

DR. VINOD VIDWANS

M. Des. Ph. D. (IIT Mumbai), India

Important Presentation

7th World Music Conference 2023 Dec 15th-16th

An online Conference

<https://www.youtube.com/watch?v=MUUTBKQamd0>

Important Publications:

A book titled: **‘The Music of Minds and Machines: A Deep Dive into the Generative Theory of Indian Music’**.

Author: Dr. Vinod Vidwans

May 2023

PDF Link: <https://computationalmusic.com/pdfs/The-Music-of-Minds-and-Machines.pdf>

A book chapter titled: **Computational Indian Musicology: Challenges and New Horizons**

A book chapter published in ‘Computer Assisted Music and Dramatics: Possibilities and Challenges’, (Eds.), Ambuja Salgaonkar, Makarand Velankar, Pub.: Springer Nature Singapore Pte Ltd. The work is published in the bookseries Advances in Intelligent Systems and Computing. Publication date: 25th June 2023.

Chapter Link: https://link.springer.com/chapter/10.1007/978-981-99-0887-5_15#Sec9

Paper Publication

22 - 27 June 2025

27th International Conference on Human-Computer Interaction

Gothia Towers Hotel and Swedish Exhibition & Congress Centre, Gothenburg, Sweden

Title of the Research Paper: A Semi-automatic Text Recognition Tool for Pre-colonial handwritten manuscripts in Devanagari script

Authors: Bharath Valaboju, Shagun Dwivedi¹, Kartik Chincholikar, Kaushik Gopalan, and **Vinod Vidwans**

This paper has been accepted for presentation at HCII 2025 and for publication in the Springer CCIS volumes of the [Conference Proceedings](#) to be published before the Conference.

Research Projects

Feb. 28th – March 1st, 2025

Pune Design Festival

Musical Robot: Work in progress presented.

In collaboration with FLAME Design Lab, a project titled ‘*RagaRobot*’ has been initiated where a robot will play a musical composition in given *Raga* on a synthesizer/ keyboard. The project is at initial stage of assets gathering and initial explorations.

Patents:

Recent Patents Awarded

Inventor: Dr. Vinod Vidwans, Department of Design, Art and Performance, FLAME University, Pune, India

Sr. No.	Name of the Faculty	Patent Number	Month of Award	Patent Awarding Agency	Title
1	Vinod Vidwans	202024105906	Oct-24	German: Deutsches Patent – und Markenamt	Flute with adjustable pitch change mechanism
2	Vinod Vidwans	202024106029	Oct-24	German: Deutsches Patent – und Markenamt	A flute-based musical instrument with scale-shifting capabilities
3	Vinod Vidwans	202024106031	Oct-24	German: Deutsches Patent – und Markenamt	Tunable double flute musical instrument
4	Vinod Vidwans	202421077473 A	Nov-24	Official Journal of the Patent Office – India	Flute with pitch variation capability
5	Vinod Vidwans	202421080019 A	Nov-24	Official Journal of the Patent Office – India	Tunable double flute musical instrument
6	Vinod Vidwans	202421080020 A	Nov-24	Official Journal of the Patent Office – India	A flute-based musical instrument with scale shifting capabilities
7	Vinod Vidwans	429864-001	Nov-24	The Patent Office, Government of India	Flute with dynamic scale shifting
8	Vinod Vidwans	429866-001	Nov-24	The Patent Office, Government of India	Flute with adjustable pitch modulation

Previously granted three patents by German Patent office, 2023, for three new musical instruments.

TITLE OF THE INVENTION: A SHRUTI MANDALAM MUSICAL DEVICE

TITLE OF THE INVENTION: A BRIHAD SHRUTI MANDALAM MUSICAL DEVICE

TITLE OF THE INVENTION: A SHRUTI GUITAR MUSICAL DEVICE

Three patents in the process at Indian Patent office, 2023, for three new musical instruments. Inventor: Dr. Vinod Vidwans, FLAME University, Pune, India

Research, Design and Development of a new musical instrument:

'Bharat Veena' - Microtonal Veena or Samashruti Veena

(Based on Bharata's Equal Temperament *Shruti* Theory)

He has previously designed and developed a new musical instrument called '*Bharat Veena*' based on the two-thousands-year-old theory of '*Shrutis*' (microtones) from Bharata's *Natyashastra*. Information available on following web links:

<http://computationalmusic.com/bharat-veena.php>

<http://computationalmusic.com/making-of-bharat-veena-shruti-veena.php>

Musical Instruments Design Summary:

Dr. Vinod Vidwans has been engaged in designing musical instruments for many years. So far, he has designed, apart from *Bharat Veena* (*Shruti Veena*), *Shruti Mandalam*, *Brihad Shruti Manadalam*, *Shruti Guitar*, *Flexi-Flute Algoza*, *Flexi-Flute Scale Shift*, *Flexi-Flute Pitch Variations*, and many more in the pipeline. All the musical instruments designed by Dr. Vinod Vidwans have been granted patents by appropriate authorities.

