




## Faculty Details proforma for DU Web-site

Title	<b>Professor</b>	First Name	TEJ	Last Name	SINGH	Photograph
Designation		PROFESSOR				
Department		MATHEMATICS				
Address (Campus)		Room No. 06, Faculty of Mathematical Sciences, University of Delhi, Delhi-110007				
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<b>Educational Qualifications</b>						
DEGREE		Institution		Year	Details	
<b>D. Phil.</b>		University of Allahabad, Allahabad		1983	Converse of some theorems about orbit spaces and the Conner conjecture modulo some Serre classes	
<b>M. Sc.</b>		University of Delhi, Delhi		1973	Mathematics	
<b>B. Sc.</b>		University of Gorakhpur, Gorakhpur		1971	Physics, Chemistry, Mathematics	
<b>Career Profile</b>						
Institution		Designation		Duration		Role
University of Delhi, Delhi		<b>Professor</b>		December 2001 -- Present		Post Graduate Teaching and Research
		Reader		December 1988 -- December 2001		
University of Allahabad, Allahabad.		Lecturer		January 1983 – December 1988		Undergraduate and Post Graduate Teaching and Research
University of Missouri, St. Louis, U.S.A.		Visiting Assistant Professor		January -- May 1988		Undergraduate Teaching and Research
Atarra P.G. College, Atarra.		Lecturer		November 1974 – January 1983		Undergraduate and Post Graduate Teaching, and Research
<b>Administrative Experience</b>						
Organisation / Institution			Duration		Role	
University of Delhi, Delhi-7			10 <sup>th</sup> October 2008 - 21 <sup>st</sup> July 2009		<b>Head</b> , Department of Mathematics	
			22 <sup>nd</sup> July 2012 - 19 <sup>th</sup> December 2012		<b>Dean</b> , Faculty of Mathematical Sciences, and <b>Head</b> , Department of Mathematics	

Research Interests / Specialization

**ALGEBRAIC TOPOLOGY (Subfield:Transformation Groups)**

Teaching Experience ( Subjects/Courses Taught)

I have experience of more than forty years' of teaching Post-Graduate classes. During this period, I have given courses in Algebraic Topology, Point-set Topology, Field Theory, Module Theory, Representation of Finite Groups, and Real Analysis at different universities/colleges. In the first fourteen years of my teaching career, I have also taught Algebra, Calculus, Geometry and Linear Algebra to the Under-Graduate students.

Research Guidance

Two students have received Ph. D. degree and another four students M. Phil. Degree under my supervision. Presently, I have been guiding two students for Ph. D. degree.

Publications Profile

**Research Publications**

In Indexed/ Peer Reviewed Journals

1. "On an extension of localization theorem and generalized Conner conjecture," (with S. Deo and R. Shukla) Trans. Amer. Math. Soc. 269 (1982), 395 - 402; MR 83 a: 57051.
2. "On the converse of some theorems about orbit spaces," (with S. Deo) J. London Math. Soc. 25 (1982), 162 - 170; MR 83 k: 54039.
3. "Non existence of odd periodic maps on certain spaces without fixed points," Bull. Austral. Math. Soc. 32 (1985), 389 - 397; Zbl. Math. 572 Mai 1986: 57020.
4. "The eigenvalues of the endomorphisms induced in cohomology by a self equivariant map," Proc. Math. Soc. B.H.U. vol. 2 (1986), 99 - 101; MR 89e : 57049.
5. " $Z_p$ -action on spaces of cohomology type  $(a, 0)$ ," (with R. Dotzel) Proc. Amer. Math. Soc. 113 (1991), 875 - 878; MR 92 b: 57046.
6. "Cohomology ring of the orbit spaces of certain free  $Z_p$ - actions," (with R. Dotzel) Proc. Amer. Math. Soc. 123 (1995), 3581 - 3585; MR 96a : 57082.
7. "Some local properties of fuzzy topological groups," (with P. Jha) Bull. Cal. Math. Soc. 87 (1995), 441-448, MR 97d: 54010.
8. "Fuzzy topological groups," (with P. Jha) Bull. Cal. Math. Soc. 91 (1999), 351 – 358, MR: 2001 k 22005.
9. "The cohomology rings of the orbit spaces of free transformation groups of the product of two spheres," (with R. Dotzel and S. Tripathi) Proc. Amer. Math. Soc. 129 (2001), 921-930, MR: 2001 f 57037.
10. "On the cohomology of orbit space of free  $Z_p$ -actions on lens spaces," (with H. K. Singh) Proc. Indian Acad. Sci. (Math. Sciences) 117 (2007) 287-292.
11. "Fixed point free involutions on cohomology projective spaces," (with H.K.Singh) Indian J. Pure and

