# **Curriculum Vitae**

# Dr S. Udayakumar

Assistant Professor Heritage Science and Society Programme School of Humanities National Institute of Advanced Studies Indian Institute of Science Campus Bangalore-560012 archaeology1987@gmail.com/udayarch@nias.res.in

Date of Birth: 01March1987

Nationality: Indian Marital Status: Married Sex: Male

#### **Education**

College/ University	Year	Degree awarded	Major field
DeccanCollegePostgraduate&ResearchInstitute,Pune.	2012-2016	PhD	Archaeology
DeccanCollegePostgraduate&ResearchInstitute,Pune.	2009-2011	M.A	Ancient Indian History, Culture and Archaeology (First Class 63.18%)
University of Madras	2005-2009	B.F. A	Bachelor of Fine Arts (Metal Department) (First class 64%))
Thiagarajar Model Higher Secondary School, Madurai. Board of Higher Secondary Examination, Government of Tamil Nadu, India	2003-2005	12 <sup>th</sup> Std	Tamil.English,Commerce,AccountancyandComputer Science
Sethupathi Higher Secondary School, Madurai. Board of Secondary Education,	2003	10 <sup>th</sup> Std	Tamil,English,Science,SocialScienceandMathematics

Government of Tamil		
Nadu, India		

#### **Professional Employment History**

Institution	Position	From	То	Nature of work
National Institute	Assistant	01 August	Ongoing	Research on
of Advanced	Professor	2023		Archaeometallurgy
Studies				of South India,
Indian Institute of				Experimental
Science Campus				archaeology and
Bangalore				dissemination
				archaeology and
				offering credit
				course for NIAS
				PhD Students
National Institute	Post Doctoral	01 January	31 <sup>st</sup> July 2023	Research on
of Advanced	Research	2018		Ethnoarchaeology,
Studies	Associate			Experimental
Indian Institute of				archaeology and
Science Campus				dissemination
Bangalore				archaeology
Sharma Centre for	Research	01 June 2013	31 August	Antiquity
Heritage	Assistant		2013	documentation of
Education,				stone tool
Chennai				
Sharma Centre for	Project	06 July 2011	09 November	Public archaeology
Heritage	Coordinator		2011	and workshop
Education,				coordinator
Chennai				

## **Publications**

**Udayakumar, S. 2025.** Ethno-technological Perspective of Current Wisdom of Metal Craft and Craftsmanship, Tamil Nadu and Karnataka. SAARC Cultural Centre, Vol. 10, Sri Lanka.

**Udayakumar, S. 2025.** A Current Wisdom and Heritage of Making Terracotta Horses in Konthagai Village, Sivagangai District, Tamil Nadu. Heritage: Journal of Multidisciplinary Studies in Archaeology 10: 129-147

Udayakumar, S. 2024. An Experimental Study of Iron-Smelting Techniques Used in the Nathara-Ki-Pal and Iswal, India: Results for the Reconstruction of Ancient Metallurgical

Processes, in South Asian History, Culture and Archaeology. Vol. 4, No. 2, 2024, pp. 221-240.

**Udayakumar, S.** and Pandy.L. **2023**. Revisiting the Metal working in Southeast Rajasthan: A Historical study, in *Peopling and cultural spread*. *Studies in South Asian Archaeology*. In honour of Prof. Vasant Shinde Edited by Ajmal Shah & Mumtaz Yatoo, Dev Publishers & Distributors.

Udayakumar, S. 2023. Experimenting with bones: Preliminary research on bone tool making techniques, in *Animals in Archaeology: Integrating Landscapes, Environment and Humans in South Asia (A Festschrift for Prof. P.P. Joglekar)* Volume 1 (Pankaj Goyal, Abhayan G.S., and Sharada Channarayapatna Eds.), pp. 279-287. Thiruvananthapuram: Department of Archaeology, University of Kerala.

**Udayakumar, S.** and Mukherjee. Diya. **2022**. Revisiting the role of Vishwakarma in Indian Metallurgy (Lost-Wax Technique): Case studies from Tamil Nadu and Kerala. *INDICA/TODAY*: 1.

**Udayakumar, S. 2020**. Initial exploration of the woodcraft techniques of Tamil Nadu. In the Wood is good, Grow more. Institute of wood science and technology. Vol. 1(4): 47-50.

