

PROF. Y. S. SHISHODIA

Professor & Academic Advisor | Physicist & Research Scientist

📍 Jaipur, Rajasthan, India | ✉ [yad.shi@gmail.com] | ☎ [hidden] | 🔗 [hidden]

PROFESSIONAL SUMMARY

Distinguished physicist and academic leader with over five decades of experience in advanced research, university administration, and IT infrastructure consulting. Expertise spans condensed matter physics, plasma fusion studies, nuclear instrumentation, GIS applications, and computational mathematics. Proven track record in securing international fellowships, leading institutional transformations, developing multidisciplinary curricula, and supervising doctoral candidates across physics, computer science, and engineering disciplines.

EDUCATION

- **Ph.D. in Physics** (1966–1972) | University of Rajasthan, Jaipur
 - **M.Sc. Physics** (1964–1966) | University of Rajasthan, Jaipur | *Gold Medalist*
 - **B.Sc. (Physics, Chemistry, Mathematics)** (1961–1964) | University of Rajasthan, Jaipur | *Gold Medalist*
 - **Pre-University & Secondary Education** | SAP High School, Bhawani Mandi & University of Rajasthan
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ACADEMIC & ADMINISTRATIVE LEADERSHIP

- **Advisor**, University of Technology, Jaipur
 - **Pro-Vice-Chancellor**, Jagan Nath University, Jaipur
 - **Professor & Head of Department**, University Science Instrumentation Centre
 - **Founder Director**, University Computer Centre, University of Rajasthan
 - **Principal**, University Maharaja College
 - **Director**, Indira Gandhi Centre for Human Ecology, Environment and Population Studies
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RESEARCH EXPERTISE & ACADEMIC CONTRIBUTIONS

- **Condensed Matter Physics**
Electron momentum distribution, Fermi surface studies of metals/semi-metals, positron lifetime analysis in solids.

- **Nuclear & Atomic Physics**

Hyperfine structure analysis, nuclear moments of neutron-deficient thallium isotopes using Focussing Atomic Beam Magnetic Resonance.

- **Plasma & Laser Physics**

Fabrication of low-energy Plasma Focus machines for Deuterium fusion/neutron emission; design of sequenced Nitrogen lasers for plasma fusion studies.

- **Applied Physics & Technology**

Laser scanning characterization of amorphous solar cells, GIS applications for telecommunication networks, power loss reduction in radial distribution systems.

- **Computational & Mathematical Physics**

Sumudu Transform technique for Newtonian/non-Newtonian fluid dynamics, cloud economics.

- **Physics Education & Experimental Development**

Pioneered innovative laboratory experiments in mechanical, electrical, and nuclear systems under the University Leadership and Centre for Development of Physics Education. Notable developments include ultra-low frequency oscillators, Lucite air tracks, high-Q pendulum systems, and novel Lissajou-figure techniques for mechanical resonance studies.

- **Curriculum Development & Computer Science Leadership**

As Director of the University Computer Centre, established and scaled Certificate, Post-Graduate Diploma, MCA, MCA(Evening), M.Sc.(IT), and B.Sc.(Computer Science) programs across the university and affiliated institutions. Spearheaded the introduction of the Ph.D. program in Computer Science. At Jagan Nath University, guided interdisciplinary research spanning computer science, electrical, mechanical, and cloud computing domains.

FELLOWSHIPS & INTERNATIONAL COLLABORATIONS

- **Visiting Fellow**, United Nations University & ICTP | University of Malaya, Kuala Lumpur, Malaysia (May–Jun 1988)
- **Plenary Speaker**, International Conference on Physics Education (1987) | Cairo University, Egypt
- **Plenary Speaker**, International Conference on Physics Education (1985) | University of Duisburg, Germany
- **Research Associate/Scholar**, SAREC & SIDA | Uppsala University, Sweden (1972–1973; 1984–1985)
- **Participant**, ICTP College on Microprocessors & Applications in Physics | ICTP, Italy (Sep–Oct 1981)
- **CSIR Research Fellowship** | University of Rajasthan (1966–1969)

- **DAE Scholarship** (Undergraduate & Postgraduate) | Maharaja College & Dept. of Physics, UoR (1963–1966)
 - **University Merit Scholarship** | University of Rajasthan (1964–1966)
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AWARDS & HONORS

- **First Prize (Open Category)**, Apparatus Competition | American Association of Physics Teachers (AAPT), New York, USA (1979)
 - **Gold Medal**, M.Sc. Physics Examination (1966)
 - **Gold Medal**, Highest Marks in 3rd Year TDC | University Maharaja College
 - **Gold Medal**, Highest Marks in 2nd Year TDC | University Maharaja College
 - **Gold Medal**, RBSE High School Examination | SAP High School, Bhawani Mandi
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BOARD MEMBERSHIPS & PROFESSIONAL SERVICE

- **Member**, Governing Board, RAJCOMP (Rajasthan State Agency for Computer Services)
 - **Governor Nominee**, Board of Management, MLSU, Udaipur
 - **Coordinator**, DOE ACC for "O" and "A" level courses, Rajasthan
 - **Selection Committee Member**, Computer Subjects, RPSC & Multiple Universities
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CONSULTING & INDUSTRY ENGAGEMENT

- **IT Infrastructure Consultant** | SBBJ (now SBI) (1992–2006)
Led evaluation, procurement, implementation, and technical recruitment for large-scale banking IT infrastructure projects.
 - **IT Systems Consultant** | Bank of Rajasthan (1993–2008)
Managed IT system evaluation, procurement, deployment, and technology-driven recruitment initiatives.
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DOCTORAL SUPERVISION

Supervised Ph.D. research across physics, computer science, and applied disciplines. Notable scholars include: Yogesh K. Vijay | Maya Raghuvanshi | Neeraj Bhargava | Vijay Singh Rathore | Shakti Singh Parmar | Deepak Kumar | Ramesh Chandra Meena | Nishtha Keshwani | Meenu Dave | Tanuj Manglani | M. P. Singh | Mikku Dave | Sushila Rathore