Applied Math. 39(32) (2008) 285-291.

12. "On  $Z_2$  and  $S^1$  free actions on spaces of cohomology type (a,b)," (with Pedro L.Q. Pergher, H.K.Singh) Houston Journal of Math. 36 (2010) 137-146.
13. "The cohomology of orbit spaces of certain free circle group actions," (with H.K. Singh) Proc. Indian Acad. Sci. (Math. Sciences) 122 (2012) 79-86.
14. "Circle group action on the product of two projective spaces," (with J. Kaur and H.K. Singh) Topology Proceedings 48 (2016) 163-172.
15. "A Borsuk–Ulam type theorem for the product of a projective space and 3-sphere" (with S. K. Singh, H. K. Singh) Topology and its Applications 225 (2017) 112–129.
16. "Borsuk-Ulam Theorems and Their Parametrized Versions for  $FP^m \times S^3$ " (with S. K. Singh, and H. K. Singh), Bulletin of the Brazilian Mathematical Society, New Series (2017) DOI 10.1007/s00574-017-0040-1.

### **Books / Monographs**

Year of Publication	Title	Publisher	Co-Author
2013	Elements of Topology	Taylor and Francis, USA	None

### **Excerpts of reviews on the book**



PARTICIPATE. INVESTIGATE. EDUCATE.

The overall tone and level of sophistication in this book is roughly comparable to that of Munkres, and is considerably higher than in Simmons' text. The overall writing style is, however, sufficiently clear that there is no question of the suitability of (at least much of) this text for undergraduates. The pedagogical value of the book is also enhanced by the presence of quite a number of exercises of varying levels of difficulty (solutions to which are not provided), and also a substantial number of detailed examples in the text itself. This text

presents a considerable amount of material in a clear and accessible way, and should be carefully considered for textbook adoption by anybody teaching a course in point-set topology.

[Reviewed by Mark Hunacek, on 11/19/2013]

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[Singh, Tej Bahadur\(6-DELHI\)](#)

**Elements of topology.** *CRC Press, Boca Raton, FL, 2013. xxii+530 pp.* ISBN: 978-1-4398-7195-9

The book under review covers in an introductory way the most usual topics in general topology as well as other less standard ones including some initial topics of algebraic topology like the fundamental group and covering spaces. The book is suitable for self-study and as a textbook for a good course in general topology. I really enjoyed reading the book and I will use it in my future courses. I highly recommend this textbook because of its good didactic presentation of the material as well as the wide variety of topics studied.

This book deserves a warm welcome on the grounds of both design and execution.

Reviewed by [Fernando Hernández-Hernández](#)

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Singh, Tej Bahadur \* 1273.54001

Elements of topology. Boca Raton, FL: CRC Press (ISBN 978-1-4398 7195-9/hbk). xxi, 530 p. \$ 63.99 (2013).

The book under review provides an introduction to the basics of general topology

and (nonhomological) algebraic topology. Each section ends with a carefully composed list of related exercises, and the entire text is interspersed with numerous instructive, directly related examples and counterexamples as well as with many luminating figures and diagrams. Together with the utmost lucid, detailed and didactically well-balanced presentation of the material, these special features make the book a suitable source for self-study, on the one hand, and for a profound course in topology on the other. Both students and instructors can profit a great deal from this excellent primer, which shows the author's rich teaching experience just as much as his expository skills throughout the book.

Reviewer: Werner Kleinert (Berlin)