**Udayakumar, S. 2020**. The traditional craft of leather bellows-making: technoethnoarchaeological perspectives from Sholapur, India. In the *Crucible*. Archaeometallurgical News. Historical Metallurgy Society News: Issue 103, spring 2024, 4-5. Brunel University, U.K.

**Udayakumar, S. 2019**. Traditional technique of gold jewellery: A case study of Devakottai. In *Journal of the centre for heritage studies*: Vol: 1, 323-329, University of kelaniya, Srilanka.

**Udayakumar, S. 2019**. Traditional grains storage practices of Chettiar community in Tamil Nadu with special reference to sivagange district. In *Journal of the centre for heritage studies*: Vol. 1. 305-311, University of kelaniya, Srilanka.

**Udayakumar, S. 2019**. A study of art and architecture of Avudayar kovil temple of Pudukkottai district, Tamil Nadu. In *Art style/art & culture* International Magazine, issue: 1, 106-116. New York.

**Udayakumar, S. 2018**. A Unique Bimetallic antiquity from the early historical site of Iswal, Rajasthan. In *Pakistan Heritage*: Vol: 10, 91-97, Department of Archeology, Hazara University Mansehra. Pakistan.

Udayakumar, S. 2018. Ancient Iron Smelting in Nathara-Ki-Pal, Southeast Rajasthan. In *History Today, Journal of History and Historical Archaeology*: No. 19, New Delhi.

Udayakumar, S. 2017. Ancient iron smelting in Nathara-ki-pal, Southeast Rajasthan. In *the Crucible*. Archaeometallurgical news. Historical Metallurgy Society News: Issue 96, 10-11, winter, Brunel University, U.K.

Udayakumar, S. 2016. An overview of experimental work on Ancient Iron Technology". In *Heritage Journal of Multidisciplinary Studies in Archaeology* Vol: 4, 472-481, Department of Archaeology, University of Kerala.

Udayakumar, S. 2016. Investigating causes of technological difference and similarity between Chola Bronze Casting and Dhokra Casting. In *Bulletin of Deccan College Post Graduate and Research Institute* Vol: 74, 139-145. Pune.

**Udayakumar, S. 2014**. Traditional wisdom and current practices of bronze technology in Tamil Nadu: with special reference to Tanjore. In *Heritage Journal of Multidisciplinary Studies in Archaeology* Vol: 2. 772-782, Department of Archaeology, University of Kerala.

### Scholarship and Research Awards

**2012** Received Nehru Trust Small Study Research Grant on the proposed research entitled. "Traditional wisdom and current perspective of bronze technology in Tamil Nadu: with special reference to Tanjore district" New Delhi.

**2014** Received Junior Research Fellowship Indian Council for Historical Research (ICHR), New Delhi.

2015 Received the Tylecote Memorial Fund, Historical Metallurgical Society, U.K.

**2016** Received Nehru Trust Small Study Research Grant on the proposed research entitle, "Investigating the technological difference between the Chola bronze casting and Dokra bronze casting through experimental study" New Delhi.

**2017** Received Akshara Foundation grant for the study of ancient medieval temple architecture on the proposed research entitled "Study of art and architecture of Avudyarkovil temple at Pudukkottai district, Tamil Nadu" Ahmadabad.

2017 Received INTACH Research Scholarship Award 2016-17 on the proposed research

entitled "Experimental study of iron-smelting techniques used in Southeast Rajasthan" New Delhi.

**2017** Received ICHR Research Scholarship project Award 2017-19 on the proposed research entitled "Understanding the ancient air bellows through ethno-techno-archaeological lens: with special reference to Maharashtra. India" New Delhi.

**2019** Received the Tylecote Memorial Fund, Historical Metallurgical Society, U.K, for research of "Understanding the ancient leather air bellows through ethno-techno-archaeological lens: with special reference to Sholapur, India.

**2020** Received Virtual Fellowship Programme Award, University of Liverpool for research of Amour architecture of Tipu Sultan in Bangalore. <u>https://www.liverpool.ac.uk/humanities-and-social-sciences/research/blog/2021-posts/virtual-fellows/</u>

**2021** Received **INSA Young Historical of Science Award**, Indian National Science Academy, New Delhi.

**2023** Received The Tylecote Memorial Fund, Historical Metallurgical Society, U.K. for the research of "Investigating iron melting process with special reference to Ballari iron ore.

