



## Faculty Details Proforma



Title	Dr.	First Name	Sandeep	Last Name	Kumar	Photograph
Designation	Assistant Professor					
Address	Gurgaon, Haryana					
Date of Birth						
Phone No Office						
Mobile						
Email	sandeep_kumar@sbs.du.ac.in					
Web-Page	<a href="https://sites.google.com/sbs.du.ac.in/sandeepkumar/">https://sites.google.com/sbs.du.ac.in/sandeepkumar/</a>					
<b>Educational Qualifications</b>						
Degree	Institution				Year	
B.A. Hons. (Maths)	Rajdhani College (University of Delhi)				2006	
M.Sc, Mathematics	IIT Delhi				2008	
M.Tech Computer Applications	IIT, Delhi				2010	
Ph.D.	IIIT Delhi				2022	
<b>Career Profile</b>						
Assistant Professor, Shaheed Bhagat Singh College (University of Delhi) – June 2015 Till now						
Assistant Professor (Adhoc), University of Delhi – Jan 2012 to June 2015						
Software Associate, Strand Life Science, Bangalore – July 2010 to Jan 2012						
<b>Areas of Interest / Specialization</b>						
Machine Learning, Cryptography						
<b>Papers Taught</b>						
Cryptography and Network Security, Number Theory, Discrete Mathematics, C Language, C++ Language, Computer Algebra System, Latex and HTML, Python, Numerical Methods, Real Analysis, Group Theory, Ring Theory, Linear Algebra, Differential Equations, Probability and Statistics, Complex Analysis, Calculus.						
<b>Research Guidance</b>						
<b>PhD scholars</b>						
<b>Under Supervision</b>		<b>Submitted</b>			<b>Awarded</b>	
<b>M.Phil Scholars</b>						

Under Supervision		Submitted		Awarded			
<b>M.A. Dissertations</b>							
Under Supervision			Awarded				
<b>Publications Profile</b>							
<b>Books</b>							
Title	ISBN/Publisher/Link	Indexed Scopus etc if any	Year				
Latex and HTML	978-81-928184-6-7 Vardhman Publications	-	2016				
Graph Theory	978-81-928184-4-3 Vardhman Publications	-	2015				
Practical using Mathematica for Calculus-I	978-81-928184-3-6 Vardhman Publications	-	2014				
Practical using Mathematica for Numerical Methods and Analysis - II	978-81-928184-2-9 Vardhman Publications	-	2014				
<b>Research Publications</b>							
Article Name	Publication Type (UGC Care/	Journal Name	ISSN No	Volume	Year	URL	DOI

	<b>Scopus/ Web of science etc)</b>						
Will a tropical cyclone make landfall?	Scopus	<i>Neural Computing and Applications</i>	0941-0643	35	2022	<a href="https://link.springer.com/article/10.1007/s00521-022-07996-7">https://link.springer.com/article/10.1007/s00521-022-07996-7</a>	<a href="https://doi.org/10.1007/s00521-022-07996-7">https://doi.org/10.1007/s00521-022-07996-7</a>
TanhSoft—dynamic trainable activation functions for faster learning and better performance	Scopus	<i>IEEE Access</i>	2169-3536	9	2021	<a href="https://ieeexplore.ieee.org/document/9514829">https://ieeexplore.ieee.org/document/9514829</a>	<a href="https://doi.org/10.1109/ACCESS.2021.3105355">10.1109/ACCESS.2021.3105355</a>
<b>Publications other than journal articles</b>							
Title of Publication	Type of Publication	Publisher	Role in Publication	ISB N Number	Year	URL	Level
Prediction of landfall intensity, location, and time of a tropical cyclone	Conference Paper	AAAI Conference on Artificial Intelligence	First Author	-	2021	<a href="https://cdn.aaai.org/ojs/17741/17741-13-21235-1-2-20210518.pdf">https://cdn.aaai.org/ojs/17741/17741-13-21235-1-2-20210518.pdf</a>	International Conference. Ranked – 33 (in <a href="https://scholar.google.com/citations?view_op=top_ven">https://scholar.google.com/citations?view_op=top_ven</a>