Evidence-Driven Indian Knowledge Systems:

Dr. Vidwans strongly believes in the scientific and logical ethos of Indian knowledge systems and always feel that using advanced technology it is possible to demonstrate its strength to the world. He also firmly believes that by adopting a scientific approach it is possible to carry forward the legacy of ancient wisdom and provide leadership to the world in advancement of knowledge. A brief overview of the following projects will demonstrate the strengths of IKS.

Special Invitee:

Special invitee at the IKS Strategic Conclave, Pune on December 14-15, 2023 organized by Indian Knowledge Systems Division, Ministry of Education, Government of India.

Long-Term Research Projects:

Working on following long-term projects for more than thirty years.

Artificial Intelligence and Indian Classical Music: Research focuses on designing and developing a *generative* intelligent system for Indian Classical Music using principles of Artificial Intelligence (AI). The research led to the development of a computational theory of Indian classical music. More information is available on the website: <http://www.computationalmusic.com/>

AI and Smart Systems for Indian Music by Dr. Vinod Vidwans:

The traditional '*Gyana-Samvid*' (Repository of Knowledge) of Indian music can be documented, and preserved in the form of 'smart' digital repositories, 'smart' books and 'smart' AI systems. The advent of smart technologies and Artificial Intelligence has created many pathways to document, preserve, simulate and even interpret this '*Gyana-Samvid*' innovatively. Artificial Intelligence provides an excellent opportunity in this regard. In this context Artificially Intelligent Expert Systems for Indian Music called '*Bharati*', '*AI Tala*', '*AI RagaGen*', and '*AI Raga*' have been designed and developed by Dr. Vinod Vidwans.

Indic Language Platform for AI

The Centre for Interdisciplinary Artificial Intelligence (CAI) at FLAME University, under the initiative of, and in collaboration with, Professor Vinod Vidwans, CAI has developed an Indic Language Word Processor that enables the user to intuitively type Indic language text using a

standard keyboard. The project has been designed and developed in-house, and we envision it being used as a platform for the development of subsequent task-specific software. The Word Processor currently supports typing in Hindi, Marathi, Sanskrit, Vedic Sanskrit, and Gujarati. Support for other Indic Languages will be implemented in later stages of development.

Additionally, it should be noted that modern AI tools need the development of such Natural Language Processing and AI applications for the Indian context that will help to create massive dataset in Indic languages. The project has such long-term goals, as well as the short-term goals envisioned.

YouTube Channel: Indian AI Music

Video presentations of Artificial Intelligence (AI) generated compositions of Indian Raga Music
https://www.youtube.com/channel/UCm_QHdRyO9kcmDqx_OY0KnQ

Doctoral Research

Jan. 89-Dec. 94

Doctoral Research at IIT (Mumbai)

Thesis Title: Characterizing Creativity as Design-Intelligence: A Philosophical Analysis

The thesis puts forth a paradigm that defines creativity as design-intelligence and considers it as an activity of the dynamical system of human mind. A critical explication of various dimensions of this activity opens up possibilities of transforming cognitive patterns of a person. This perspective provides the necessary foundations for pedagogy of creativity. The study expounds generic patterns of creativity common across all creative expressions including artistic, scientific and managerial creativity.