**2024** Received **SRS- Interuniversity development cooperation project** as a visiting scholar scholarship award in Ghent University, Belgium.

# **Conference Papers**

**2025** An Archaeo-Experimental Approach to Understanding the Indian Metal Heritage of Bronze Images of Harappan Civilization. In Indus Valley 100 National Conference on Indus Civilization: its Culture & People- Archaeological Insights, 3rd & 4th March 2025, DG Vaishnav College & Centre for South Indian Studies, Chennai

**2024** Experimental archaeology and ethnoarchaeology- Pottery Techniques Perspective. In 3<sup>rd</sup> International conference on History, Science and Technology of South Asian Ceramics, To commemorate Padma Shri Awardee IRAVATHAM MAHADEVAN, 5<sup>th</sup>- 9<sup>th</sup> January 2024, IIT Madras.

**2022** Understanding past technology through an experimental approach: Case study of pottery techniques, bone tool making and iron smelting process. In Young Researcher in Archaeometry5, Organized by Austrian Archaeological Institute (ÖAW), 5<sup>th</sup>-6<sup>th</sup> September 2022.

**2022** Primary understanding ancient technology through experimental approach; case study of Bone tool making techniques. In The Northern Paleolithic and Evolutionary Anthropology (NOPE) EXARC. net. Sponsored by antiquity and Dr coco's Academic Proof reading service, U.K. 9<sup>th</sup> April 2022.

**2022** Understanding ancient technology through an experimental approach; case study of pottery techniques, Bone tool making and metalworking (iron smelting and brass casting). In (EASts) Experimental Archaeology student symposium Liverpool, University of Liverpool, 9<sup>th</sup> June 2022.

**2021** With Dr. Diya Mukherjee. Revisiting the role of Vishwakarmas in India metallurgy (Lostwax technique); Case studies from Tamil Nadu and Kerala, In INDICA Hindu Art, Architecture & Artisan Traditions, 19<sup>th</sup> November,2021.

**2021** Investigating the ancient heritage of Indian Iron smelting technology through experiment approach, In International Camp of Experimental Archaeology virtually Torun, 26<sup>th</sup> August,2021.

**2021** Primary understanding ancient technology through an experimental approach. In the 13<sup>th</sup> Annual workshop, South Asian Archaeology Conference, Hartwick College, USA 24-25 April.

**2021** A comparative study of lost-wax technique of South Indian bronze Casting and Manipur Brass Casting. In the International Conference on Australasian Research Cluster for Archaeological Science, Australia, 19<sup>th</sup> -20<sup>th</sup> March 2021.

**2021** A Comparative Approach to Understand the Current Ethno-techniques of Iron smiths of South and West India: Case Study of Karnataka and Gujarat. In the International Webinar onIronAgeinSouthAsia, 1-4<sup>th</sup> March, Department of Archaeology, University of Kerala.

**2019** A comparative analyses of Dhokra casting and Chola bronze casting: A Technological approach. In the National Seminar on Technology and Society in Central India, 1<sup>st</sup> -2<sup>nd</sup> March, Organized by Department of History, Indira Gandhi National Tribal University, Amarkantak, M.P.

**2018** A Comparative study of Iron workers of South and West India; A Case Study of Karnataka and Gujarat. In the International Conference on Heritage of South & South East Asia: Issues on Musealization from 15-16 November 2018. Department of Museology, University of Calcutta, Kolkata.

**2018** A Comparative Study of Lost-Wax technique of South Indian Bronze Casting and Manipur Brass Casting. In the Conference on Relevance of Archaeology for 21<sup>st</sup> century India, Bangalorefrom24<sup>th</sup>July–25<sup>th</sup> July2018.NationalInstituteof Advanced Studies, Bangalore.

**2018** I have presented An Archaeo-Experimental Approach to Understanding the Indian Metal Heritage of Small-size Bronze Image of Harappan culture. In INAE-Engineering heritage-meeting Study Group Annual Meeting & Workshop on Digital Museum of metallic Objects, Deccan College PG& RI, Pune from  $20^{th}$ July  $-21^{st}$  July 2018.