							<a href="#">ues )</a>
Predicting landfall's location and time of a tropical cyclone using reanalysis data	Conference Paper	Artificial Neural Networks and Machine Learning Conference	Co-author	978-3-030-86380-7	2021	<a href="https://doi.org/10.1007/978-3-030-86380-7_30">https://doi.org/10.1007/978-3-030-86380-7_30</a>	International Conference.
Track prediction of tropical cyclones using long short-term memory network	Conference Paper	IEEE 11th Annual Computing and Communication Workshop and Conference	First Author	978-1-6654-1490-6	2021	<a href="https://ieeexplore.ieee.org/document/9376027">https://ieeexplore.ieee.org/document/9376027</a>	International Conference
Smooth maximum unit: Smooth activation function for deep networks using smoothing maximum technique.	Conference Paper	<i>IEEE/CVF Conference on Computer Vision and Pattern Recognition Conference</i>	Co-author	978-1-6654-6946-3	2022	<a href="https://ieeexplore.ieee.org/document/9878772">https://ieeexplore.ieee.org/document/9878772</a>	International Conference. Ranked – 04 (in <a href="https://scholar.google.com/citations?view_op=top_venues">https://scholar.google.com/citations?view_op=top_venues</a> )
ErfAct and Pserf: Non-monotonic Smooth Trainable	Conference Paper	AAAI Conference on Artificial Intelligence	Co-author	-	2022	10.1609/aaai.v36i6.20557	International Conference. Ranked – 33 (in <a href="https://scholar">https://scholar</a>

Activation Functions							<a href="https://www.google.com/citations?view_op=top_venues">.google.com/citations?view_op=top_venues</a> )
Revocable identity-based encryption from codes with rank metric.	Conference Paper	<i>Cryptographer's Track at the RSA Conference</i>	Co-author	978-3-319-76952-3	2018	<a href="https://doi.org/10.1007/978-3-319-76953-0_23">https://doi.org/10.1007/978-3-319-76953-0_23</a>	International Conference
Eis-efficient and trainable activation functions for better accuracy and performance.	Conference paper	Artificial Neural Networks and Machine Learning Conference	Co-author	978-3-030-86380-7	2021	<a href="https://doi.org/10.1007/978-3-030-86340-1_21">https://doi.org/10.1007/978-3-030-86340-1_21</a>	International Conference.

#### Conference/ workshop Organized

- Member of organization committee - National Workshop on Latex and HTML, 2016.

#### Awards and Distinctions

- 21 All India Rank in JAM (Joint admission test for admission in M.Sc at IIT's)
- 111 All India Rank in GATE.

#### Association with Professional Bodies

Life time member of Cryptology Research Society of India (CRSI).

## Other Activities

### Administrative Activities:

- Member Research Cell, 2023.
- Convenor Admission Committee - OBC, 2022.
- Convenor Admission Committee - OBC, 2021.
- Teacher-Incharge of the department, 2020-21.
- Convenor NSS committee of staff council, 2021-23.
- Convener of Computerization committee of staff council for the sessions 2016-17 and 2017-18.
- Member of Attendance committee of staff council for the session 2017-18.
- Member of Website committee of staff council for the session 2016-17 and 2017 -18.
- Member of NSS committee of staff council for the session 2015- 16, 2017-18 and 2018-19.
- Member of organizing committee of International Conference on Applicable Analysis, February 08-11, 2017.
- Member of organizing committee of National Workshop on Latex and Website Designing, August 11-12, 2016.
- Member of Departmental Admission committee for the session 2015-16, 2016-17 and 2017-18.
- Convener of Departmental Computerization committee for the session 2016-17.
- Member of Departmental NAAC committee during 2016-17.

### Invited Talks/Lectures

- Two lectures on Applications of Mathematica at one day workshop conducted by MMH College, Ghaziabad, September 20, 2018.
- Invited talk on Cryptography: A career option for Mathematics students conducted by Satyawati College, University of Delhi, August 02, 2018.
- Three lectures at the Faculty Development Programme, Mathematica: A tool fo computational Analysis conducted by Ramjas College, University of Delhi, March 10-11, 2018.
- Three Lectures at National Workshop on Latex and Website Designing conducted by Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi, August 11-12, 2016.
- Talk on Cryptography: A Career option for Mathematics Students at the seminar Career with Mathematics conducted by the Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi, November 10, 2017.