

## Bio-dataoftheInvestigator(s)

1.	Name	Prof. Ritu Sharma			
2.	DateofBirth(dd/mm/yyyy)	16-10-1968			
3.	Designation	Professor			
4.	Degreesconferred(beginwithBachelor'sdegree)				
	<b>Degree</b>	<b>Institutionconferringthedegree</b>	<b>Field(s)</b>	<b>Year</b>	
	B.E.	MBM Engineering College, Jodhpur Jai Narayan Vyas University, Jodhpur	Electronics and Communicatio n	1994	
	M.Tech.	MNIT Jaipur	Electronics and Communicatio n	2001	
	Ph.D.	MNIT Jaipur	Electronics and Communicatio n	2011	
5.	Research/trainingexperience(inchronologicalorder)				
	<b>Duration</b>	<b>Institution</b>	<b>Nameofworkdone</b>		
	08-08-1994 to 31-03-1995	Modi Olivetti	Work Controller		
	05-03-1999 to 31-08-2015	MNIT Jaipur	Assistant Professor		
	01-09-2015 to 14-05-2018	MNIT Jaipur	Assistant Professor		
	15-05-2018 to till date	MNIT Jaipur	Associate Professor		
6.	Major scientific fields of Interest	Antenna designing for various applications, RF and Microwave component designing and fabrication of flexible electronics, MEMS, Sensors			
7.	List of publications				
<b>Journal Papers in SCI/SCOPUS</b>					
<b>Level</b>	<b>Categ ory</b>	<b>Detail</b>	<b>Role</b>	<b>Total No. of Co- Auth</b>	<b>Status</b>

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2024						
Internati onal	SCIE	Study on-trap sensitivity on Single material Gate and Double material Gate Nano Ribbon FETS , Physica Scripta (IOS Press) Volume :99 / 8 / 2024 DOI: <a href="https://doi.org/10.1088/1402-4896/ad562d">10.1088/1402-4896/ad562d</a>	Co-Superv isor	4	Publis hed	
Internati onal	SCOP US	Design and Modal Analysis of Swastik-Shaped Flexible Piezoelectric Biomechanical Energy Harvester" , <b>Tuijin Jishu/ Journal of Propulsion Technology</b> (Tuijin Jishu Journal of Propulsion Technology) Volume :45 / 2984-2990 / 2024 DOI: <a href="https://propulsiontechjournal.com/index.php/journal/article/view/6394">https://propulsiontechjournal.com/index.php/journal/article/view/6394</a>	Main Superv isor	4	Publis hed	
Internati onal	SCIE	Investigation on electrical parameters between single and double material gate nanoribbon FETs including trap distributions" , <b>Materials Science and Engineering: B</b> (Elsevier) Volume :303 / 9 / 2024 DOI: <a href="https://doi.org/10.1016/j.mseb.2024.117326">https://doi.org/10.1016/j.mseb.2024.117326</a>	Co-Superv isor	5	Publis hed	
Internati onal	SCIE	Optimized Cluster-Based Cooperative Spectrum Sensing Over Weibull, Nakagami, Rician, and Rayleigh Fading Channels" , <b>IETE Journal of Research</b> (IETE) Volume :10 / 17 / 2024 DOI: <a href="https://doi.org/10.1080/03772063.2024.2305836">https://doi.org/10.1080/03772063.2024.2305836</a>	Main Superv isor	4	Publis hed	
Internati onal	SCIE	Multi-Wall Carbon Nanotubes/Polydimethylsiloxane Composites based Dry Electrodes for Bio-Signal Detection" , <b>IEEE Journal on Flexible Electronics</b> (IEEE) Volume :3 / 7 / 2024 DOI: <a href="https://doi.org/10.1109/JFLEX.2024.3367648">DOI: 10.1109/JFLEX.2024.3367648</a>	Main Superv isor	5	Publis hed	
2023						
Internati onal	SCIE	Development of a multi-modal graphene nanoparticles (GNP)- Polydimethylsiloxane (PDMS) flexible sensor for human activity monitoring and health assessment" , <b>International Journal of Electrochemical Science</b> (Elsevier) Volume :18 / 9 / 2023 DOI: <a href="https://doi.org/10.1016/j.ijoes.2023.100236">https://doi.org/10.1016/j.ijoes.2023.100236</a>	Main Superv isor	4	Publis hed	
Internati onal	SCOP US	Effect of Dimensional Variation on the Performance of Pyramidal Proof-Mass Rectangular Two Beam Piezoelectric Energy Harvester" , <b>International Journal of Advances in Electronics and Computer Science</b> (International Journal of Advances in Electronics and Computer Science) Volume :10 / 27-32 / 2023 DOI: <a href="https://doi.org/10.1016/j.ijoes.2023.100236">IJAACS-IRAJ-DOIONLINE-19393</a>	Main Superv isor	3	Publis hed	
Internati onal	SCIE	Enhancing Throughput Over Varied Fading Channels for Cluster Based Cooperative Spectrum Sensing in Cognitive Wireless Networks"	Main Superv isor	3	Publis hed	