**2018** Investigating Causes for the Small Size of Bronze Images in the Harappan Civilization: A Technological perspective. In the International Conference in the Growth and Development of Indian Culture: Historical and Literary Perspectives (Prehistoric Period – 12<sup>th</sup> Century CE) In the Dr. S.R.Rao memorial Foundation for Indian Archaeology, Art and Culture, Bangalore from 29<sup>th</sup>June–1<sup>st</sup> July 2018.

**2018** Traditional Techniques of Gold Jewellery: A Case Study of Devakottai, Tamil Nadu. In the6<sup>th</sup> International Congress Society of South Asian Archaeology, In Indian Museum, Kolkatafrom16<sup>th</sup>-18<sup>th</sup>March, 2018.

**2017** Experimental approaches in the study of the formation of iron smelting furnaces. In the Joint annual conference of IAS-ISPQS-IHCS and International seminar on the recent field research and scientific studies in Indian Archaeology. In Centre of Advance study, Department of AIHC & Archaeology, BHU Collaboration from 4<sup>th</sup> -6t December.

**2017** An experimental study of iron smelting techniques used in the Southeast Rajasthan; with special reference to Nathara-Ki-Pal, Udaipur. In the International Seminar on Field Archaeology, In University of Kerala 16<sup>th</sup> -19<sup>th</sup> January.

**2016** Experimental smelting of iron ores from Nathara-ki-Pal, Udaipur: Results for the reconstruction of ancient metallurgical processes. In the national conference of language, culture and technologies. In Sahitya Sanstan, Janardhan Rai Nagar Rajasthan Vidhya Peeth, Udaipur (Platinum Jubilee Seminar 1941-2016), 7<sup>th</sup> November.

**2016** Investigating and tracing the continuity and change in the Lost-Wax technique of Bronze Casting, archaeological and anthropological perspectives. In the International Conference on Ancient Science & Technology: Retrospection & Aspiration (ASTRA- 2016), In Deccan College Post Graduate & Research Institute, Pune09<sup>th</sup>-11<sup>th</sup> January.

2015 Experimental studies in Iron Smelting. In the Joint annual conference of IAS-IPQS-IHCS

and International seminar on culture and cognition in reconstruction the past, In Department of History, University of Hyderabad. 17<sup>th</sup>-20<sup>th</sup>December.

**2014** Evidence of iron smelting from Iswal, Southeast Rajasthan: An archaeological and ethnographic study. In the Joint annual conference of IAS-ISPQS-IHCS and International seminar on Archaeology and language. In Deccan College Post-Graduate and Research Institute (Deemed to be University) Pune 6<sup>th</sup>-9<sup>th</sup> October.

**2013** Iron objects from Iswal (Early Historical Phrase), Rajasthan. In the Joint annual conference of IAS-ISPQS-IHCS and International seminar on the Recent Advance on Archaeological Science and Indian Archaeology, In Centre of Advance Study, Department of AIHC & Archaeology, BHU collaboration with ASI and Bharat Kala Bhawan from 14<sup>th</sup>-16<sup>th</sup> December.

**2013** Investigating causes for the small size of bronze images in the Harappan Civilization: A Technological Perspective. In the Joint annual conference of IAS-ISPQS-IHCS and International seminar on the Recent Advance on Archaeological Science and Indian Archaeology, In Centre of Advance study Department of AIHC & Archaeology, BHU Collaboration with ASI and Bharat Kala Bhawan from 14<sup>th</sup>- 16<sup>th</sup>December.

**2013** Labour in the context of bronze image production in Tamil Nadu in the workshop on understanding labour: Region, caste and gender through Tamil history and Literature, organized by Department of Indology, French Institute of Pondicherry and Tamil Nadu- Puducherry progressive writer's artisans association, 21<sup>st</sup> -23<sup>rd</sup> August.

**2012** Typological study of iron object from Iswal (Early Historical Phrase), Rajasthan in the Regional Workshop on Archaeology of Western India, organized by the Archaeological survey of India, Mumbai Circle and Deccan College Post-Graduate and Research Institute, Deemed University from 5<sup>th</sup>-6<sup>th</sup> November, Pune.

**2011** Art and wisdom of bronze casting in Tamil Nadu in the Joint annual conference of IAS-ISPQS-IHCS and national seminar on the Megalithic culture of India, organized by the Department of Archaeology, University of Kerala and ASI, 11<sup>th</sup>-13<sup>th</sup> November.

