



भारतीयज्ञानसंवर्धनयोजना

Competitive Research Proposals Program -2023

Application and Instructions

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Dates to Remember

Proposals Due by	1 to15 June 2023
Presentations on	20 to 21 June 2023
Announcement of the Result	22 June 2023

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About Indian Knowledge Systems (IKS) Division

Home to the oldest continuously living civilization of the world, the Indian subcontinent has been a knowledge and manufacturing powerhouse of the world for most of the known history. A Dharmic culture that emphasized the development of all dimensions of humanity with an emphasis on living in harmony with oneself, one's environment, and the universe at large. It is becoming very apparent from the recent developments around the world that the current models of development are unsustainable and are in serious conflict with nature. The rising inequalities in the modern world point to a dire need for new paradigms of development.

There is an Indian way that is both sustainable and strives for the welfare of all. The grand vision for the IKS Division at RGPV is to initiate a process of training generations of scholars who will show the 'Indian way' to the world. If we want to become the Knowledge Leader in this century and be the 'Viśvaguru', it is imperative that we regain a comprehensive knowledge of our heritage and demonstrate the 'Indian way' of doing things to the entire world. Therefore, the IKS Division at RGPV has been established with a vision to ***promote interdisciplinary and transdisciplinary research on all aspects of Indian Knowledge Systems (IKS), update and disseminate IKS knowledge for further innovations and societal applications.***

Functions of IKS division:

- 1) Facilitate and coordinate IKS based/related inter and transdisciplinary work done by various Departments in RGPV.
- 2) Establish, guide and monitor subject-wise interdisciplinary research groups comprising of researchers from institutes, centers and individuals.
- 3) Create and promote popularization schemes.
- 4) Facilitate funding of various projects and develop mechanisms to undertake research.
- 5) Make Policy recommendations wherever required for the promotion of IKS.

Overview of the Competitive Research Proposals Program of IKS Division @ RGPV

The Competitive Grants Program of the Indian Knowledge Systems is designed to encourage and fund research studies that will contribute to the research mission of the IKS Division. Our goal is to make catalytic grants that encourage original, serious, and deep scholarly research in the Indian Knowledge Systems and rejuvenate IKS research in India. The funds available to support the Competitive Grants Program are discretionary funds provided by the Govt. of Madhya Pradesh to support the activities of the IKS Division. The level of funding available for the program each year is determined by the Govt. of Madhya Pradesh. Each proposal call of the division will focus on certain thematic areas identified with the help of experts and IKS researcher community feedback.

Funding research that may eventually lead to deeper understanding or practical products or to solutions to contemporary problems is the top priority. The research proposals must be interdisciplinary, involving the study of the traditional concepts, methods, technologies, or approaches using the modern tools and approaches wherever necessary, in order to solve contemporary societal problems or develop deeper understanding of the Indian Knowledge Systems. Research proposals should be collaborative and involve traditional scholars/scholars well versed with the traditional texts and practices and compare them wherever possible to the developments in modern sciences.

This call for proposals has the following research priority areas. We intend to support up to 5-6 high quality research proposals in each area subject to availability of funding. We may not fund any proposals in a thematic area if we do not receive high quality proposals.

- 1. Mathematics and Astronomy:** India has a rich tradition of mathematics and astronomy. Most of the mathematics taught in schools today either originated or was developed in India. The mathematics of India involved sophisticated concepts which were also of great practical utility. Proposals are invited to investigate the historical development of mathematics and astronomy (not astrology) through study of the original texts or of ancient structures and instruments. Relationship between the astronomical phenomena and the Panchanga for determining the timing of the festivals and agricultural operations, traditional methods for periodic correction of the astronomical models, study of the simplicity and optimality of the algorithms developed in Indian mathematics and astronomy are a priority.
- 2. Metallurgy and Material science and technology:** Indians were pioneers in metallurgy and material sciences. Many of these technologies are on the verge of being lost. It is important to study the technologies to preserve, understand and update the state of the art. Proposals are invited for the study of various metal and alloy processing technologies and possible adaptation of traditional Indian metallurgical technologies in the modern context. Understanding the manufacturing processes used in traditional Indian metallurgical traditions from a technological perspective is a top priority. Study of historical artefacts obtained from the archaeological excavations is encouraged.

