


## STANDARD TEMPLATE OF FACULTY PROFILE FOR UPLOADING OF UNIVERSITY WEBSITE

Title	Dr.	First Name	KHYATI	Last Name	CHOPRA	
Designation		ASSISTANT PROFESSOR				
School /Dept. Name		USAR				
Address:		19, 3 <sup>rd</sup> Floor, Ram Vihar, Delhi-110092				
Phone No.	Office					
	Residence	(optional)				
	Mobile	9717276968				
Email	1. khyati.usar@ipu.ac.in			2. khyatichopra134@gmail.com		
Web Page (if any)	<a href="https://scholar.google.com/citations?user=7vAKHG4AAAAJ&amp;hl=en&amp;oi=ao">https://scholar.google.com/citations?user=7vAKHG4AAAAJ&amp;hl=en&amp;oi=ao</a>					
Subjects Taught	<ul style="list-style-type: none"> <li>• Wireless Communication, Internet of Things, Embedded System, Electrical Science, Electronic Devices and Circuits, Analog and Digital Communication and Computer Networks</li> </ul>					
Areas of Interest/ Specialization	<ul style="list-style-type: none"> <li>• Physical Layer Security</li> <li>• Cooperative Communication</li> <li>• Cognitive Radio Networks</li> <li>• Internet of Things</li> <li>• Game Theory.</li> </ul>					
Experience (in years)	Total					
	Industry	Six Months <ul style="list-style-type: none"> <li>• <b>RF Software Engineer</b> intern in the Cellular Standard team at <b>National Instruments (NI, R&amp;D), Bangalore, 2014.</b></li> </ul>				
	Teaching	5 Years 6 Months <ul style="list-style-type: none"> <li>• <b>Assistant Professor</b> in USAR, GGSIPU-EDC from November 9, <b>2022.</b></li> <li>• <b>DST INSPIRE FACULTY</b> in Department of Computer Science &amp; Engineering, SEST, Jamia Hamdard from July 20, <b>2020</b> to November 9, <b>2022.</b></li> <li>• <b>Assistant Professor</b> at <b>GD Goenka University</b> in Electronics and Electrical Department (DEEE), SOE from Aug 1, <b>2018</b> to July 17, <b>2020.</b></li> </ul>				

	Research	<p>4 Years (2014-2018)</p> <ul style="list-style-type: none"> <li>• <b>Ph.D.</b> from <b>Indian Institute of Technology, Delhi</b> on “<b>Wireless Security</b>”, under the supervision of <b>Prof. Ranjan Bose (Microsoft Chair Professor)</b>, co-guided by <b>Dr. Robin A. Gandhi</b> from University of Nebraska, Omaha, <b>United States</b>. The research work was in collaboration with <b>Prof. Anupam Joshi</b> from University of Maryland (<b>Director, UMBC Center for Cyber-Security</b>), Baltimore County, <b>United States</b>.</li> </ul>
Educational Qualifications	UG	B.Tech from IGDTUW (former IGIT, GGSIPU)
	PG	M.Tech from BITS PILANI
	Doctorate	Ph.D. from IIT DELHI
	Any other – Diploma in IPR	
Research Publications in Journals (last 5 years)	<p>13 Journal Publications</p> <ol style="list-style-type: none"> <li>1. <b>K. Chopra</b> and M. A. Alam, “Secrecy Performance Review for IoT-Based Cognitive Farming System”, <i>Recent Patents on Engineering</i>, May 2023. (<b>Scopus Indexed</b>)</li> <li>2. <b>K. Chopra</b> and M. A. Alam, “Intercept analysis with threshold-based diversity reception for cognitive network”, <i>International Journal of Ad Hoc and Ubiquitous Computing</i>, 2022. (<b>SCIE Indexed</b>)</li> <li>3. <b>K. Chopra</b> and M. A. Alam, “Stackelberg Secure Modeling Game Scheme for Price-Power Control in Cognitive Radio Enabled Agriculture System”, <i>International Journal of Computational Economics and Econometrics</i>, 2022. (<b>ESCI Indexed</b>)</li> <li>4. R. Bholan, S. Agrawal, <b>K. Chopra</b>, “Narrowband Internet of Things: Performance Analysis Coverage Enhancement in Uplink Transmission”, <i>International Journal of Wireless and Mobile Computing</i>, 2022. (<b>Scopus, Elsevier</b>)</li> <li>5. R. Bholan, <b>K. Chopra</b> and S. Kumar, “Narrowband internet of things: analysis of frame structure, NPSS sequence generation and detection,” in <i>International Journal of Systems, Control and Communications</i>, 13(1), pp.67-81, 2022. (<b>Scopus, Elsevier</b>)</li> <li>6. D. Joon and <b>K. Chopra</b>, “A Secure and energy-efficient model for CPS using deep learning approach,” <i>Journal of Theoretical and Applied Information Technology</i>, vol. 100, no. 3, 2022. (<b>Scopus, Elsevier</b>)</li> <li>7. E. Soni, A. Nagpal, <b>K. Chopra</b>, “Atrial Fibrillation Discrimination for Real-Time ECG Monitoring Based on QT Interval Variation”,</li> </ol>	

