fixed point theorems for vector lattices*
  Advisor: Professor I. Beg

- **M. Sc. (Mathematics),** University of the Punjab, Lahore, Pakistan, 1988

- **B. Sc.,** Govt. College Lahore, Pakistan, 1985

Positions Held (Summary)

- October 2008 – Present, *Associate Professor*, Department of Mathematics and Statistics, College of Sciences, Al-Imam University, Riyadh, Saudi Arabia

- August 2007 – September 2008, *Assistant Professor*, Department of Mathematics, College of Sciences, Al-Imam University, Riyadh, Saudi Arabia

- August 2003 – August 2007, *Assistant Professor*, Department of Mathematics, King Khalid University, Abha, Saudi Arabia

- January 2003 - August 2003, *Assistant Professor*, Department of Mathematics, Lahore University of Management Sciences (LUMS), Lahore, Pakistan.

- June 2002 – January 2003, *Lecturer*, Quaid-i-Azam University, Islamabad, Pakistan

Teaching Experience

I have taught various courses at under-graduate and graduate levels in Saudi Arabia, Pakistan and United Arab Emirates.

- **Foundation Courses:** Foundation Mathematics (Math 001 & Math 002; College Algebra; Finite mathematics; Pre-Calculus.

- **Graduate Courses:** Modern Algebra; Group Theory; Linear Algebra; Number Theory; Graph Theory; Calculus -I & II; Applied Abstract Algebra; Discrete Mathematics; Numerical Methods; Computational Techniques; Differential and Integral Calculus for Engineers; Calculus for Life Sciences.

- **Postgraduate Courses:** Group Representation Theory, Nilpotent & Soluble Groups, Advanced Linear Algebra.

Current Research Interests

- Computational Group Theory and Computer Algebra
    - Representation Theory of Finite Simple Groups
    - Computer Algebra
    - Fischer-Clifford Theory and Group Extensions
    - Generations and Ranks for the Sporadic Simple Groups.
- Units in Integral Group Rings
- Codes and designs from sporadic simple groups
- Fuzzy groups

Publications (Selected Only)

1. **F. Ali,** On the ranks of Fi_{22}, *Quaestiones Mathematicae***, 37** (2014), 1--10**.**

2. **F. Ali** and J. Moori, Fischer-Clifford matrices for the group extension, 2^6:S_8, *Hacettepe Journal of Mathematics and Statistics*, **43** (2) (2014), 153 – 171.

3. **F. Ali** and M. A. F. Ibrahim, On the simple sporadic group He generated by the (2,3,t) generators, *Bulletin of the Malaysian Mathematical Sciences Society*, **35** (3), (2012), 745--753.

4. F. Ali and J. Moori, The Fischer-Clifford matrices and character table of a maximal subgroup of Fi_{24}, *Algebra Colloquium***, 17** (2010), 389--414.

5. F. Ali and Jamshid Moori, On the ranks of Janko groups J_1, J_2, J_3 and J_4, *Quaestiones Mathematicae*, **31 (**2008), 37--44.

6. F. Ali and Jamshid Moori, The Fischer-Clifford matrices of the non-split group extension $2^6 : U_4(2)$, *Quaestiones Mathematicae*, **31** (2008), 27-36.

7. F. Ali, On the ranks of O'N and Ly, *Discrete Applied Mathematics*, 155 (2007), no. 3, 394–399

8. F. Ali, The Fischer-Clifford matrices of a maximal subgroup of the sporadic simple group of Held, *Algebra Colloquium*, 14 (2007), no. 1, 135–142.

9. F. Ali and M. A. F. Ibrahim, On the ranks of HS and McL, *Utilitas Mathematica*, 70 (2006), 187–195.

10. F. Ali and M. A. F. Ibrahim, On the ranks of Conway groups *Co*2 and *Co*3, Journal of Algebra and Its Applications, 4 (2005), no. 5, 557–565.

11. F. Ali and M. A .F. Ibrahim, On the ranks of Conway group *Co*1, *Proceedings of the Japan Academy, Series A: Mathematical Sciences*, **81** (2005), no. 6, 95–98.

12. F. Ali and J. Moori, Fischer-Clifford matrices and character table of the group 2^7:$Sp_6(2)$, *International Journal of Mathematics, Game Theory and Algebra*, **14** (2004), no. 2, 101–121.