### **Conference** Attended

**2018** Participated in two-day international seminar "Altruism, wellbeing and purpose vantage views on planetary life and its meaning from biology, Indian Philosophy and the arts" held at National Institute of Advanced Studies, Bangalore, 1<sup>st</sup>-2<sup>nd</sup> February.

2018 Participated in national conference on science in performing arts, 12<sup>th</sup> -13<sup>th</sup> January "Nataraja, a confluence of arts and science: Emerging perspective with insights", IUCAA,

Pune.

**2018** Participated in Dialogues at the Science-Society interface: some contemporary issues and themes A Conference in memory of Prof. C V Seshadri, IIT Madras Research Park, Taramani, Chennai–600113, 8<sup>th</sup>-10<sup>th</sup>Feb.

**2015** Participated in one-day seminar "New Perspectives on Pre- and Protohistory in India" to Honour Prof. V.N. Mirsa on his 80<sup>th</sup> Birthday held at Department of Archaeology, Deccan College, Pune, on August 18.

**2014** Participated in the Seminar & Demonstrations on Art Education 21- 24 January 2014, held at Lalit Kala Akademi (National Academy of Art) Ministry of Culture, Government of India New Delhi.

**2013** Participated in the seminar "New perspectives on the Indian Acheulian: A seminar to honor Dr.R.S. Pappu in his 80<sup>th</sup> year" November 22, Department of Archaeology, Deccan College Postgraduate & Research Institute, Pune.

**2012** Participated ICHR Sponsored International Seminar on Harappan sites In Western India (Gujarat) 22<sup>nd</sup> -24<sup>th</sup> March 2012 organized by the Department of Archaeology, Deccan College Postgraduate & Research Institute, Pune.

**2011** Participated UKIERI Dissemination seminar "Pioneering Ferrous Metallurgy" 16<sup>th</sup> -18<sup>th</sup> November, National Institute of Advanced Studies, Bangalore and Exeter University, U.K.

**2010** Attended a National conference on Recent Advances in Indian Archaeology during 3<sup>rd</sup> and4<sup>th</sup> December 2010, organized by the Department of Archaeology and Ancient History, Faculty of Arts, The Maharaja Sayajirao university of Baroda under the UGC-DRS-SAP-II.

### Field Experience

**2010** One-month excavation at Proto-historic Harappa culture site of Farmana in Haryana, India. Directed by: Prof. Vasant Shinde, Deccan College Post Graduate & Research Institute, Pune. Exploration of the Harappan sites in Haryana such as Rakhigarhi and Gerawal.

**2011** 10 days' trip to Madhya Pradesh (Khajuraho group of Temples, Bhopal, Vidisha & Sanchi) for Art & Architecture and Museology field trip headed by 3 lecturers from Deccan College Post Graduate& Research Institute, Pune.

**2012** Complete season of excavation at Proto-historic Harappa culture site of Kotada-Bhabli, Gujarat, India. Directed by Dr. Prabodh Shirvalkar, Deccan College Post Graduate & Research Institute, Pune. Duties: Site and trench supervisor, Responsibilities: Supervising the site.

**2013** Participated in the excavation at Kotada- Bhadli (a single culture late mature Harappan site) district Kuchchh, Gujarat, India, under the supervision of Dr. Prabodh Shirvalkar, Deccan College

Post Graduate & Research Institute, Pune. Duties: Site and trench supervisor, Responsibilities: Supervising the site.

**2013** Participated in the exploration and test pit at Teri (Microlithic site) District Thoothukudi, Tamil Nadu, India, under the director of Dr. Kumar Akhilesh and Prof. Shanti Pappu from Sharma Centre for heritage education, Chennai.

**2017** Participated in the excavation at keeladi, Sivagange district, Tamil Nadu, under the supervision of Dr. S.P. Sriram, Archaeological Survey of India, Bangalore Excavation branch. Responsibilities: Supervising the site.

**2023** Participated in the exploration in NIigiris district, Tamil Nadu (March to May 2023) with the collaboration of Ghent University <u>https://www.nilgiri.ugent.be/team/</u>

**2024** Participated in the exploration in NIigiris district, Tamil Nadu (April to May 2024) with the collaboration of Ghent University <u>https://www.nilgiri.ugent.be/team/</u>

#### **Dissertation and PhD Research**

**2008-2009** Dissertation on "Sri Chakra" a thesis submitted to the University of Madras, for the degree of Bachelor of fine arts. Under the guidance of Dr. K. Rajendran, Department of Metal sculpture, Govt. College of architecture and sculpture, Mamallapuram.