		, <b>International Journal of Wireless Information Networks</b> (Springer ) Volume :30 / 227-240 / 2023 DOI: <a href="https://doi.org/10.1007/s10776-023-00601-1">https://doi.org/10.1007/s10776-023-00601-1</a>	isor		
Internati onal	SCIE	Implementation and Optimization of CNTFET Based Ultra-Low Energy Delay Flip Flop Designs" , <b>Silicon</b> (Springer ) Volume :15 / / 2023 DOI: <a href="https://doi.org/10.1007/s12633-021-01085-5">https://doi.org/10.1007/s12633-021-01085-5</a>	Main Superv isor	2	Publis hed
<b>2022</b>					
Internati onal	SCOP US	Performance Investigation of Flexible UWB Antenna near Human Body for Wearable Appliances, <i>Progress In Electromagnetics Research B, Vol. 97, 131–147, 2022</i>	Co-Superv isor	3	Publis hed
Internati onal	SCI	Optimization of inter-fusion rule threshold for energy-efficient cluster-based cooperative spectrum sensing over Nakagami and Rician fading channels, <i>International Journal of Electronics (2022)</i>	Main Superv isor	2	Publis hed
Internati onal	SCI	Role of Silver Catalyst in Synthesis of Porous Si and Vertically Aligned Nanostructures With High Aspect Ratio Without Using Lithography, <i>Russian Journal of Physical Chemistry A, Vol. 96, Suppl. Issue 1, pp. S27-S30, 2022</i>	Main Superv isor	1	Publis hed
Internati onal	SCIE	Performance analysis of all optical-based quantum internet circuits, <i>Journal of Computational Electronics (2022) 21:1180–1188</i>	Main Superv isor	2	Publis hed
Internati onal	SCI	Performance enhancement of GaN/GaAs based hybrid multi-quantum well LED structures, <i>OPTOELECTRONICS AND ADVANCED MATERIALS – RAPID COMMUNICATIONS Vol. 16, No. 7-8, July-August 2022, p. 300 - 306</i>	Main Superv isor	1	Publis hed
Internati onal	SCI	Implementation and Optimization of CNTFET Based Ultra-Low Energy Delay Flip Flop Designs, <i>Silicon (2022)</i>	Main Superv isor	1	Publis hed
Internati onal	SCI	Design, modeling, and frequency domain analysis with parametric variation for fixed-guided vibrational piezoelectric energy harvesters, <i>Microprocessors and Microsystems 95 (2022) 104692</i>	Main Superv isor	4	Publis hed
Internati onal	SCI	Design, parametric analysis and comparison of fixed-guided two beam and four beam vibrational piezoelectric energy harvesters, <i>Microsystem Technologies (2022) 28:1203–</i>	Main Superv isor	4	Publis hed