3. **Chemical science and technology:** In India, chemistry (Rasayanashastra) was given the special designation as a “shastra”, ie. A system of codified knowledge. Several methods to produce alloys, acids, bases, salts and other chemicals were developed, studied carefully and tested and deployed for various uses including medicines, mortars, dyes and pigments for textiles, arts, murals, paintings in India. Research proposals in the chemical sciences especially with a focus on recreating these technologies for preparing medicines, mortars, dyes and pigments and other materials are also invited. Recreation of environmentally friendly, non-toxic, bio-based pigments and dyes, and mordants used in traditional Indian textiles, murals in temples and caves are a priority.
4. **Health, Wellness, and Consciousness studies:** Ayurveda, the discipline of health and wellness studies is accorded the status of “upaveda” in India. The systemic approaches of Ayurveda supplemented with the approaches of allopathy can bring in new insights to the human health and wellness. Consciousness studies in India have a very long tradition and the approaches developed in India are being explored in various contemporary studies. Proposals are invited for novel studies in the areas of ayurveda, vipassana (mindfulness) approaches of Buddhists, health, wellness and consciousness studies based on the Indian traditions. Studies of the impact of the spiritual practices such as meditation, mantra chanting and kirtans in an individual vs. group settings on the physiological and mental health outcomes of participants are encouraged.
5. **Political and Economic thought, Economics and Foreign policy:** India is the land of great wisdom in the study of polity and economy, the Rajaneetishastra and Arthashastra, as expounded in our great epics Ramayana and Mahabharata and in the profound works of thinkers such as Shukracharya and Acharya Vishnugupta. Indian empires of the last few millennia consisted of Maurya, Guptas, Cholas, Pallavas, and Vijayanagara who had flourishing economies, transcontinental trades, sent cultural ambassadors to all corners of known world, and even sent military expeditions to safeguard economic and political interests. What was the Indian approach to economics, politics and foreign policy? What were their guiding principles? When did India, a major maritime power started looking inwards and cease to be a major maritime power? What were the reasons? This heritage is relatively less studied especially in the period before 1800 CE. These aspects need to be studied in detail to understand India’s political, and economic thought and foreign policy. Research proposals focusing on these important issues concerning India’s past are invited.
6. **Sustainable Agriculture and Food preservation:** India is blessed with a large area conducive for agriculture which formed the basis for her prosperity. With the advent of the green revolution, the food security of the nation was assured despite a four-fold increase in the population. However, it is increasingly evident that the industrial methods of agriculture are not sustainable and is resulting in the degradation of the soil health. There is a need to develop alternatives inspired by traditional practices of India to move towards a more

sustainable agriculture without jeopardizing food security of the Nation. Proposals focusing on replacement of pesticides with traditional alternatives area priority. Proposals for developing economically viable technologies or strategies for improving soil health based on the traditional practices of India is a top priority.

7. **IKS approaches for Management of water resources:** India in its long history has faced many vagaries of nature including floods, droughts and uneven precipitation patterns. To address these challenges and adapt to diverse situations, every region of India developed its own traditional knowledge in the construction of wells, ponds, lakes, reservoirs, dams and other water-harvesting and water-management structures. Often these methods and strategies were multidimensional, addressing not only the needs of the society, but also those of agriculture and domesticated animals. In this thematic area, water-management techniques, including water-harvesting, water-storage, irrigation and other distribution methods, are a top priority. Also the relevance of those traditional knowledge systems to contemporary problems of water management. To qualify under this theme, the proposals must cite a primary text, physical evidence (including from archaeological excavations), or an oral tradition on which the proposal is based, propose advance studies using modern methodologies, and assess the applicability to the maintenance of the ecosystem services. Simply replicating a traditional technology or using a modern water-management technique will not be considered to be responsive to this theme.
8. **Architectural engineering, vaastu and shilpa shastra:** India is world-renowned for its splendid architecture and associated technologies, from rock-cut marvels to imposing constructed buildings for religious or civil purposes. How were these monuments planned and executed? What sort of knowledge of mathematics or civil engineering was involved? And how were the supply chains for raw materials, human and material resources managed? IKS division invites proposals that delve into such details of a particular structure / monument as top priority. Proposals that are about general aspects of architectural engineering, vaastu and shilpa shastras are not currently of interest to the IKS division.
9. **New universal sociological models based on emic perspective:** The Indian way of thinking was always concerned about लोकहित, not merely मनुष्यहित (anthropocentric). Also, theory-making within the Indian traditions followed the अनुबंध-चतुष्टय, which includes विषयः, फलः (प्रयोजनः), अधिकारी and संबंधः। How can this be integrated into mainstream sociological thinking? Therefore, the development of Indic methods of sociological analysis using a new set of instruments that are not ascertained by any other means of cognition (pramana) and explain a large set of societal facts to obtain results that are not achievable from any other source are critically needed. Placing our folktales, songs, and performances within the sociological, anthropological, folkloristics, and the social and behavioral sciences, and their analysis from an emic point of view is much needed. Can the texts of Panini and Bhatrahari be used to provide a universal sociolinguistic theory? Indic sociological categories