	<p>in <i>Indian Journal of Science and Technology</i>, 2022.</p> <ol style="list-style-type: none"> <li>8. D. Joon and <b>K. Chopra</b>, “Hybrid Deep Learning Prediction Model for Blackhole Attack Protection in Wireless Communication,” in <i>NVEO - Natural Volatiles &amp; Essential Oils Journal</i>, pp. 10228–10243, 2021. (<b>Scopus, Elsevier</b>)</li> <li>9. <b>K. Chopra</b>, “A Review on Secrecy Performance of Cooperative Relay Network with Diversity”, <i>International Journal of Internet Technology and Secured Transactions</i>, 2021. (<b>Scopus, Elsevier</b>)</li> <li>10. <b>K. Chopra</b>, A. Sondhi and M. A. Alam, “Trust-Based Duopoly Secure Game Models for Cooperative Relay Networks”, <i>International Journal of Internet Technology and Secured Transactions</i>, 2021. (<b>Scopus, Elsevier</b>)</li> <li>11. <b>K. Chopra</b>, “Mobile Ad Hoc Network Security using Mean Field Game Theoretic Threshold-Based Scheme”, <i>Recent Advances in Computer Science and Communications</i>, 2021. (<b>Scopus Indexed</b>)</li> <li>12. D. Joon and <b>K. Chopra</b>, “Game Theory for Network Security- A Literature Survey,” in <i>Journal of Critical Reviews</i> vol. 7, no. 10, 2021.</li> <li>13. E. Soni, A. Nagpal, <b>K. Chopra</b>, “The Role of ECG for Identifying Cardiac involvement In Patients Post Covid19,” in <i>Drugs and cell Therapies in Hematology</i>, vol. 10, no. 1, pp.1498-1510, 2021. (<b>ESCI Indexed</b>)</li> </ol>
<p>Papers Published in Conference Proceedings (last 5 years)</p>	<p>5 Conference Publications</p> <ol style="list-style-type: none"> <li>1. R. Bholan, S. Agrawal, <b>K. Chopra</b>, S. Kumar, “Coverage and Latency analysis for NB- IoT in Uplink transmission” in <i>International Conference on Decision Aid Sciences and Applications (DASA)</i>, March 2022.</li> <li>2. S. Sharma, <b>K. Chopra</b> and A. Ahmad, “Compressed Sensing: A Survey Paper,” in <i>Proc 3rd International Conference on ICT for Digital, Smart, and Sustainable Development (ICIDSSD)</i>, 24-25 March, Jamia Hamdard, 2022.</li> <li>3. E. Soni, <b>K. Chopra</b>, “The IoT for Healthcare And Telemedicine: A Review,” in <i>Proc. 3rd International Conference on ICT for Digital, Smart, and Sustainable Development (ICIDSSD)</i>, 24-25 March, Jamia Hamdard, 2022.</li> <li>4. S. Sharma, <b>K. Chopra</b> and A. Ahmad, “Classification of Iris dataset using Bayesian Models,” in <i>Proc 3rd International Conference on ICT for Digital, Smart, and Sustainable Development (ICIDSSD)</i>, 24-25 March, Jamia Hamdard, 2022.</li> <li>5. D. Joon and <b>K. Chopra</b>, “Oligopoly game modelling framework for secure power trading in cognitive radio network,” in <i>International Conference on Emerging Trends in Electrical and Electronics Engineering (ICETEEE’21)</i>, Sri Shakthi Institute of Engineering and Technology, Coimbatore, 2021.</li> </ol>