		1212			
International	SCI	Joint Optimization of Fusion Rule Threshold and Transmission Power for Energy Efficient CSS in Cognitive Wireless Sensor Networks, <i>Wireless Personal Communications (2022) 123:2127</i>	Main Supervisor	1	Published
International	SCI	Fabrication of Fixed-Fixed Beam Type Piezoelectric Vibration Energy Harvester, <i>Silicon (2022) 14:5975–5982</i>	Main Supervisor	2	Published
<b>2021</b>					
International	SCI	Design and performance analysis of a deterministic iSWAP gate using a resonator as a coupler, <i>Journal of Optical Technology (2021) Vol. 88, No. 11</i>	Main Supervisor	1	Published
International	SCI	Effect of noise on the performance of deterministic CNOT gate for photonic Qubits, <i>Optical and Quantum Electronics (2021) 53:607</i>	Main Supervisor	1	Published
International	SCI	Design and analytical calculations of the width and arrangement of quantum well and barrier layers in GaN/AlGaN LED to enhance the performance, <i>Opto-Electronics Review 29 (2021) 141 -147</i>	Main Supervisor	1	Published
International	SCI	Design, Modeling and Parametric Analysis of Piezoelectric Energy Scavenger on Silicon Substrate as a Vibration Sensor, <i>Silicon (2021)</i>	Main Supervisor	4	Published
International	SCOPUS	The Effect of Thermal Annealing on Structural, Morphological and Optical Features of BaTiO <sub>3</sub> Thin Film Prepared by e-Beam PVD Technique, <i>Iranian Journal of Materials Science and Engineering, Vol. 18, Number 2, June 2021</i>	Main Supervisor	4	Published
International	SCI	Structural and microstructural analysis of spincoated PVDF thin films, <i>Ferroelectrics, (2021) 583:1, 151-161</i>	Main Supervisor	4	Published
International	SCI	Inter and Intra Fusion Schemes for Energy Efficient CB-CSS in Cognitive Wireless Networks, <i>International Journal of Electronics (2021) Volume 108, Issue 11</i>	Main Supervisor	4	Published
International	SCI	Synthesis and study of polyaniline/MWCNT composite for optoelectronic application, <i>Bull. Mater. Sci. (2021) 44:121</i>	Main Supervisor	2	Published
<b>2020</b>					
International	SCI	Enhancement in structural, morphological and	Main	5	Publis

onal		optical features of thermally annealed zinc oxide nanofilm, <i>Indian Journal of Pure &amp; Applied Physics Vol. 58, August 2020, pp. 642-648</i>	Supervisor		hed
International	SCOPUS	Optimized design of narrow spectral linewidth nonpolar m-plane InGaN/GaN micro-scale light-emitting diode, <i>Journal of Optics volume 49, pages397-402 (2020)</i>	Main Supervisor	1	Published
International	SCI	Fabrication process for very-low frequency operation of guided twobeam piezoelectric energy harvester, <i>Microsystem Technologies (2020) 26:2479-2486</i>	Main Supervisor	2	Published
<b>2019</b>					
International	SCI	Scalable Synthesis of Highly Conductive Graphene-Based Thin Film for Supercapacitor Application, <i>IEEE TRANSACTIONS ON NANOTECHNOLOGY, Volume 18, 2019</i>	Main Supervisor	3	Published
International	SCI	Fabrication and Comparison of Guided Two-Beam and Four-Beam Piezoelectric Energy Harvester For Low-Frequency Operation, <i>JOURNAL OF MICROELECTROMECHANICAL SYSTEMS, VOL. 28, NO. 3, JUNE 2019</i>	Main Supervisor	2	Published
International	SCI	Design Optimization in geometry of seismic mass of MEMS Based Cantilever Type Piezoelectric energy harvester for motor vibrations, <i>Indian Journal of Pure &amp; Applied Physics Vol. 57, August 2019, pp. 334-337</i>	Main Supervisor	2	Published
International	SCI	Energy efficient collaborative spectrum sensing with clustering of secondary users in cognitive radio networks, <i>IET Communications 2019, Vol. 13 Iss. 8, pp. 1101-1109</i>	Main Supervisor	1	Published
International	SCI	Cluster-based distributed cooperative spectrum sensing over Nakagami fading using diversity reception, <i>IET Networks, 2019, Vol. 8 Iss. 3, pp. 211-217</i>	Main Supervisor	1	Published
<b>2018</b>					
International	SCI	Optimised fusion rule in cluster-based energy-efficient CSS for cognitive radio networks, <i>International Journal of Electronics, Volume 106, 2019 - Issue 5, Pages 741-755</i>	Main Supervisor	1	Published
International	SCI	Fabrication and Sensitivity Analysis of Guided Beam Piezoelectric Energy Harvester, <i>IEEE TRANSACTIONS ON ELECTRON DEVICES,</i>	Main Supervisor	2	Published