2011 Dissertation on "THEARTANDSCIENCEOFBRONZETECHNOLOGYINTAMIL

NADU": Traditional wisdom and current perspectives a thesis submitted to Deccan College Postgraduate and Research Institute, Pune. Under the guidance of Dr. Vijay Sathe and Dr Prabodh Shirvalkar, Deccan College Postgraduate and Research Institute, Pune.

**2012-2016** PhD on "A Study of Iron technology of Early Historical and Medieval Phase of Iswal and Nathara-Ki-Pal, Southeast Rajasthan a thesis a thesis submitted to Deccan College Post Graduate and Research Institute, Pune. Under the guidance of Dr. V.S.Shinde, Deccan College Post Graduate & Research Institute, Pune.

#### **Delivered lectures**

**2025** Delivered lecture on "The Importance of Experimental Archaeology and Ethnoarchaeology in Technical Studies of Material Culture", Deccan College PG & Research Institute, Pune. 6<sup>th</sup> March 2025

**2024** Delivered lecture on "A current wisdom of Indian metal heritage and craftsmanship: Technological Perspective", NMKRV College for Women, Jayanagar, Bangalore. 18<sup>th</sup> May.

**2024** Delivered lecture on "Trace, observe and understanding the metal and metal craftsmanship in India", IGRMS, Mysure, World Heritage Day Popular talk. 18<sup>th</sup> April.

**2023** Delivered lecture on "Methods in Heritage and Archaeology", MES College of Science, Arts and Commerce, Bangalore. 9<sup>th</sup> November.

**2022** Delivered lecture on "Experimental Archaeology: Bone tool making/ Pottery making technique/ Metal technology", French Institute of Pondicherry, India. 29<sup>th</sup> April.

**2020** Delivered lecture on "Craft of Pottery/ Wood carving/ Weaving/ Metal heritage (Understanding India)", Vivekananda Institute of Indian Studies, Mysure. 23<sup>rd</sup> November (online).

**2020** Delivered lecture on "Investigating the ancient heritage of Indian iron smelting technology through experimental approach", Department of history & archaeology, School of Social Science, Nagaland University, Kohima Campus. 8<sup>th</sup> November (online).

**2020** Delivered lecture on "Craft Heritage in India" (Undertaking India) in Vivekananda Institute of Indian Studies. 4<sup>th</sup> November (online).

**2020** Delivered lecture on "Methods in Metals" in Department of History & Archaeology, Tura Campus, North-Eastern Hill University, Shillong, Meghalaya.

**2020** Delivered lecture on "Craft of Pottery/ Wood carving/ Weaving/ Metal heritage (Understanding India)", Vivekananda Institute of Indian Studies, Mysure. 23<sup>rd</sup> October (online).

**2019** Delivered Lecture on "To trace, Observe and Understand the ancient metal technology in India". In NIAS Wednesday lecture, 11<sup>th</sup> September.

**2019** Delivered Lecture on "Investigation ancient Indian heritage of iron smelting technology: an experimental approach in the workshop", Workshop on Archaeological Resource in the reconstruction of ancient history of Tamil Nadu and the application of recent technological studies, 24<sup>th</sup> June to 7<sup>th</sup> July, organized by the school of history and tourism studies, Tamil Nadu Open University, Saidapet Chennai.

**2018** Delivered Lecture on "Archaeo-Experimental Approach to understanding iron smelting processes: A case study of Naratha-Ki-Pal, South East Rajasthan", NIAS Wednesday lecture 16<sup>th</sup> July.

**2018** Delivered lecture on "Lost-Wax Method (South Indian Bronze), Christ University (Deemed to be University), Bangalore, 23<sup>rd</sup> May.

**2018** Delivered lecture on "Lost-Wax Method (South Indian Bronze), Marry Ann Matriculation Higher Secondary School, Madurai, Tamil Nadu, 15<sup>th</sup> February.

**2018** Delivered lecture on "Archaeology, Marry Ann Matriculation Higher Secondary School, Madurai, Tamil Nadu, 14<sup>th</sup> February.