Books Authored/ Book Volume Chapters	<p>1 Book Authored</p> <ul style="list-style-type: none"> <li>• <b>Book published</b> on “<b>Secrecy in Cooperative and Cognitive Relay Networks with Game Theory</b>” with ISBN 978-620-0-09455-1 in 2019.</li> </ul> <p>4 Book Chapters</p> <ol style="list-style-type: none"> <li>1. N. Agarwal, A. Sondhi, <b>K. Chopra</b> and G. Singh ,“Transfer Learning: Survey and Classification” in <i>Advances in Intelligent Systems and Computing</i>, 2021. (<b>Springer Book Series</b>)</li> <li>2. E. Soni and <b>K. Chopra</b>, “IoHT – Health care with Internet of Things” in the <b>book series</b> <i>Biomedical Engineering: Techniques and Applications</i> and book titled <i>IoT and Cloud Computing based Healthcare Information System</i>, 2021.</li> <li>3. 7. R. Bholan, S. Agrawal and <b>K. Chopra</b>, “Analysis of Energy Efficient Narrowband Internet of Things (NB-IoT): LPWAN Comparison, Challenges, and Opportunities” <b>book chapter</b> in <i>Wireless Communication with Artificial Intelligence: Emerging Trend and Applications</i>, chapter 11, <b>Taylor &amp; Francis USA</b>, CRC Press, 2021.</li> <li>4. 8. R. Bholan, S. Agrawal and <b>K. Chopra</b>, “Narrowband Internet of Things (NB-IoT) - Analysis of Development Mode and Radio Coverage” <b>book chapter</b> in <i>Wireless Communication with Artificial Intelligence: Emerging Trend and Applications</i>, chapter 10, <b>Taylor &amp; Francis USA</b>, CRC Press, 2021.</li> </ol>		
No. of Conferences	National	Attended	Organized
		7 National Conferences Attended	
	International	<p>1 International Conference Attended</p> <ul style="list-style-type: none"> <li>• <b>K. Chopra</b>, R. Bose and A. Joshi, "Secrecy Outage Performance of Cooperative Relay Network With Diversity Combining," in <i>Proc. IEEE 2nd International Conference on Signal and</i></li> </ul>	<p>3 International Conferences Organized</p> <ul style="list-style-type: none"> <li>• <b>Organized</b> Two-Day 3rd International <b>Conference</b> on ICT for Digital, Smart, and Sustainable Development on 24- 25 March 2022 in Jamia Hamdard.</li> </ul>

		<p><i>Image Processing (ICSIP'17)</i>, NTU, <b>Singapore,</b> Aug. 2017. <b>(Best Paper Presentation Award)</b></p>		<ul style="list-style-type: none"> <li>• <b>Organized Two-Day International Conference 'ICSCC'</b> on 7-8 February 2020 in GD Goenka University</li> <li>• <b>Organized Two-Day International Conference 'REDSET'</b> on 15-16 November, 2019 in GD Goenka University.</li> </ul>
Research Guidance	Awarded	PG	M. Phil	Doctorate
				2 PhD Awarded
	Undergoing			3 Undergoing
Research Projects	Completed	NA		
	Undergoing	<b>DST funded project of 35 Lacs</b> on “Smart Game-Automated Optimized Model for Secure Farming System”		
Awards & Distinctions	<ul style="list-style-type: none"> <li>• <b>DST INSPIRE Faculty</b> Awardee of <b>INR 22 Lacs</b> per year, which includes annual research grant of INR 7 Lacs in April 2020.</li> <li>• <b>Best Paper Presentation</b> award in the 2nd <b>IEEE International Conference</b> on Signal and Image Processing (ICSIP), NTU, <b>Singapore</b>, Aug. 2017.</li> <li>• <b>Scientist of the Year Award</b> in 7th INTERNATIONAL CONFERENCE ON INNOVATIVE COMPUTING AND COMMUNICATION (ICICC 2024)</li> <li>• <b>Best Researcher Award</b> in <b>BITS PILANI</b> for excellent contribution towards research.</li> </ul>			
Administrative Assignments Handled	<ul style="list-style-type: none"> <li>• Faculty Coordinator of <b>ACM-Women Chapter</b> in USAR, GGSIPU-EDC.</li> <li>• Intel oneAPI Student Club Coordinator and Dance Club Coordinator in USAR, GGSIPU-EDC.</li> <li>• Training and Placement Coordinator of USAR, GGSIPU-EDC.</li> <li>• Academic Administration (NAAC/NIRF) Committee member in ISAR, GGSIPU-EDC.</li> <li>• Practical Exam Committee Member in USAR GGSIPU-EDC.</li> <li>• Anugoonj Organization Committee member in 8-10 Feb 2024, GGSIPU.</li> </ul>			