		<i>VOL. 65, NO. 11, NOVEMBER 2018</i>			
International	SCI	Joint sensing time and fusion rule threshold optimization for energy efficient CSS in cognitive radio sensor networks, <i>International Journal of Communication Systems</i> , vol. 31, no. 18, 2018	Main Supervisor	1	Published
International	SCI	Fabrication and Characterization of Zinc Oxide/Multi-walled Carbon Nanotube Schottky Barrier Diodes, <i>Journal of ELECTRONIC MATERIALS</i> , Vol. 47, No. 5, 2018	Main Supervisor	1	Published
International	SCOPUS	Performance improvement of CSS over imperfect reporting using diversity reception in cognitive radio networks, <i>World Journal of Engineering</i> , Vol. 16 No. 1, pp. 87-93	Main Supervisor	1	Published
<b>2017</b>					
International	SCI	Dynamic characterization of fabricated guided two beam and four beam cantilever type MEMS based piezoelectric energy harvester having pyramidal shape seismic mass, <i>Microsystem Technologies (2017) 23:5947–5958</i>	Main Supervisor	2	Published
International	SCI	Design and development of guided four beam cantilever type MEMS based piezoelectric energy harvester, <i>Microsystem Technologies (2017) 23:1751–1759</i>	Main Supervisor	2	Published
International	SCI	Performance Evaluation of distributed CSS with clustering of secondary users over fading channels, <i>International Journal of Electronics Letters</i> , 2017	Main Supervisor	1	Published
International	SCOPUS	Performance comparison of centralized and distributed CSS over fading channels in cognitive radio, <i>Cogent Engineering</i> , 2017, 4 (1355599)	Main Supervisor	1	Published
<b>Conference Paper Indexed</b>					
<b>Level</b>	<b>Category</b>	<b>Detail</b>	<b>Role</b>	<b>Total No. of Co-Authors</b>	
<b>2023</b>					

International	SCOPUS Indexed	Designing of Polarization Insensitive Microwave Absorber for WLAN Application”, <i>Wireless, Antenna &amp; Microwave Symposium (WAMS 2023)</i>	Main Supervisor	1	Accepted (Publication under process)
International	SCOPUS Indexed	Button Sized Wearable Antenna Design for ISM Frequency Bands”, <i>Wireless, Antenna &amp; Microwave Symposium (WAMS 2023)</i>	Main Supervisor	2	Accepted (Publication under process)
<b>2022</b>					
International	SCOPUS Indexed	Performance evaluation of throughput for CB-CSS in cognitive radio network over Hoyt fading channel, <i>2<sup>nd</sup> International Conference on Computational Electronics for Wireless Communications (ICCWC-2022)</i>	Main Supervisor	2	Accepted (Publication under process)
International	SCOPUS Indexed	Design and Analysis of Compact Dual Band Antenna for Body Area Network Applications, <i>2<sup>nd</sup> International Conference on Computational Electronics for Wireless Communications (ICCWC-2022)</i>	Co-Supervisor	3	Accepted (Publication under process)
International	SCOPUS Indexed	Fusion Rule Optimisation for Energy Efficient Cluster-Based Cooperative Spectrum Sensing, <i>Emerging Electronics and Automation, Lecture Notes in Electrical Engineering 937, Springer, Singapore</i>	Main Supervisor	4	Published
International	SCOPUS Indexed	Investigations on variations of the number of QW layers on optical properties of GaN/AlGaIn based LEDs, <i>Proc. SPIE 11995, Physics and Simulation of Optoelectronic Devices XXX, 1199506 (4 March 2022)</i>	Main Supervisor	1	Published
International	SCOPUS Indexed	Deterministic Two Qubit iSWAP Gate Using a Resonator as Coupler, <i>Optical and Wireless Technologies (OWT-2020). 771, 253-258, Lecture Notes in Electrical Engineering, Springer, Singapore.</i>	Main Supervisor	1	Published