13. F. Ali and J. Moori, The Fischer-Clifford matrices and character table of the group 2^8:$Sp_8(2)$, *International Journal of Mathematics, Game Theory and Algebra*, **14** (2004), no. 2, 123–135.

14. F. Ali and J. Moori, The Fischer-Clifford matrices of a maximal subgroup of Fi'_{24}, *Representation Theory (American Mathematical Society)*, **7** (2003), 300– 321.

15. I. Beg, F. Ali and T. Minhas, Fixed point theorems for 2-metric spaces, Research Seminar on Fixed Point Theory, 3, Babes-Bolyai Univ., Cluj-Napoca, (1992), 7–17.

16. I. Beg, A. Azam, F. Ali and T. Minhas, Some fixed point theorems in convex metric spaces, *Rend. Circ. Mat. Palermo* (2) 40 (1991), no. 2, 307–315.

17. F. Ali and J. Moori, Fischer-Clifford Matrices and the Character Table of a Maximal Subgroup of Fi_{24}, *University of Birmingham, Department of Mathematics and Statistics, United Kingdom*. Preprint No. 26 (2003), 1-35.

Contributions to the *Computer Algebra System* GAP-*Groups, Algorithms and Programming*

18. Character table of the non-split extension $3^7.O_7(3):2$, as a maximal subgroup of *Fi*24, Incorporated into the system GAP, The GAP Group, GAP – Groups, Algorithms, and Programming, Version 4.3; 2002, (http://www.gap-system.org).

19. Character Table of the group $2^6:S_8$, as a subgroup of Fi_{24}, Incorporated into the system GAP, The GAP Group, GAP – Groups, Algorithms, and Programming, Version 4.3; 2002.

20. Character table of the group $2^8:Sp_6(2)$, Incorporated into the system GAP, The GAP Group, GAP – Groups, Algorithms, and Programming, Version 4.2; 2001.

Research Projects

Research Project In Progress

- *Involution generating sets for the largest Janko group* J_4, Deanship of Academic Research, Project No. 331208, Al-Imam University, Saudi Arabia. (Principal Investigator)

Research Projects Completed

- *(2011) The character table of the group extension* $2^{14}.U_7(2)$, Deanery of Academic Research, Project No. 003(30), Al-Imam University, Saudi Arabia. (Principal Investigator)

- *(2011) (2,3,t)-generations of the sporadic simple groups Suz, Ru and O'N,* Deanery of Academic Research, Project No: 09(30), Al-Imam University, Saudi Arabia. (Co-Investigator)

- (2008-2010), *On the conjugate generations of Fischer groups* Fi_{22} *and* Fi_{23}, Project No. 003(28), Al-Imam University, Saudi Arabia. (Principal Investigator)

- (2008-2010), *(2, 3, t)-generations of the Conway groups* Co_1, Co_2 *and* Co_3, Project No. 004(28), Al-Imam University, Saudi Arabia. (Co-Investigator)

- (2006 - 2007), *On the generation of Tits simple group and Harada-Norton group*, Project No. 244-44, King Khalid University, Saudi Arabia.

12. Honours and Awards

External Examiner:

I have examined following three PhD thesis as external examiner:

1.	Name:	Abraham Love Prins
	Degree:	PhD (February 2012)
	University:	University of Western Cape, South Africa
	Title:	Fischer-Clifford matrices and character tables of inertia groups of maximal subgroups of finite simple groups of extension type
2.	Name:	ABM Basheer
	Degree:	PhD (June 2012)
	University:	University of Kwa-Zulu Natal, Pietermaritzburg, South Africa
	Title:	Clifford-Fischer theory applied to certain groups associated with symplectic, unitary and Thompson groups
3.	Name:	Lucy Chikmai
	Degree:	PhD (January 2013)
	University:	University of Kwa-Zulu Natal, Durban, South Africa
	Title:	Linear Codes Obtained from 2-modular Representations of Some Finite Simple Groups

13. Professional Memberships

- Member, American Mathematical Society
- Life Member, Punjab Mathematical Society, Lahore
- Member, London Mathematical Society (1994)
- Member, Pakistan Mathematical Society