Research Citation:

Research Citations: Google Scholar Analysis till July 9th 2025:

Number of overall citation- 319

Number of citations in last five years- 135

Link: <https://scholar.google.com/citations?user=rJozwywAAAAJ&hl=en>

Earlier Publications:

Artificial Intelligence, Hindu Art and Aesthetics

A conference paper published by Indic Academy online research journal, Indica Today, 21st November, 2021

<https://www.indica.today/research/artificial-intelligence-hindu-art-and-aesthetics/>

Indian Music: Retrospect and Prospects

A paper presented at the conference titled, 'Beyond Imperialism of Categories', The 2nd Interdisciplinary Conference in the series "New Directions in Indic Studies", organized by Indian Institute of Advanced Studies, Shimla and FLAME University, Pune

'The Doctrine of *Shrutis* in Indian Music'

A monograph/ book published by FLAME University, 2016
<http://computationalmusic.com/the-doctrine-of-shruti-in-indian-music.php>

‘Story of Graphic Design’, Graphic Design for Std. XI (A Text Book),
NCERT, New Delhi, Member, Text Book Writing Committee (Published in 2010-11)

‘The New-Age Graphic Design’,
Graphic Design for Std. XII (A Text Book),
NCERT, New Delhi, Member, Text Book Writing Committee (Published in 2012-13)

A Book Chapter Publication: *‘Expressing with Grey Cells: Indian Perspectives on New Media Arts’*, a chapter in the book titled- **‘Educating Artists for the Future’**, (Ed.) Mel Alexenberg,
Intellect Books, UK, May 2008.

‘Criteria of creativity’, in Indian Philosophical Quarterly, July-August 1997.

Retreats and Executive Coaching

Jan. 2020

Honored to anchor a retreat titled **‘Weekend With Wisdom’** organized by Indic Academy at Academy of Ancient Wisdom, Bangalore, India

Mentor/ Guide

November 28th, 2022

The 5th Annual WiMIR Workshop (virtual), A global satellite event

Faculty Development Program

Jan. 12th- 13th 2022

Symbiosis Institute of Design, Pune, India

Conducted a two-day Faculty Development Program on Design Research Methodology

Guest of Honor Address

December 24th, 2021

Madhya Pradesh Vigyan Sammelan- MPVS 21,

Organized at IIT Indore and Renaissance University, Indore, India

Guest of Honor Address:

Topic: Music and Science

Distinguished Guest Address

August 28th, 2021

Indic Academy Conference on Hindu Aesthetics

Topic: Artificial Intelligence, Hindu Art and Aesthetics,

Conference General Chair

March 7-8th 2025

General Chair for HCIPAI Symposium on Transforming Touchpoints for HCI on 07-08 March 2025, organized by Department of Design, Art and Performance, FLAME University, Pune.

Link: <https://www.flame.edu.in/research/conferences/hcipai-symposium-2025-transforming-touchpoints-for-human-computer-interaction>

Conference Session Chair

April 26th 2024

Chair for a Session on ‘**Artificial Intelligence and Indian Philosophical Concern**’ in the International Conference on Indian Knowledge Systems at Vivekanand Global University, Jaipur.

Instagram link: https://www.instagram.com/vgujaipur/?locale=en_gb

Keynote Address

September 9th 2024

Keynote Speaker at Research Conference:

Keynote Speech at the Speech Music and Mind (SMM) workshop in the Interspeech 2024 at IIIT Hyderabad, India.

Link: <https://smm24.iiit.ac.in/keynoteSpeakers.html>

August 4th, 2023

27th International Symposium on Frontiers of Research in Speech and Music (FRSM),

Organized by Department of Electronics Engineering Sardar Vallabhbhai National Institute of Technology, Surat & Sir C.V. Raman Centre for Physics & Music, Jadavpur University, Kolkata

Topic: The Generative Theory of Indian Music (GTIM): A Paradigm for Indian AI Music.

August 5th, 2023

A 2-Day Symposium on " Impacts of AI on Education" at PES University, Bengaluru,

Keynote Address and Panel Discussion

Topic: AI Music: Striking a Different Chord

Invited Talks and Presentations

May 12th, 2021

Interdisciplinary Conference on ‘New Directions in Indic Studies: Beyond Imperialism of Categories’. Organized by Indian Institute of Advance Studies, Shimla & FLAME University.

Invited Panelist and the speaker on the topic - ‘Indian Music: Retrospect and Prospects’.

January 24th, 2021

India Science Festival

Invited panelist as a Distinguished Expert on ‘Science of Music, Music of Science’ as a part of India Science Month Online (ISMO) at 2nd India Science Festival (ISF) 2021 (online).

December 24, 2020

India International Science Festival (IISF)

By The Ministry of Science & Technology et al India

Invited Lecture as a Distinguished Expert on ‘Science Research and Bharateey Sangeet’ at 6th India International Science Festival (IISF) 2020, Goa

June 26, 2020

Sundowner Session on News Fatigue

Invited Panelist to share experiences on the topic- News Fatigue: a phenomenon of being overwhelmed by information... Organized by BLiSc Communications, Bangalore.

