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Papers Published in SCI Journal

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- **Australian Patent Granted: -** SBDA- Secured Bra for women safety, smart and secured bra for women safety based on Deep Learning Algorithms, Patent Number 2020102636.
- **Australian Patent Granted: -** A System And A Method For Automated Irrigation Using Internet Of Things, Patent Number 2020104385
- **Australian Patent Granted: -** Holonomic Drive Conveyor System And Its Method Using IoT, Patent Number 2020104116
- **Australian Patent Granted: -** Self-Cleaning And Germ-Killing Revolving Public Toilet For Covid 19, Patent Number 2021100059
- **Australian Patent Granted: -** Smart Bathroom System And Method, Patent Number 2021100780
- **Australian Patent Granted: -** Delicate Vibratory Instrument For Neonates Oral Motor Simulation, Patent Number 2021101385
- **Australian Patent Granted: -** A SYSTEM AND METHOD FOR PREVENTING CORONA VIRUS TRANSMISSION, Patent Number 2021102958

SWAYAM-NPTEL

- Working as a Subject Matter Expert for the SWAYAM-NPTEL UG/PG course ANIMATIONs.

Research Projects (Funded)

- **iTBI (NIDHI Inclusive Technology Business Incubator)**
  Role: Principal Investigator
  Funding Agency: Department of Science & Technology (DST-NIDHI), Govt. of India
  Grant Received: ₹5 Cr.

- **Establishment of Technology Enabling Centre (TEC) at GGV Bilaspur**
  Role: Principal Investigator
  Funding Agency: Department of Science & Technology (DST), Govt. of India
  Grant Received: ₹3.56 Cr.

- **AI-Powered Surveillance System for Livestock Behaviour Detection and Analytical Insights**
  Role: Principal Investigator
  Funding Agency: Ministry of Electronics and Information Technology, Govt. of India
  Grant Received: ₹5.75 Lakhs

Technology Transfer and Commercialization

- Patent 519100: An Artificial Intelligence And Machine Learning Based Automatic Penalty Device And Its Method Thereof, Technology Transfer By Presear Softwares Pvt Ltd.
- Patent Application No 202231058937: An AI-powered portfolio management system for automated

algorithmic trading & process optimization, Technology transfer by Presear Softwares PVT LTD.

- Patent Application No 202021025200: Theft Vehicle detection using digital signature-based ECU and Image Processing, Technology transfer by Presear Softwares PVT LTD.

FDP/Short-Term Courses Organized:

- Organize one-week ATAL-AICTE FDP Program on Data Sciences during 12th- 16th Oct 2020 in GGV Bilaspur.
- Organize one-week FDP Program on Deep Learning and Machine Learning Applications in Computer Vision during 12 August, 2020 to 18 August, 2020 organized by GGV Bilaspur and Electronics and ICT Academy, NIT Patna
- Organize two-week ATAL-AICTE FDP Program on Computer Vision during 14th- 26th Nov 2022 in GGV Bilaspur.

Awards & Achievements:

- Awarded the "**Saraswat Award**" by Achala Education Foundation Trust, Ahmedabad (2024), in recognition of distinguished academic contributions and impactful service in the field of education.

Invited Lecture:

- **Resource Person**: Delivered a lecture in the NEP Orientation & Sensitization Programme on *"Research and Development"*, organized by the **UGC-Malaviya Mission Teacher Training Centre,** Sant Gadge Baba Amravati University, from **04/08/2025 to 13/08/2025, on 08/08/2025**
- **Resource Person**: Delivered a lecture in the NEP2020 Orientation & Sensitization Programme on *"Use of Machine Learning in Research"*, organized by the **UGC-Malaviya Mission Teacher Training Centre,** Doctor Harisingh Gour Vishwavidyalaya, Sagra (MP), from **05/08/2025 to 14/08/2025, on 05/08/2025**
- **Resource Person**: Delivered a lecture in the NEP2020 Orientation & Sensitization Programme on *"Artificial Intelligene (AI) and Machine Learning (ML) Applications in Research"*, organized by the **UGC-Malaviya Mission Teacher Training Centre,** Doctor Harisingh Gour Vishwavidyalaya, Sagra (MP), from **05/06/2025 to 18/06/2025**
- **Resource Person**: Delivered a lecture in the National Seminar on *"Intellectual Property awareness program at M.L. SchroffHall"*, organized by the **Pt. Ravishankar Shukla University, Raipur**, from **27/03/2025 to 28/03/2025**
- **Resource Person**: Delivered a lecture in the MMTTC Faculty Induction Programme (Guru Dakshata) on *"Image Processing Application in Video Surveillance"*, organized by the **Indira Gandhi National Tribal University, Amarkantak (MP)**, from **01/11/2024 to 30/11/2024**
- **Resource Person**: Delivered a lecture in the AICTE Training and Learning (ATAL) Academy FDP on *"Innovations in Computer Aided Design Simulations (ICADS-2022)"*, organized by the **Department of Mechanical Engineering**, **National Institute of Technology, Rourkela**, from **12/12/2022 to 23/12/2022**, on **22/12/2022**.
- **Resource Person**: Delivered a lecture in the International Workshop in Advanced Research on

Intelligent System and Fixed Points Analysis on *"Intelligent Video surveillance System for Human Behavvior Analysis"*, organized by the **Thammasat University**,

- **Resource Person**: Delivered a lecture in the IEEE AICTE-ATAL five Days FDP on *"Deep Learning and Big Data Analytics in Healthcare Application"*, organized by the **Panimalar Engineering college**, 18/11/2020

- **Resource Person**: Delivered a lecture in the Two Days National e-Workshop under TEQIP-III on *"Digital Education during COVID-19 and e-Content Development"*, organized by the **Government Engineering College, Raipur**, from **25/10/2020 to 26/10/2020**.

- **Honor Speaker**: Workshop on *"Skills Development in Digital Media Technology"*, organized by the **Muban Chom Bueng Rajabhat University, Thailand**, 25/12/2024

Experience in Administration:

- Nodal Officer, Incubation Centre, GGV Bilaspur
- Nodal Officer, IPR Cell, GGV Bilaspur
- Nodal Officer, MOOCs, GGV Bilaspur
- Nodal Officer, Visvesvaraya PhD Scheme, GGV Bilaspur
- Co-ordinator, DST-iTBI, GGV Bilaspur
- Co-ordinator, DST-TEC, GGV Bilaspur
- Co-ordinator, IT Cell, GGV Bilaspur
- Co-ordinator, Chandrayan Utsav
- Officer In-charge, Placement Cell, SoS(E&T), GGV Bilaspur
- Core Member, IQAC, GGV Bilaspur
- Core Member, NEP-2020, GGV Bilaspur

Outside Committee Member:

- Executive Council Member, Sant Gahira Guru Vishwavidyalaya, Surguja Ambikapur
- Member, Academic Planning and Evaluation Board, Shaheed Mahendra Karma University, Bastar
- Member, BOS in the Department of CSE, IGNTU Amarkantak
- Member, BOS in the Department of CSE, Mizoram University
- Member, CGPSC
- Member, Different Reputed Institute

Guest Editor in SCI Journal

- Guest Editor, Special issue on "Visual and Sensory Data Processing for Real Time Intelligent Surveillance System" of **Multimedia Tools and Applications, Springer (SCI Impact Factor:**

2.77).

- Guest Editor, Special issue on "Edge Computing and Machine Learning for Improving Healthcare Services" of **Computers, Materials & Continua, Tech Press (SCI Impact Factor: 3.79).**

Prof. Alok Kumar Singh Kushwaha