Further guidance on proposal preparation

Considerations in preparing your proposal:

1. The charge of the IKS is to support **research in Indian Knowledge Systems** that will make meaningful contributions to the furtherance of IKS.
2. A good proposal will emphasize how the proposed research is intended to contribute towards the IKS's mission either in the near future or by leading to major developments in the long run. Simply satisfying curiosity or compiling data for a refereed paper will not be in the interest of the IKS Division and will not impress the reviewers.
3. ***The projects must strictly be related to IKS themes.*** Projects which are not within the scope of this solicitation will be rejected in Phase 1 review (internal review process) without any further communication in this regard. Projects must have clear scope that can be completed in two years. The projects must have clear quantifiable deliverables. Writing a comprehensive report is required for all projects. For projects that involve performing arts, a comprehensive multimedia documentation is expected.

Table 1. Examples of what qualify/do not qualify as an IKS project

Is an IKS project	Is NOT an IKS project
Study of mortar composition used in older bridges/forts/temples.	Study of bridges and ships in a locality.
Documenting and evaluating the water treatment methods practiced by communities.	Monitoring plastic pollution in a river.
Studying the relevance and applicability of Chanakya's arthashastra is relevant for solving current societal problems.	Studying the economic theories of Adam Smith or MMT.
Study of port construction in Dholavira and Lothal and estimating the capacity of those ports.	Studying ships in a port.
A study of the influence of Sanskrit education on the cognitive abilities of the students.	Visiting schools to see how Sanskrit education is imparted.
Identifying the contextual and etymological meanings of the words (ex. Dharma, nyaya, papa, punya) in a purana for the current societal context.	Enumerating the occurrences of words (ex. Dharma, nyaya, papa, punya) in a purana

4. Clear communication is the key: Proposals that clearly specify the contribution of the research will score higher.
5. Because conveying the results of research to potential users is important, requesting funds for defraying costs of such activities is permitted.
6. We do not fund acquisition or construction of facilities (bricks and mortar). Requests for equipment needed to carry out proposed research are permitted. The proposal must describe your need and specify how the equipment will be used in this specific research. Funding will not be provided to better equip your laboratory or facilitate other work.
7. It may happen that your reviewers could be scholars who may have only a minimal familiarity with the details of your specialized field. Please write your justification, objectives, procedures, and impacts such that a person who may only have a limited background in your area can understand what you are saying – like talking with your next-door neighbor. A proposal that reviewers cannot readily understand is likely to be poorly rated and not funded.
8. While it may be easy for you to cut-and-paste material from another proposal when preparing your IKS proposal, your proposal will be rejected if it is obvious that you have done so. Even if you borrow phrases or ideas (NOT cut and paste) ensure that you proofread your proposal to remove any telltale dates, timelines or references that could serve as a cut and paste “giveaway.”
9. Research that is original and innovative tends to be favored. If appropriate, describe to what extent your proposed study fits this description.
10. Future funding is difficult to predict but tell us how the results of your research might help lead to future grant funding from other sources.
11. Please keep in mind that funds to finance this research are limited. We will make a call on the number of proposals to be funded based on the availability of funds.
12. Please ensure that you cite all your references in your text. Be sure to remove “ghost” references – a citation listed in the text but not the reference section. Web links to general background information may be included in the text for reader edification purposes. All proposals must include at least one primary text in the references. Please do not use web links to journal articles.
13. If you intend to use IKS project funds in concert with other funding to complete a project, be sure to thoroughly describe the other funding source(s) and amount(s) on your budget page. Reviewers are interested in knowing about funds leveraging possibilities.
14. The total budget allocated for the recommended project will be Rupees 5,00,000 (Five Lakhs Rupees) only.
15. The selected Doctoral Fellow (RIKS-DF) will be provided with a fellowship of Rupees 31,000 per month as per the norms of RGPV Bhopal.