May 11, 2019

Department of Sanskrit, University of Hyderabad, Hyderabad, India

Invited talk on Artificial Intelligence and Indian Music.

May 8, 2019

Rotary Club, Gandhinagar, Pune, India

Invited talk on Artificial Intelligence and Indian Music.

March 2019

Vision India Foundation at IGNCA, New Delhi, India

An Invited Distinguished Lecture on Artificial Intelligence and Indian Music at Abhyudaya Conclave.

Oct. 2018

India International Science Festival, Lucknow

Invited Distinguished Talk on 'Bharat Veena: A Synthesis of Physics, Music and Aesthetics'.

Jan. 2018

Department of Vedic Sciences, MIT University, Pune, India

Invited talk on 'Unity Among Arts and Computational Convergence'

Jan. 2018

Centre for Mathematical Modeling and Simulation, Pune University, Pune, India

Invited talk on 'Rule-Based Artificial Intelligence for Indian Music'

Media Coverage

The work on Indian Music and Artificial Intelligence is widely covered by the media. Some notable links are as follows:

Hindustan Times 1st December 2019

<https://www.hindustantimes.com/cities/indian-classical-music-gets-its-groove-the-ai-way/story-VcPmkwXkyyyUh2S0SifoAL.html>

<https://www.hindustantimes.com/cities/studying-in-pune/>

<https://www.hindustantimes.com/topic/-ugc>

<https://www.hindustantimes.com/topic/carnatic-music>

<https://www.hindustantimes.com/search?q=Anjali-shetty>

Sakal News Paper 7th December 2019

<https://www.esakal.com/pune/artificial-intelligence-realized-ban-241701>

Lokmat News paper 8th December 2019

<https://www.lokmat.com/pune/musical-gifts-through-artificial-intelligence/>

SoftPowerMag 9th December 2019

<https://www.softpowermag.com/ai-shows-indian-music-is-both-an-art-and-a-science/>

<https://www.softpowermag.com/ai-shows-indian-music-is-both-an-art-and-a-science/>

UNI India

<http://www.uniindia.com/creative-collaboration-artificial-intelligence-ai-to-generate-indian-music/west/news/1819317.html>

Economic Times 4th Jan. 2020

<https://economictimes.indiatimes.com/magazines/panache/new-software-can-compose-indian-classical-music-with-help-from-ai/articleshow/73099534.cms>

Business Standards 4th Jan. 2020

https://www.business-standard.com/article/pti-stories/prof-designs-ai-music-software-to-generate-bandish-of-raga-120010400400_1.html

The Week Magazine 4th Jan. 2020

<https://www.theweek.in/wire-updates/national/2020/01/04/bes11-mh-music-software.html>

News Track (Hindi) 4th Jan. 2020

<https://www.newstracklive.com/news/pune-professor-vinod-vidvans-develops-software-to-create-bandish-of-ragas-mc23-nu-1345237-1.html>

Devdiscourse 4th Jan. 2020

<https://www.devdiscourse.com/article/arts/817495-prof-designs-ai-music-software-to-generate-bandish-of-raga>

7th World Music Conference 2023 Dec 15th-16th

An online Conference

<https://www.youtube.com/watch?v=MUUTBKQamd0>

Visiting Professor

CEPT University, Ahmedabad, Institute of Design, MIT, Pune, Symbiosis Institute of Design, Pune, D J Academy of Design, Coimbatore, Pt. Deendayal Petroleum University, Gandhinagar, Indian Institute of Management, Ahmedabad, Indian Institute of Technology, Kanpur, India, Indian Institute of Science, Bangalore and many others.

Qualifications

Doctor of Philosophy, 1997

Department of Humanities and Social Science, Indian Institute of Technology, Mumbai

Master of Design (Visual Communication), 1987

Industrial Design Centre, I. I. T. Mumbai

(Specialization in Computer Graphics and Communication through Video)

Master of Fine Arts, (Portrait Painting), 1984

Nagpur University

(Topped the University merit list across the Depts. of Painting, Music and Dramatics)

Bachelor of Fine Arts, 1982, Nagpur University

Fellowships & Scholarships

Research Fellowship for Ph. D. at I. I. T. Mumbai (1989-1994)

Research Scholarship for Master of Design at I. I. T. Mumbai (1985-1987)

Junior Research Fellowship (JRF) of the U. G. C., New Delhi in Fine Arts (1985)