International	SCOPUS Indexed	Effect of Number of Users and Number of Clusters Using Distributed Cooperative Spectrum Sensing Over Hoyt Fading Channel, <i>Optical and Wireless Technologies (OWT-2020)</i> . 771, 349-358, <i>Lecture Notes in Electrical Engineering, Springer, Singapore.</i>	Main Supervisor	3	Published
International	SCOPUS Indexed	1D Photonic Crystal Waveguide Based Biosensor for Skin Cancer Detection Application, <i>Optical and Wireless Technologies (OWT-2020)</i> . 771, 443-450, <i>Lecture Notes in Electrical Engineering, Springer, Singapore.</i>	Main Supervisor	2	Published
International	SCOPUS Indexed	Design and Simulation of a Photonic Crystal-Based 2-D Octagonal-Shaped Optical Drop Filter, <i>Optical and Wireless Technologies (OWT-2020)</i> . 771, 457-464, <i>Lecture Notes in Electrical Engineering, Springer, Singapore.</i>	Main Supervisor	2	Published
International	SCOPUS Indexed	Optimization of Physical Parameters of Single-Beam Vibrational Piezoelectric Energy Harvester, <i>Optical and Wireless Technologies (OWT-2020)</i> . 771, 585-593, <i>Lecture Notes in Electrical Engineering, Springer, Singapore.</i>	Main Supervisor	1	Published
International	SCOPUS Indexed	Amit Kumar Sharma, Ritu Sharma and Shishir Kumar Sharma, "Effect of noise on concurrence of compact photonic CNOT gate designed using universal cloner," <i>In 2<sup>nd</sup> International Conference on Intelligent Computing Techniques for Smart Energy Systems (ICTSES-2021)</i> <i>Lecture Notes in Electrical Engineering, vol 862. Springer, Singapore.</i>	Main Supervisor	2	Published
<b>2021</b>					

International	SCOPUS Indexed	Design and Simulation of Flower Shaped Flexible Wideband Antenna for WBAN Applications, <i>IEEE Indian Conference on Antennas and Propagation (InCAP), 2021, pp. 140-143</i>	Co-Supervisor	3	Published
International	SCOPUS Indexed	Model study of complex conductivity and permittivity of CNT/PANI composite (CPC) material for application of THz antenna, <i>Materials Today: Proceedings (2021), vol. 46, pp. 5833-5837</i>	Main Supervisor	2	Published
<b>2020</b>					
International	SCOPUS Indexed	Design and Simulation of Flexible Substrate based Wearable Antenna for WBAN Applications, <i>5<sup>th</sup> IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE), 2020, pp. 1-6</i>	Co-Supervisor	3	Published
International	SCOPUS Indexed	Implementation of 5-Block Convolutional Neural Network (CNN) for Saliency Improvement on Flying Object Detection in Videos, <i>3<sup>rd</sup> International Conference on Emerging Technologies in Computer Engineering: Machine Learning and Internet of Things (ICETCE-2020), 07-08 February 2020</i>	Main Supervisor	2	Published
International	SCOPUS Indexed	Cooperative Spectrum Sensing Over Weibull and Hoyt Fading Channels using Centralized and Distributed Schemes, <i>3<sup>rd</sup> International Conference on Emerging Technologies in Computer Engineering: Machine Learning and Internet of Things (ICETCE-2020), 07-08 February 2020</i>	Main Supervisor	3	Published
International	SCOPUS Indexed	Piezoelectric layer length and thickness variation effects on displacement, von-Mises stress and electric potential generated by cantilever type piezoelectric energy harvester, <i>Materials Today: Proceedings 30 (2020) 23–27</i>	Main Supervisor	2	Published

International	SCOPUS Indexed	Effect of seismic mass thickness on the resonance frequency of cantilever type piezoelectric energy harvester, <i>Materials Today: Proceedings 30 (2020) 88–92</i>	Main Supervisor	2	Published
International	SCOPUS Indexed	Design And Performance Analysis of MEMS-Based Fixed-Guided Four Beam (FG4B) Structure As A Piezoelectric Energy Harvester (PEH)". <i>In Academicsera – 607<sup>th</sup> International Conference on Electrical and Electronics Engineering (ICEEE) at New York , United States of America (2020) (Best Paper Award)</i>	Main Supervisor	4	Published
International	SCOPUS Indexed	Optimum Performance of Carbon Nanotube Field Effect Transistor Based Sense Amplifier D Flip Flop Circuits, <i>In International Conference on Intelligent Computing Techniques for Smart Energy Systems (ICTSES-2018). 607, 173-182, Lecture Notes in Electrical Engineering, Springer, Singapore (2020).</i>	Main Supervisor	1	Published
International	SCOPUS Indexed	Design and Performance Analysis of Different Structures of MEMS PVDF-Based Low-Frequency Piezoelectric Energy Harvester ". <i>In International Conference on Intelligent Computing Techniques for Smart Energy Systems (ICTSES-2018). 607, 173-182, Lecture Notes in Electrical Engineering, Springer, Singapore (2020).</i>	Main Supervisor	3	Published
International	SCOPUS Indexed	Design and Performance Analysis of Different Structures for Low-Frequency Piezoelectric Energy Harvester". <i>In 4<sup>th</sup> International Conference on Nanoelectronics, Circuits and Communication Systems (NCCS-2018). 642, 47-56, Lecture Notes in Electrical Engineering, Springer, Singapore (2020).</i>	Main Supervisor	3	Published
International	SCOPUS Indexed	Design and Analysis of Decagonal Photonic Crystal Fiber for Liquid Sensing, <i>Optical and Wireless Technologies 2018 . Lecture Notes in Electrical Engineering, vol 546.</i>	Main Supervisor	1	Published