**2013** Delivered lecture on "knowledge of traditional bronze image making" in Ellen Sharma Matriculation Higher Secondary school & Sharma center for Heritage education, Chennai, Tamil Nadu.

**2012** Given an onsite lecture on Technology of Bronze casting to the Students from Tilak Maharashtra Vidyapit at the site of Kotada Bhadli, Gujarat, India.

**2011** Delivered lecture on "Art and wisdom of bronze casting in Tamil Nadu "in Sharma center for Heritage Education, Chennai, Tamil Nadu.

### PhD Credit Course Offered

**2024** Methods in Heritage Studies, Elective Two-Credit for NIAS doctoral students, January to May

### **Workshops**

**2009** Participate bronze sculpture making competition by Tamil Nadu Tourism, Mamallapuram, Tamil Nadu.

**2010** Organized a One Day Workshop on Pottery Making at Deccan College Postgraduate and Research Institute, Pune.

**2012** Participated in the workshop on Water Management, past and Future- an Archaeological Perspective organized by Society of South Asian Archaeology (SOSAA), 13<sup>th</sup> October. In the Department of Archaeology, Deccan College Post-Graduate and Research Institute, Pune.

**2013** Participated in the workshop on The Robert Bruce Foote memorial workshop on Prehistory& Lithic Technology from 30<sup>th</sup> may to 3<sup>rd</sup> June organized Celebrating the 150<sup>th</sup> Anniversary of Indian Prehistory in Sharma Centre for Heritage Education, Chennai.

**2013** was a resource person in the workshop on The Robert Bruce Foote memorial workshop on Lost-Wax method technology from  $5^{th}$  to  $6^{th}$  September organized celebration the  $150^{th}$  Anniversary of Indian Prehistory, Sharma Centre for heritage education, Chennai.

**2013** Organized a workshop on The Robert Bruce Foote memorial workshop on Paleontology &Prehistory from 25<sup>th</sup> and 26<sup>th</sup> October organized Celebrating the 150<sup>th</sup> Anniversary of Indian Prehistory in Sharma Centre for Heritage Education, Chennai.

**2013** Organized and Participated a workshop on Foote- Prints Robert Bruce Foote and India's Stone Age Legacy from 28<sup>th</sup> and 29<sup>th</sup> December organized Celebrating the completion of 150years of the Indian Prehistory in IGRMS, Bhopal in collaboration with Sharma Centre for Heritage Education, Chennai.

**2014** Contacted a Demo Cum workshop on Lost- Wax Method from 21- 24 January organized seminar & Demonstrations on Art Education at Lalit Kala Akademi (National Academy of Art) Ministry of Culture, Government of India.

**2014** Was a resource person a workshop on The Robert Bruce Foote memorial workshop on Prehistory, Rock art and Stone Napping from 3<sup>rd</sup> and 4<sup>h</sup> January organized celebrating the 150<sup>th</sup>AnniversaryofIndianPrehistory in Sharma Centre for Heritage Education,Chennai.

**2014** Was a resource person in Archaeology workshop on Experimental lithic Knapping &Microware studies. Jointly organized by Department of History and Archaeology, Nagaland University and ICHR.

**2014** Was a resource person in Lost-wax method technology on 12<sup>th</sup> July in Sharma Centre for Heritage Education.

**2014** Was a resource person in Lost-wax method technology on 18<sup>th</sup> July in Sharma Centre for Heritage Education.

**2014** Participated in the workshop on "Ceramic Production" Jointly organized by Department of Archaeology, Deccan College Pune and Potters in Peril Trust Mumbai from 7<sup>th</sup> to 9<sup>th</sup>August.

**2014** Was a resource person in Lost-wax method technology on 27<sup>th</sup> September in Sharma Centre for Heritage Education.

**2014** ParticipatedasaResourcePersoninPaleoanthropologicalPerspectivesonPlantsCommunities in South Asia INQUA- Ha Bocm workshop cum training Programme 27<sup>th</sup> Octoberto2<sup>nd</sup>NovemberatSharmaCentreForHeritageEducationandFrenchInstituteofPondicherry

**2014** Participated in the workshop on "Archaeometallurgy and Archaeology" organized by Indian Institute of Technology, Gandhinagar from 8and 9<sup>th</sup> December.