- Class Incharge of IIOT in USAR, GGSIPU-EDC for academic year 2022-2023 and 2023-2024.
- Scheme and Syllabus Design Committee in USAR, GGSIPU-EDC.
- Mentor of BTech IIOT students regarding the identification of courses to be pursued for the award of BTech (Hons) Degree in the academic year 2023-2024.
- Virtual Lab **Nodal** Coordinator in GGSIPU-EDC in collaboration with **IIT-Delhi**.
- Stage Management Committee for the Orientation Program on 11th September 2023.
- Project Showcase Committee during the Inaugural ceremony of the East Delhi Campus on 8<sup>th</sup> June 2023.
- MATLAB licence verification Committee member of GGSIPU.
- Organized IoT Workshop in collaboration with Eigen Technologies on 16<sup>th</sup> September 2023 in USAR, GGSIPU-EDC
- Organized Virtual **Lab Seminar** in collaboration with **IIT Delhi** for faculty members in USAR, GGSIPU on 9<sup>th</sup> August 2023.
- Elysian Cultural Event Committee member held on 27-28 March 2023 in USAR, GGSIPU-EDC
- AZINTEK Technical Event Committee member held on 13<sup>th</sup> October 2023 in USAR, GGSIPU-EDC
- IoT Lab and Wireless Communication and Mobile Computing (WCMC) incharge in USAR, GGSIPU-EDC.
- IoT and WCMC Lab set up Committee member in USAR, GGSIPU-EDC..
- Session Chair in 5<sup>th</sup> International Conference on Information Management & Machine Intelligence (**ICIMMI- 2023**).
- Session Chair in 2<sup>nd</sup> International Conference on "Artificial Intelligence and Applications" (**ICAIA 2024**).
- **Organized** Two-Day **Virtual Lab Workshop** on 26-27 May 2021 and One-Day **Virtual Lab Workshop** on 30 November, 2021 in Jamia Hamdard.
- **Organized** Two-Day 3rd International **Conference** on ICT for Digital, Smart, and Sustainable Development on 24- 25 March 2022 in Jamia Hamdard.
- **Reviewer** of **Six** International Journals, Bentham Science **Ambassador** and **Editorial Board** member of **Thirteen** International Journals.
- **Supervisor** and Mentor of working Start-ups under **Centre for Innovation, Incubation and Entrepreneurship (CIIE)** in Jamia Hamdard.
- Representative from Jamia Hamdard in **BIRAC Start-up Expo 2022** for showcasing the achievements and activities of Jamia Hamdard.
- **Organized** Two-Day **International Conference ‘ICSCC’** on 7-8 February 2020 in GD Goenka University
- **Organized** Two-Day **International Conference ‘REDSET’** on 15-16 November, 2019 in GD Goenka University.

	<ul style="list-style-type: none"> <li>• <b>Curriculum Coordinator</b> of the <b>Masters Program</b> and <b>Program Coordinator</b> for the overall activities of the <b>EEE department</b> in GDGU from 2018-2020.</li> <li>• <b>Organized</b> One-day National <b>Workshop</b> on ‘<b>Blockchain Technology</b>’ on 15 November, 2019 and Two-day National <b>Workshop</b> on: ‘<b>Internet of Things</b> using Raspberry Pi’ on October 30-31, 2018 in GDGU.</li> <li>• <b>Virtual Lab Nodal Coordinator</b> in Jamia Hamdard from 2020 in collaboration with <b>IIT Delhi</b>.</li> <li>• <b>Session Chair</b> in the 3rd International <b>Conference</b> on ICT for Digital, Smart, and Sustainable Development on 24-25 March 2022.</li> <li>• <b>Session Chair</b> in the International Conference on Sustainable Cities and Communities on 7-8 February 2020.</li> <li>• <b>Supervisor</b> of <b>National</b> level Hackathon project on “<b>Smarter Surveillance System</b>”, PETT project on “<b>Smart Home System</b>”, Minor project on “<b>Fully Automated Irrigation System</b>” and <b>IDP</b> project on "<b>Economic Analysis of Cyber Security</b>" and TOYCATHON project on “Autonomous Joint Ambient-Resource Saving System (AUJASS).</li> </ul>
Association with Professional Bodies	ACM member, IEEE member, Bentham Science Ambassador
Any other Achievements	<ul style="list-style-type: none"> <li>• Founder of <b>ESPERON DIGITAL Startup</b></li> <li>• Indian Patent filed with Application no. 202311007062 in 2023.</li> <li>• Indian Patent filed with Application no. 202211008260 in 2022.</li> <li>• Indian Patent filed with Application no. 202111054294 in 2022.</li> </ul>