Merit Scholarship and Free-ship for Bachelor of Fine Arts (1978-1982)

Academic Experience

March'08-Till Date

Professor, Department of Design, Art and Performances at FLAME University, Pune

Other Responsibilities included:

Chair, FLAME School of Fine and Performing Arts, FLAME University, Pune

Controller of Examinations (COE), FLAME University, Pune

Teaching Courses: Design Thinking, Nature and Design, Visual Narratives, Creativity and Innovation, Creativity and Innovation for Entrepreneurship, New Media Design, Introduction to Philosophy of Science, Scenario-Building for Entrepreneurs, Bhagavad Gita for Strategic Management, Patanjali Yogasutra for Self-Management, Introduction to Philosophy (Indian & Western)

April'02-Jan'08

Professor at National Institute of Design (NID), Ahmedabad

Seminal contribution in the establishment of the Department of Software and User Interface Design, Department of Information and Digital Design, and Department of New Media Design.

Courses Taught at NID:

Elements and Principles of Design, Creative Composition, Information Design, Instructional Design, Typography, System Design- Game Design, Research Methodology for Design, Design Cognition, Space Form and Structure (SFS)

Final Diploma Projects Guidance: More than 40 students at NID Ahmedabad from various disciplines. One of the important projects includes the design of **Times of India** newspaper.

Committee Member (in the past)

- Member, Text Book Writing Committee, Graphic Design for Std. XI-XII, NCERT, New Delhi.
- Selection Committee member for National Talent Search Examination (NTS), Ahmedabad- Gandhinagar Division, NCERT, New Delhi.
- Member, Board of Studies, School of Performing and Visual Arts, Indira Gandhi National Open University (IGNOU), New Delhi.
- Member, Doctoral Studies Programme, School of Performing and Visual Arts, Indira Gandhi National Open University (IGNOU), New Delhi.
- Member, Doctoral Studies Programme, CEPT University, Ahmedabad.
- Member, Board of Studies, Symbiosis Institute of Design, Pune
- Member, Research & Recognition Committee (for Doctoral Studies), Symbiosis International University, Pune.

Committee Member (present)

- Member, Advisory Board, Symbiosis Institute of Design, Pune.
- Member, Academic Advisory Board of the Cindrebay School of Design, Kozhikode.
- Member, QIC, Symbiosis Institute of Design, Pune.
- Member, Board of Studies, MIT School of Vedic Sciences, MIT, Pune.
- Member, Board of Studies, Communication and Industrial Design Programs, for D J Academy of Design, Coimbatore, Alagappa University, Karaikudi, Tamil Nadu
- Member, Academic Advisory Council, Indic Academy.

FLAME University Committee Member

- Chair, Admissions Committee, FLAME University, Pune
- Member, University Doctoral Committee, FLAME University, Pune
- Member, Board of Examinations, FLAME University, Pune
- Member, Board of Studies, Faculty of Design, Art, and Performances.

Member of various other committees at FLAME University, Pune, in the past including the Academic Council and the Board of Management.

Industry and Professional Experience:

Dec'97-April'02

Manager and Head, Content Design and Development, ETH Research Lab, DishnetDSL, Pune.

Responsibilities:

1. Conducted research on advanced pedagogy and instructional design for various media. Design and development of educational content for Internet and multimedia, e-learning and CBT.
2. Management and Development of three Internet-based Mega-portals on Education, Agriculture and Indian Heritage.
3. Design and development of '**Sharada**' multilingual technology for Indian languages,
4. Communication and instructional design for multimedia CD ROM on computer literacy program titled '**COMPLIT**'. Presently this program is acquired by **Govt. of Maharashtra- Maharashtra Knowledge Corporation Ltd. (MKCL)** and renamed as **MS-CIT** and has now **more than fifteen million users**.

Workshops

Creativity and Innovation, User Interface Design, Dramatics and Calligraphy workshops for corporates and various target groups

Social Responsibility

- Delivered a series of 26 lectures on Yoga-Sutra for 'Yogajali' group of Yoga practitioners, Karvenagar, Pune.
- Delivered a series of 40 lectures on Bhagavad Gita for 'Yogajali' group of Yoga practitioners, Karvenagar, Pune.
- Mentoring on 'Mentor Cloud Network'.

Personal Data

Languages known

Proficient in English, Marathi and Hindi. Special interest in Sanskrit

Computer

Programming with Visual Prolog

Contact Information

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