



# Dr. S Thirumalini

ASSOCIATE PROFESSOR  
HERITAGE RESEARCH LAB

## PERSONAL INFO:

Birth Date- 6th May, 1974  
Age- 45yrs  
Gender- Female  
Nationality- Indian

## TECHNICAL SKILLS:

- Building Materials
- Ancient Architecture
- Lime Mortar
- Characterization & Simulation Study
- Organic Additives

## EDUCATION:

- University of Minho  
SAHC, 2019
- Vellore Institute of Tech.  
Ph. D- Structures, 2015
- Anna University  
M. E.- Environment, 2007
- Madras University  
B. E.- Civil, 1995

## WORK EXPERIENCE:

**Associate Professor**  
VIT University Jun'16 - Present

**Associate Professor**  
R.M.K Eng. College Jun'07 - Apr'14

**Lecturer**  
Jaya Eng. College Jun'03 - Jun'07

**Lecturer**  
SVCET Jun'01 - Jun'03

**Lecturer**  
Pallavan Eng. Coll. Dec'97 - Dec'00

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## INDIAN PATENTS

**Development of Eco bacterial lime mortar using Kadukai and Jaggery- 4631/CHE/2014**

**Aloe Vera on lime mortars - 4630/CHE/2014**

## PROJECTS

**Protection of heritage monuments & land mark of National and International importance in India and Srilanka due to direct lightning strikes, Traditional & Scientific Methods, Indo - Srilankan Project, DST, India. (2019- 21)**

**Analysis of excavated building materials at Early Historical site of Alagankulam, Ramanathapuram District, Tamil Nadu, State Archaeological department, Govt of Tamil Nadu. (2019- 20)**

**Analysis of excavated building materials at Early Historical site of Keezhadi, Madurai, Tamil Nadu, State Archaeological department, Govt of Tamil Nadu. (2019- 20)**

**Restoration of Chennai high court Domes, Tamil Nadu State government. (2019- 20)**

**Characterization of ancient mortars and simulation of new mortar Thanjavur palace and Naganathaswamy temple, Kumbakonam, Tamil Nadu state planning commission. (2015 -16)**

**Ecofriendly Durable Herbocrete, DST, New Delhi. (2012)**

## CONSULTANCY

**Production of limecrete at Haveli, Rajasthan.**

**Production of organic lime mortars for green building at sacred groves at Auroville, Pondicherry**

**Testing of lime mortars for Kolkata lime centre.**

**Chemical analysis for Lime mortars for state archae. department**

**Testing of building materials from Alagunakulam and Keeladi excavation site, India**

**Analytical testing and interpretation of lime mortar samples for many private heritage structure.**

## RESEARCH PUBLICATIONS

Influence of organic additive on carbonation of air lime mortar - changes in mechanical and mineralogical characteristics, European Journal of Environmental and Civil Engineering (2020).

Effect of natural herbs on hydrated phases of Lime mortars, Journal of architectural engineering, ASCE, (Acc. for publ.) (2020).

Grouting and Injection Techniques using organic lime mortars to arrest water leakage and Repair Cracks in Renuka Devi Temple, Chandragutti, India” Materials and Technology Journal (Acc. for publ.) (2020).

Alternative Approach for Traditional Slaking and Grinding of Air Lime Mortar for Restoration of Heritage Structures: Natural Polymer, Journal of Architectural engineering, ASCE (2019).

Identification of Bio-Minerals and Their Origin in Lime Mortars of Ancient Monument: Thanjavur Palace, International Journal of Architectural heritage, Conservation and restoration, Taylor & Francis Publication (2019).

Effect of natural polymers from cissus glauca roxb on the mechanical & durability properties of hydraulic lime mortars, International Journal of Architectural heritage conservation, analysis and restoration, Taylor and Francis Publication (2018).

Evaluation of strength and durability of natural fiber reinforced high strength concrete with M-sand, Romanian Journal of Materials (2018).

Analysis of ancient lime plasters- Reason behind longevity of the monument Charminar, India, A study, Journal of Building Engineering (2018).

Mechanical and Physical properties of natural additives dispersed lime, Journal of Building Engineering, 15,70-77, (2017).

Experimental Investigation on physical and mechanical properties of lime mortar: Effect of organic addition, Journal of cultural heritage- (2017).

Characterization of Hydraulic Lime Mortar Containing Opuntia ficus Indica as a Bio-admixture for Restoration Applications, International Journal of Architectural heritage conservation, analysis and restoration, Taylor and Francis Publication, (2016).

## RESPONSIBILITIES

Scientific advisor for Hindu religious and charitable endowments department( HRCE)

Scientific advisor for Tamilnadu State Archaeological department.

Heritage consultant for Archaeological Survey of India, Govt. of India, New Delhi.

Material consultant for Maharana Mewar Charitable Foundation (MMCF) for Udaipur palace, Rajasthan, India.

## CONFERENCE PUBLICATIONS

Three-Dimensional Implementation of Modified Rolling Sphere Method for Lightning Protection of Giant Medieval Chola Monument in South India, ICIS (Intl. conference on Industrial and Information Systems), Sri Lanka (2019).

Revealing the ancient secret of lime mortar exposed to marine environment used in and around Padaleeswarar temple, Tamil Nadu, India, Historic Mortar Conference

Study of carbonation initiated by organics in Traditional lime mortars, International conference on structural analysis of Historical Construction SAHC, Peru (2018).

Production of Organic Lime Mortar to Adapt CO<sub>2</sub> for Construction of Sacred Groves @ Auroville, Puducherry, India, International conference on structural analysis of Historical Construction SAHC Peru (2018).

## BOOK CHAPTERS PUBLISHED

Structural Health Monitoring of Aerospace Composites. Structural health monitoring of Biocomposites, Fibre reinforced composites and Hybrid composites. Elsevier.

Maintenance and Monitoring of Composites. Structural health monitoring of Biocomposites, Fibre reinforced composites and Hybrid composites. Elsevier

## PROFESSIONAL RECOGNITIONS

Member of ICOMOS (International Council of Monuments and Sites)

EGU (European Geoscience Union) Emeritus membership (ID- 561447)

RILEM (The International Union of Laboratories and Experts in Construction Materials, systems and Structures), Italy

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