THE INDIAN KNOWLEDGE SYSTEMS DIVISION @ RGPV

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IKS SAMVARDHINI PROPOSAL COVER PAGE

Proposal title:

Lead Researcher (Principal Investigator):

Name:

Email address:

Phone number:

Academic rank:

Appointment type:

Physical work location:

Academic home department:

Co-PI(s) (if any):

Cooperator(s)/Collaborator(s) (if any):

Project Budget Amount:

I certify that I will lead the project and complete all the tasks outlined in the proposal. I certify that a complete project report will be submitted at the end of the project and the funding support from IKS Division @RGPV will be acknowledged in any publication resulting from this work.

Principal Investigator

Date

Principal Investigator Printed Name:

IKS SAMVARDHINI YOJANA PROPOSAL BODY

Overview of the project (250 words): What is the project about? Describe the project idea here.

Contribution to the IKS Mission (250 words): How does this project contribute to the IKS mission?

Justification (500 words): Please provide a justification for the project and its importance.

Objectives and timelines (250 words): Please provide a clear list of specific objectives for this project. One-Three objectives a reasonable for this RFP. Clear and specific objectives will be given higher weightage.

Project Intellectual merit (250 words): What is the intellectual merit of this project? Please clearly specify the scientific impact of the project. What are the scientific questions that will be addressed under the proposed research?

Project broader impacts (250 words): What are the broader (Societal, economic and environmental impacts?

Outputs and outcomes of the proposal (250 words): What are the outputs and outcomes of the project? Please prepare a list of specific outcomes and outputs. DO NOT use paragraphs to describe the outputs/outcomes.

Procedures (1000 words): Please provide a summary of the procedures that will be used in this project. While writing the summary of the procedures ensure to provide with adequate references to literature.

Project team expertise (250 words): Please tell us about the prior experience of the PI and the Co-PIs in the proposed topic. What are the facilities available to the team to perform the research work outlined in the proposal? Expertise existing with each of the investigators in terms of preliminary results, to execute every component of the proposal should be highlighted.

Specific roles of Co-PI(s) and Cooperator(s), if listed on cover page (250 words): What are the specific roles of the team members? The team must include substantial contribution from all members. If the proposal contains more than one investigator, it is important to clearly mention the role of each Investigator in implementing the objectives of the proposal.

Timelines (100 words): Indicate timelines for project tasks and schedule of activities giving milestones through BAR diagram.

References cited *(not included in the page limit)*:

- **Primary References:** Cannot be left blank. Must include at least one primary text. Primary references are the original texts pertaining to the research proposed. These are typically in Sanskrit or other Bharateeya bhasas. The team must have at least one person who can read the primary text without the aid of any translations.
- **Translated primary texts and Secondary References:** These pertain to the translations of the primary texts into various languages including English. Secondary references refer to the texts/articles such as commentaries for the primary texts.
- **Other references:** All other pertinent references are included here.

Resume Format *(Do not exceed two pages for each investigator. The resumes are not included in the page limit)*

1. Name:
2. Correspondence Address:
3. Email:
4. Contact Numbers:
5. Institution:
6. Academic Qualification:
7. Work Experience (in chronological order):
8. Professional Recognition/Award/Prize/Certificate, Fellowship:
9. Peer Reviewed Publications:
10. Details of Patents (if any):
11. Books/Reports/Chapters/General Articles etc.:
12. Ongoing/completed Projects during the last 5 years:
13. Your competence to undertake this project (Maximum 500 words):
14. Any other information (Maximum 500 words):

EVALUATION CRITERIA

Scientific Thoughts and Principles (20%)	<ul style="list-style-type: none"> • A hypothesis or project design that is clear and well stated based on study and observation. • An experimental procedure that is effective in testing the hypothesis, or an innovative design that is an effective solution to the problem posed, or a study designed to produce significant new insights. • A demonstration of the deep knowledge of the scientific and/or engineering principles involved. • A careful extrapolation from what was learned to the subject in general or to related subjects.
Originality and Creativity (20%)	<ul style="list-style-type: none"> • An original problem or an original approach to an old problem. • A creative approach to the design of the experiment, the innovation or the project overall. • A creative use of materials and equipment. • Creative or original thinking in the application and the interpretation of any data obtained.
Thoroughness (10%)	<ul style="list-style-type: none"> • The purpose carried out to completion within the scope of the original intent. • Complete covering of the problem. • Familiarity with scientific literature in the studied field.
Skill (10%)	<ul style="list-style-type: none"> • Design and Development • Use of instruments/tools • Has requisite skills
Relevance (20%)	<ul style="list-style-type: none"> • Fundamentally suited to achieve the goals associated with the project.