**2015** Was a resource person in Lost-wax method technology on 16<sup>th</sup> February in Sharma Centre for Heritage Education.

**2015** Was a resource person in Lost-wax method technology on 26<sup>th</sup> march in Sharma Centre for Heritage Education.

**2015** Was a resource person in Lost-wax method technology on 3<sup>th</sup> July in Sharma Centre for Heritage Education.

**2015** Was a resource person in Lost-wax method technology on 12<sup>th</sup> July in Sharma Centre for Heritage Education.

**2015** Was a resource person in Lost-wax method technology on 18<sup>th</sup> July in Sharma Centre for Heritage Education.

**2015** Was a resource person in organizing Children's workshop: The Lost-Wax method technology on  $22^{nd}$  September in Sharma Centre for Heritage Education.

**2015** Was a resource person in organizing a Children's Workshop: Paleontology & Prehistory 25<sup>th</sup> & 26<sup>th</sup> October in Sharma Centre for Heritage Education.

**2015** Organized and participated in the workshop Research Methodology for Heritage Education 3<sup>rd</sup>-9<sup>th</sup> October, Deccan College PG&RI, Pune.

**2015** Participated in Workshop on Lithic studies organized by Sharma Centre For HeritageEducation3<sup>rd</sup>-9<sup>th</sup>October.

**2016** Participated a Resource person in Pale-anthropological perspectives on plants communities in South Asia "*Prehistory, Plants and People*" INQUA-HaBocm workshop cum training programme 18<sup>th</sup> January to 24, Sharma Centre For Heritage Education and French Institute of Pondicherry.

**2016** Was a resource person in organizing a "Playtime at National Museum" 18<sup>th</sup>& 19<sup>th</sup> June in National Museum, New Delhi.

**2017** Was a resource person in organizing children's workshop: The Lost-Wax Method technology 22<sup>nd</sup> September, Sharma Centre For Heritage Education.

**2018** Was a resource person in organizing a "Playtime at National Museum" 1<sup>st</sup> to 3<sup>rd</sup> June, National Museum, New Delhi.

**2019** Organized two-day workshop and exhibition on "*Karu*" the womb: Art and Science of Image casting, 5<sup>th</sup> and 6<sup>th</sup> September, National Institute of Advanced Studies, Bangalore.

**2020** Organized and Resource person two-day workshop in "The metal casting tradition of India and Korea" 2020 National Science Museum of Korea and Government college of Architecture and Sculpture, 21<sup>st</sup> and 22<sup>nd</sup> January, Govt. College of Architecture and Sculpture, Mamallapuram.

**2021** Organized and Resource person one day workshop in "India Pottery Workshop", 15<sup>th</sup>January2021, Vivekananda Institute of Indian Studies (VIIS), Mysuru.

**2023** Organized and Resource person one week workshop in "Ancient Iron Smelting Process in India" 9<sup>th</sup> January to 13<sup>th</sup> January, Netaji Subhash Chandra Bose Govt. Girls School, Tekkalakote, Ballary.

**2023** Organized and Resource person two-day workshop in "Ancient Pottery techniques in India"24<sup>th</sup>& 25<sup>th</sup> August2023, National Institute of Advanced Studies, Bangalore.

2023 Organized and Resource person two-day workshop in "Experimental Approaches in

Material Culture: Stone Tool Knapping" 2<sup>nd</sup>& 3<sup>rd</sup> Nov 2023, National Institute of Advanced Studies, Bangalore.

**2024** Resource Person two-day workshop in "South India Bronze Casting: Experimental Approach" 2<sup>nd</sup> & 3<sup>rd</sup> March 2024, IIT Gandhinagar, Gujarat.

**2025** Organized and Resource person two-day workshop in "100 years of Harappa: through Bronze Age" 6<sup>th</sup> & 7<sup>th</sup> Feb 2025, National Institute of Advanced Studies, Bangalore.

**2025** Resource Person Two-days' workshop on Experimental archaeology of Bone tools making Techniques at Somaiya Vidyavihar University in Mumbai, 4<sup>th</sup> & 5<sup>th</sup> March 2025.

### <u>Membership</u>

Life Membership in ISPQS, C/O Deccan College Post-Graduate & Research Institute, Pune Life Fellow in Indian Social Science Academy, Allahabad