		<i>Springer, Singapore.</i>			
<b>2019</b>					
International	SCOPUS Indexed	Analysis of Transmission Spectra of a Metal-Liquid Crystal-Metal Waveguide Structure With Different Metallic Layers International Conference on Optical and Wireless Technology (OWT-19)	Main Supervisor	1	Published
International	SCOPUS Indexed	Implementation of SAC-OCDMA System Using Generalized Codes Over FSO Channel International Conference on Optical and Wireless Technology (OWT-19)	Main Supervisor	1	Published
National	Proceedings	Centralised and Distributed Coperative Spectrum Sensing Over Fading Channel Advanced Communication and Technologies and Network 2019 / 2019	Main Supervisor	3	Published
National	Proceedings	Design and Performance Analysis of Single- Beam Piezoelectric Energy Harvester for Low Frequency Applications Advanced Communication and Technologies and Network 2019 / 2019	Main Supervisor	3	Published
<b>2018</b>					
International	SCOPUS Indexed	Performance comparison of hard and soft fusion Techniques for Energy Efficient CSS in Cognitive Radio, <i>2018 International Conference on Advanced Computation and Telecommunication (ICACAT), 2018, pp. 1-4</i>	Main Supervisor	1	Published
International	SCOPUS Indexed	Design and Study of a Photonic Crystal Fiber Biosensor Based on Surface Plasmon Resonance <i>International Conference on Optical and Wireless Communication Technology -2018, Springer at MNIT / 2018</i>	Main Supervisor	1	Published

International	SCOPUS Indexed	Effects of Different Shapes of Piezo-Acoustics Based Adaptive Glucose Sensing System (PABAGS) on Generated Pressure and Its Analysis / <i>International Conference on Engineering Vibration, Communication and Processing (ICoEVCI-2018) / 2018</i>	Main Supervisor	1	Published		
8.	List of ongoing/completed Research Projects including funding agency, title, duration, present status, funding amount.						
Title	Funding Agency	From	To	Amount in lakhs	Role	Total CoPIs	Status
Design, Fabrication and Performance Evaluation of Flexible Piezoelectric Biomedical Energy Harvester	SERB (Power Grant), New Delhi	10-Nov-2022	09-Nov-2025	53.97	PI	1	Ongoing
Blood Flow detection and Monitoring Using Sensory Data	RTU Kota TEQIP-III	22-06-2021	21-06-2022	2.40	Co-PI	2	Completed
Detection of Heavy Metals in Water by nanosensor electrodes	RTU Kota TEQIP-III	18-06-2021	17-06-2022	12.32	Co-PI	3	Completed
Bandgap optimization of CNT thin film in VI/IR range for application of optoelectronics devices and Optical Antenna	RTU Kota TEQIP-III	18-06-2021	17-06-2022	8.12	Co-PI	3	Completed
Design and development of MEMS based piezoelectric energy harvester	DRDO, New Delhi	13-11-2017	12-11-2021	23.65	PI	2	Completed
Design and Simulation of cantilever type MEMS based piezoelectric energy harvester	IITM Kanpur	01-06-2016	31-05-2018	2.00	PI	1	Completed
New Architectures of elliptical airhole photonic crystal fiber for ultra flattened dispersion	DST Rajasthan	15-05-2013	15-05-2016	1.60	PI	1	Completed

Urdu corpus handwritten text recognition	DST Rajasthan	11-03-2013	10-03-2016	8.00	Co-PI	2	Completed