	<ul style="list-style-type: none"> • Whether the project appropriately addresses an important development goal, took into account the strategic requirements.
Cost-effectiveness (10%)	<ul style="list-style-type: none"> • Whether the proposed methodology is the cheapest way to arrive at the desired result. • Consideration of the costs and expected benefits.
Communication (10%)	<ul style="list-style-type: none"> • A good display providing the information of the project in a logical progression. • Logical and enthusiastic oral presentation. • Appropriate project report.

Power Point Presentation Format

- Introduction (1-5 slides)
- Rationale (1-2 slides)
- Objective/s (1 slide)
- Hypotheses (1-2 slides)
- Materials and Methods (1-5 slides)
- Expected outcomes (1-2 slides)
- Significance (1 slide)
- Budget Allocation (1 slide)
- References (1-2 slides)

Budget Allocation

Sanction of the budget will be based on the following terms and conditions:

1. The below-listed items are **not** to be permitted under this Scheme:
 - Manpower.
 - Laptops, Computers, Workstations, etc.
 - Free source license version software available with the University.

- Facilities are already available in the respective Department/ School in the form of Equipment, Books, Periodicals, etc.
2. Software should be developed by the PI/ Mentor PI/ Co-PI and not outsourced to any company.
 3. The license software should be procured on a perpetual basis, not a yearly basis.
 4. Budget proposal should be based on the **justification in detail with Documentary Proof** in the form of a Budgetary Quote (at least one) of the recommended projects under Indian Knowledge system Research Project according to the following table:

Heads (with justification)	1-6 Months (in Rs.)	7-12 Months (in Rs.)	Total (in Rs.)
Minor Equipment	(Up to 30% of the total cost)	--	
Consumables	(Up to 20% of the total grant)	(Up to 15% of the total grant)	
Contingency	(Up to 10% of the total grant)	(Up to 10% of the total grant)	
Travel within India	(Up to 5% of the total grant)	(Up to 10% of the total grant)	
Grand Total			

Certificate from the Investigator

(Not included in the page limit)

Project Title:

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support.
2. I undertake that spare time on equipment procured in the project will be made available to other users.
- 3 I agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trails/experiments/exchange of specimens, human & animal materials etc.
4. The research work proposed in the scheme/project does not in any way duplicate the work already done or being carried out elsewhere on the subject.
5. I agree to abide by the terms and conditions of IKS Division @RGPV grant.

Signature of the PI

Name of the PI

Affiliation of the PI

Date:

Place:

Endorsement from the Head of the Institution

(Not included in the page limit)

This is to certify that:

1. Certified that the Institute welcomes participation of _____ as the Principal Investigator and _____ as the Co-Investigator for the project titled _____, and that in the unforeseen event of discontinuance by the Principal Investigator, the Principal Co-Investigator will assume the responsibility of the fruitful completion of the project with due information to IKS Division @RGPV.
2. The date of project starts from the date on which the Institute receives the grant from Indian Knowledge Systems Division of IKS Division @RGPV, Bhopal.
3. The investigator will be governed by the rules and regulations of Institute and will be under administrative control of the Institute for the duration of the project.
4. The grant-in-aid by the IKS Division @RGPV, Bhopal will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as mentioned in the sanction order.
5. No administrative or other liability will be attached to the IKS Division @RGPV, Bhopal at the end of the project.
6. The Institute will provide basic infrastructure and other required facilities to the investigator for undertaking the research project.
7. The Institute will take into its books all assets created in the above project and its disposal would be at the discretion of the IKS Division @RGPV, Bhopal.
8. The Institute assumes to undertake the financial and other management responsibilities of the project.

Signature of the Head of the Institution with seal

Date: