

## Faculty Profile

1. **Name** **Dr. Dhanya B. S.**
2. **Date of birth** **28/04/1981**
3. **Highest qualification** **Ph. D.**  
**Area of specialisation** **Concrete Technology**



4. **Academic performance**

Qualification	Board / University	Institute studied	Year of passing	Class & % marks
Ph. D.	IIT Madras	IIT Madras, Chennai	2015	CGPA 9.75
M Tech in Structural Engg. & Construction Management	University of Kerala	T. K. M. College of Engineering, Kollam	2004	First class with distinction; 82.32%
B Tech in Civil Engineering	University of Kerala	T. K. M. College of Engineering, Kollam	2002	First class with distinction; 77.43%
Pre Degree	University of Kerala	D. B. College, Sasthamcotta	1998	First class; 76.6%
SSLC	Dept. of Secondary Education, Govt. of Kerala	V.V High School, Thamarakulam	1996	First class with distinction; 88.67%

5. **Date of Joining service** **30/01/2006**
6. **Status as on date of Joining** **Lecturer in Civil Engineering**
7. **Salary as on date of Joining** **8000-13500 (8000+5120+100)**
8. **Present Status** **Associate. Professor in Civil Engg.**  
**(Non -cadre, AGP 9000)**
9. **Salary as on date (March 2020)** **116572 (37400+9000+68672+1500)**
10. **Number of promotions since date of joining** **Nil**
11. **Achievements since date of joining**

**a) Awards**

- Indian concrete institute national award for best Ph.D. thesis in concrete for the year 2016
- Best paper in poster presentation – CORCON 2016
- ICI-Ultra Tech award for young concrete engineer – 2018

**b) Faculty Development / QIP**

- Aailed QIP for Ph. D. from July 2011 to July 2014
- Ph. D. awarded – September 2015

### c) Research & Development

#### 1. Details of project proposals:

Sl No	Title of project	Funding agency	Name of principal Investigator and co-Investigator (if any)	Amount (Rs)	Duration (months)	Status
1	Performance evaluation of concrete made with different types of fine aggregates	TEQIP Phase II, RIT (Research seed money project)	PI – Dr. Dhanya B. S.	2, 00,000/-	12	Completed
2	Development of Street furniture using self compacting concrete	CERD Innovation Centre RIT Kottayam	PI – Dr. Dhanya B. S.	15,000/-	12	Completed
3	Development of interlocking blocks using pervious concrete	CERD Innovation Centre RIT Kottayam	PI – Dr. Dhanya B. S.	15,000/-	12	Completed
4	An Holistic and Integrated Performance-based Approach for Specifying, Designing and Operating Durable Concrete Structures (PERSPEC)	Department of Science and Technology, Govt. of India and European commission through Horizon – 2020 scheme	PI – Dr. Radhakrishna G. Pillai Co-PI – Dr. Dhanya B. S.	99,70,000/-	--	Not sanctioned
5	Study of the influence of poor site practices on the corrosion performance of coated steel reinforcement	Department of Science and Technology, Govt. of India (Early Career Research Award Scheme)	PI – Dr. Dhanya B. S.	54,64,840/-	--	Not Sanctioned
6	Study of the effect of surface preparation on the corrosion resistance of uncoated and cement polymer composite coated TMT steel reinforcement	CERD, Research seed money project	PI – Dr. Dhanya B. S.	2,00,000/-	24	Completed
7	Durability of two different cementitious systems in organic and inorganic acidic environment	CERD Students project scheme	PI – Dr. Dhanya B. S. Co-PI – Dr. Bindhu B. K.	45,000/-	12	Completed
8	Development of recycled aggregate concrete for the construction of	Transportation Research Centre, Govt. of Kerala	PI – Dr. Dhanya B. S. Co-PI – Dr. Bino I. Koshy.	19,14,000/-	36	On going

	various road elements	(Research grant)				
9	Evaluation of Sacrificial Anode Cathodic Protection (SACP) systems for reinforced concrete applications <b>(Industry sponsored research project)</b>	Radhe Structorepair Pvt. Ltd., Representative India Business, Authorised distributor of Vector Corrosion Technologies, Canada	PI – Dr. Radhakrishna G. Pillai, IIT Madras Co- PI – Dr. Dhanya B. S. Co-PI – Dr. Haji Sheik, BSAR Crescent University, Chennai	9,16,000/-	18	On going
10	Assessment of the influence of curing compounds on mechanical and durability properties of concrete	KSCSTE (Student project scheme)	PI -Dr. Dhanya B. S.	10,000/-	12	Ongoing
11	Development of sustainable concrete integrating supplementary cementitious materials and fibres for white topping application	Transportation Research Centre, Govt. of Kerala (Research grant)	PI – Dr. Dhanya B. S. Co-PI – Dr.Sunitha K. Nayar, IIT Palakkad Co PI – Ms. Sneha S., RIT, Kottayam	19,34,000/-	24	Proposal submitted

Total value of the sanctioned projects (as on March 2020) – 33.15 lakhs

## 2. Involvement as Ph. D. Candidate

1. Evolution of performance specifications for concrete construction in India, Department of Science and Technology (Project sanctioned to Prof. Manu Santhanam, IIT Madras) Value : Rs. 50,00,000/-
2. Anticipating durability standards: Module II, Lafarge Centre for Research, Lyon, France (Project sanctioned to Prof. Ravindra Gettu, IIT Madras) Value: Rs. 96,85,000/-

## 3. Guidance of Ph. D. – approved Research guide under KTU

Student details

Sl No	Title of thesis/ Broad area of research	University	Name of student	Name of guide and co guides if any	Date of registration	Status
1	Influence of curing on mechanical and durability properties of concrete	KTU	Paul Ben Pulliattu	Guide - Dr. Dhanya B. S.	August 2018	(On going) Scholar under NDF scheme
2	Mix optimisation for concrete white toppings	KTU	Tiju Susan Thomas	Guide - Dr. Dhanya B. S.	August 2019	(On going) Scholar under NDF scheme

3	Sacrificial anode cathodic protection	KTU	Arya E. K.	Guide - Dr. Dhanya B. S.	August 2019	(On going) Scholar under NDF scheme
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**d) No. of publications**

Journal publications : 7

Conference publications : 19+9 = 28

M Tech thesis contest: 2

International symposium: 1

Book Chapters: 3

**Details of publications:**

**International Journals (Published – 7)**

1. B.S Dhanya and Manu Santhanam, Performance specification for concrete construction in India: Are we ready?, The Indian Concrete Journal, Vol. 87, September 2013, pp.- 36-43.
2. Santhosh George Cheriyan, B. S. Dhanya and Manu Santhanam, Durability indices for concretes with different dosages of mineral admixtures , The Indian Concrete Journal ,Vol. 88, March 2014, pp. 60-68.
3. B. S. Dhanya, M. Santhanam, V. Kulkarni, P. Nanthagopalan, S. Bishnoi, S. P. Singh, G. Indu Sivaranjani, P. Dinakar and S. Bhaskar, "Round robin testing of durability parameters – Towards identification of suitable durability tests for concrete", The Indian concrete Journal, July 2017, Vol. 91, Issue 7, pp. 11-22.
4. B.S Dhanya and M. Santhanam, Performance evaluation of rapid chloride permeability test in concretes with supplementary cementitious materials, Materials and Structures (2017) 50: 67. doi:10.1617/s11527-016-0940-3
5. B. S. Dhanya, M. Santhanam, R. Gettu and R. G. Pillai, Performance evaluation of concretes having different supplementary cementitious material dosages belonging to different strength grades, Construction and Building Materials, 187 (2018), 984 – 995. <https://doi.org/10.1016/j.conbuildmat.2018.07.185>
6. R. Gettu, R.G. Pillai, M. Santhanam, A.S. Basavaraj, S. Rathnarajan and B.S. Dhanya, "Sustainability-Based Decision Support Framework for Choosing Concrete Mixture Proportions", Materials and Structures., DOI: 10.1617/s11527-018-1291-z, 51:165, 16 p. (2018).

7. B.S. Dhanya, Sundar Rathinarajan, Manu Santhanam, Radhakrishna G. Pillai and Ravindra Gettu, "Carbonation and its effect on microstructure of concrete with fly ash and ground granulated blast furnace slag", The Indian Concrete Journal, April 2019, pp.- 10-21.

***International conferences (Published – 19)***

1. R. Gettu, R. G. Pillai, M. Santhanam, and B.S. Dhanya, Ways of improving the sustainability of concrete technology through the effective use of admixtures, Creative Concrete Technologies for sustainable Future, Korea Concrete Institute, December 2013, 107 – 126.
2. B.S. Dhanya, M. Santhanam, R. G. Pillai, and R. Gettu, Evaluation of various electrical methods used to assess chloride transport in concrete, Proceedings of
3. B.S. Dhanya, M. Santhanam, R. G. Pillai, and R. Gettu, Evaluation of various electrical methods used to assess chloride transport in concrete, Proceedings of The fourth fib congress (Improving performance of concrete structures), Mumbai, February 2014.
4. B. S. Dhanya, and M. Santhanam, Use of combined durability parameters for different exposure conditions, Proceedings of the RILEM International Workshop on performance-based specification and control of concrete durability, Croatia, June 2014, 101-108.
5. B. S. Dhanya and M. Santhanam, Study of the influence of mineral admixtures on the durability parameters of concrete, Proceedings of the 10th fib international Ph. D. Symposium in Civil Engineering, Canada, July 2014, 131-136.
6. B. S. Dhanya, M. Santhanam and B. N. B. Kumar, Durability performance of slag as a supplementary cementitious material, Second international conference on durability of concrete, ICDC – 2014, December 2014.
7. Bharath. M.S, Santhanam, M and B. S. Dhanya, Study of influence of moisture content, portlandite content and pore solution conductivity on surface resistivity of concrete, fib Symposium 2016 on Performance-based approaches for concrete structures: Materials technology, structural design, analytical modelling, conformity assessment and testing, Cape town, South Africa
8. B. S. Dhanya and Manu Santhanam, Service life Estimation of concretes having different Supplementary Cementitious Materials using Duracrete model – Issues and the way forward, CORCON - 2016, NACE International, New Delhi, 2016.

9. B. S. Dhanya, Anujith K. Babu, Jacob Sebastian, Varsha S. Kumar and Smruthi P. Nair, Performance evaluation of concrete made of recycled fine aggregates from different exposure conditions, 71st RILEM Week & ICACMS 2017, International Conference on Advances in Construction Materials and Systems, Chennai, India, 3 – 8 September 2017.
10. Ansa Varghese, Arya Hari, Kavya Somanath, Surya Bhaskaran and B. S. Dhanya, Influence of super plasticizers on M30 grade concrete, 4th International Conference on Modeling and Simulation in Civil Engineering (ICMSC 2017), TKMCE, Kollam
11. An Rose Paul, Dhanya B. S., James Joseph, Megha S., and Namitha K., “Comparison of mechanical and durability properties of steam and normal cured concrete”, Second International Conference On Advances in Concrete, Structural & Geotechnical Engineering, BITS Pilani, Pilani, February 26 – 28, 2018
12. R. Gettu, R.G. Pillai, J. Meena, A.S. Basavaraj, M. Santhanam and B.S. Dhanya, "Considerations of Sustainability in the Mixture Proportioning of Concrete for Strength and Durability", 2nd Intl. Workshop on Durability and Sustainability of Concrete Structures (Moscow, Russia), 11 p. (2018); also ACI SP 326: Durability and Sustainability of Concrete Structures (DSCS-2018), American Concrete Institute Special Publication, Eds. V. Falikman, R. Realfonzo, L. Coppola, P. Hájek and P. Riva, ISBN: 9781641950220, pp. 5.1-5.10 (2018)
13. B. S. Dhanya, Alan Verghese Ittyeipe, Akshay Rudhan, Anjaly Ajayan, and Malavika S., Effect of surface preparation on the corrosion resistance of Cement Polymer Composite (CPC) Coated Steel Reinforcement, Proceedings of the 3rd R.N. Raikar Memorial International Conference and Gettu-Kodur International Symposium, On Advances in Science and Technology of Concrete, 14-15 December 2018, Mumbai, India, Vol. III, pp. 218 – 223.
14. B. S. Dhanya, Manu Santhanam and Santhosh George Cheriyan, “Durability classifications for chloride exposure”, 2<sup>nd</sup> RILEM Spring convention and International conference on Sustainable Materials, Systems and Structures (SMSS2019), Rovinj, Istria, Croatia, 20 -22 March 2019.
15. Arya E. K., and B. S. Dhanya, Review on the corrosion of steel reinforcement in reinforced concrete structures and its mitigation through electro chemical

- techniques, Proceedings of the International conference on modelling and simulation in civil engineering, TKM College of Engineering, Kollam, pp. 115.
16. Tiju Susan Thomas, Snehalatha P. S., Dhanya B. S., and Sunitha K. Nayar, White toppings for repair of existing pavements: Prospects and Research Challenges, Proceedings of the International conference on modelling and simulation in civil engineering, TKM College of Engineering, Kollam, pp. 168.
  17. Paul Ben Pulliattu, and B. S. Dhanya, Re-emphasising the need for proper curing in concrete, Proceedings of the International conference on modelling and simulation in civil engineering, TKM College of Engineering, Kollam, pp. 117.
  18. B. S. Dhanya, Bino I. Koshy, Jisha K. V., Aisu Jayamohan, and Neethu Mathew, Evaluation of the mechanical performance of M25 grade recycled aggregate concrete, Proceedings of the International conference on modelling and simulation in civil engineering, TKM College of Engineering, Kollam, pp. 120. (Paper got accepted for publication in the Earth & Environmental Science proceedings (Scopus Indexed) of the Institute of Physics (IOP) publishers, Bristol UK.)
  19. Sneha S. S., Karthika Soman, Prajith C., Aisswarya K. Davis and Dhanya B. S., Study of the mechanical and corrosion resistance properties of concrete, Proceedings of the International conference on modelling and simulation in civil engineering, TKM College of Engineering, Kollam, pp. 119. (Paper got accepted for publication in the Earth & Environmental Science proceedings (Scopus Indexed) of the Institute of Physics (IOP) publishers, Bristol UK.)

#### ***National conferences - (Published - 9)***

1. B. S. Dhanya and Seema K. Nayar, Performance analysis of brick industry in Kollam, FACE, National conference on Focusing on Advances in Civil Engineering, TKM College of Engineering, Kollam, Kerala, February, 2007, 25-29.
2. B. S. Dhanya and Seema K. Nayar, Environmental and social aspects of brick industry in Kollam, FACE08, 2nd national conference on Focusing on Advances in Civil Engineering, TKM College of Engineering, Kollam, Kerala, February, 2008, 505 – 510.
3. Athira Krishnan, K. S. Haritha, G. Sethulakshmi, Siju Simon and B. S. Dhanya, Development of pervious concrete for parking lot, Proceedings of the national

conference ARICE 2016, Muthoot Institute of Technology and Sciences, Puthencruz, Ernakulam, pp. 44-49.

4. An Rose Paul, James Joseph, Megha S., Namitha K. and B. S. Dhanya “Comparison of normal and steam curing on mechanical and durability properties of concrete”, Kerala Science Congress, 2018.
5. Arya V. Nair, Neeraja S., Revathy V. V., Saranya P. V., Alan Verghese Ittyeipe, B. S. Dhanya and B. K. Bindhu, “ Durability of two different cementitious systems in organic and inorganic acidic environment”, Kerala Technological Science Congress, February, 2019.
6. Anel Ignus, Irene Susan Aniyankunju, Jino Thomas Therattil, Lakshmi Renjan, Dhanya B. S., Evaluation of effectiveness of curing compounds by ASTM C 156 test method, KTU Tech fest, March 2020 (Under review)
7. Caroline Cherian, Devanand S., Jerrin Mathew, Teswin Jose, Dhanya B. S. and Arya E. K., Experimental procedure to verify the working of sacrificial anode, KTU Tech fest, March 2020 (Under review)
8. Dhanya B. S., Arjun V. Pradeep, Ashily John, Libitha T. M., Sreejith U. V., Exploring the potential of Ultrasonic Pulse Velocity Test to assess the properties of concrete, SECON 2020, FISAT Angamali (Under review)
9. Arya E. K., Caroline Cherian, Devanand S., Jerrin Mathew, Teswin Jose, and Dhanya B. S., The control of corrosion in reinforced concrete structures using sacrificial anodes, SECON 2020, FISAT Angamali (Under review)

#### ***M. Tech Thesis contest***

1. Arbin Raj, B. S. Dhanya and J. M. Krishnan, Challenges in the measurement of resilient modulus for bituminous mixtures, M Tech thesis contest 2017, RIT, Kottayam (Paper presentation category, First prize)
2. Sijo M. Saji, and B. S. Dhanya M. Tech Thesis contest, 2018, RIT, Kottayam (Poster presentation category, First Prize)

#### ***International symposium***

1. Akshay Rudhan, Alan Verghese Ittyeipe, Anjaly Ajayan, Malavika S., Dhanya B. S. “Study of the effect of surface preparation on the corrosion resistance of uncoated and cement polymer composite coated TMT steel reinforcement”, CORSYM,



International Corrosion Prevention Symposium for Research Scholars, March 23 – 24, 2018, Chennai

### **Book Chapters**

1. Manu Santhanam and B. S. Dhanya , Brief description of major deterioration phenomena and major transport mechanisms, , Chapter 3, Indian Concrete Institute Handbook on Concrete Durability
2. Manu Santhanam, V. K. Kulkarni and B. S. Dhanya, Durability Provisions, including exposure class definition in Indian and selected international standards (BIS, IRC, IRST), Chapter 5, Indian Concrete Institute Handbook on Concrete Durability
3. B. S. Dhanya, Radhakrishna G. Pillai, Sreepriya Rengaraju, Critical evaluation of test methods on durability Chapter 6, Indian Concrete Institute Handbook on Concrete Durability

### **e) Participation in co and extra-curricular activities (member of respective committees / office bearer / Group leader etc.)**

- Secretary of Indian Concrete Institute Technical Committee (TC – 08) on concrete durability
- Team leader, KIIFB technical team no. 6, responsible for DPR preparation of 4 projects under higher education department (2017 -2018)
- Expert team member, Third party quality assurance, CPWD (2 works – KV, Kollam, IIIT Pala) (2017 – 2019)
- Resource person, CARE Kerala Scheme, an initiative by Department of Co- operation, Government of Kerala for rebuilding Kerala after the flood (2018-19)

### **f) Short Term Training programmes attended:**

#### *Details of Short Term Training Programmes attended*

1. Short Term Training Programme (DTE Sponsored) on **Advanced technological interventions for environmental sustainability** organized by the Department of Civil Engg., RIT, Kottayam, 14<sup>th</sup> to 27<sup>th</sup> March 2007.
2. Short Term Training Programme (TEQIP Sponsored) on **Special concretes** organized by the Department of Civil Engg., College of Engineering, Trivandrum, 10<sup>th</sup> to 14<sup>th</sup> December 2007.
3. Short Term Training Programme (TEQIP Sponsored) on **Effective teaching of structural analysis** organized by the Department of Civil Engg., College of Engineering, Trivandrum, 16<sup>th</sup> to 20<sup>th</sup> June 2008.
4. Short Term Training Programme (TEQIP Sponsored) on **Structural steel design with IS 800: 2007** organized by the Department of Civil Engg., College of Engineering, Trivandrum, 16<sup>th</sup> to 20<sup>th</sup> March 2009.
5. Short Term Training Programme (DTE Sponsored) on **Pedagogic strategies for creating effective learning environment** organized by the Department of Civil Engg., RIT, Kottayam, 24<sup>th</sup> November to 5<sup>th</sup> December 2008.

6. **Faculty development programme for research scholars (FDP – RS 2011)**, Organised by the Centre for Continuing Education, IIT Madras, 20<sup>th</sup> to 21<sup>st</sup> August 2011.
7. Short Term Training Programme (AICTE Sponsored) on **Structural Restoration of Historical Monuments** organized by the Department of Civil Engg., IIT Madras, 2<sup>nd</sup> 7<sup>th</sup> January 2012
8. **Academic English Course** Upper -International level, British Council. Grade A from 29<sup>th</sup> September to 15<sup>th</sup> December 2012.
9. **Academic Leadership Programme for TEQIP institutions**, organized by Indian Institute of Management, Kozhikode, 2<sup>nd</sup> to 7<sup>th</sup> February 2015.
10. **Faculty Development Programme (FDP)**, organized and conducted by Teaching Learning Centre (TLC), IIT Madras, 23<sup>rd</sup> to 25<sup>th</sup> April 2015.
11. **In house training programme on Familiarization of various laboratories in Civil Engineering** organised by the Department of Civil Engineering from 12<sup>th</sup> to 21<sup>st</sup> August 2015.
12. Short Term Training Programme (DTE Sponsored) on **Advanced Tool Boxes in Matlab for optimisation** organized by the Department of Civil Engg., CET, Trivandrum, 25<sup>th</sup> November to 27<sup>th</sup> November 2015
13. Short Term Training Programme (TEQIP Sponsored) on **Air quality monitoring and assessment** organized by the Department of Civil Engg., RIT, Kottayam, 9<sup>th</sup> to 11<sup>th</sup> December 2015.
14. Short Term Training Programme (TEQIP Sponsored) on **Intelligent transportation systems – Theory and applications** organized by the Department of Civil Engg., RIT, Kottayam, 1<sup>st</sup> to 7<sup>th</sup> June 2016.
15. AICTE Sponsored QIP Short term training course on **Professional capacity building in structural engineering** organized by the Department of Civil Engg., RIT, Kottayam, 4<sup>th</sup> to 6<sup>th</sup> December 2017
16. Training programme on **Capacity enhancement training for staff advisors**, organised by College of Engineering, Trivandrum, 2<sup>nd</sup> to 7<sup>th</sup> July 2018

**g) STTP/ events organised:**

***Details of STTPs/events organised***

1. Faculty Development Programme on AUTOCAD, RIT, Kottayam, 8th to 13th March 2010 (Sponsored by Department of Technical Education Curriculum Development Centre).
2. Organising Committee member ICI Fest, IITM, 14<sup>th</sup> and 15<sup>th</sup> March 2013
3. Short term training programme on Bridging the gaps in structural conservation – Philosophy and practices of conservation of built- heritage, RIT, Kottayam, 9th to 15th July 2015.
4. One day refreshing session for PWD engineers in materials testing, RIT, Kottayam, 4th September 2015.
5. One day in-house training programme for faculty and technical staff on total station surveying, RIT, Kottayam, 18th September 2015.

6. STTP on Durability of reinforced concrete structures, 27th June to 2nd July 2016, RIT, Kottayam
7. STTP on Durability based Design of Concrete on 29<sup>th</sup> June 2016
8. RILEM Organising Committee member.
9. STTP on Integrating sustainability in design using Building Information Modeling (BIM), 20<sup>th</sup> to 22<sup>nd</sup> October 2016, RIT, Kottayam
10. STTP on Material characterization and development, 6th to 8th February 2017, RIT, Kottayam

#### **h) Workshops / conferences attended:**

##### ***As Key note speaker***

- International conference on Structural Engineering and Construction Management, MACE, Kothamangalam, 28<sup>th</sup> March 2016

##### ***As Chair of conferences***

1. International conference on Structural Engineering and Construction Management, MACE, Kothamangalam, 28<sup>th</sup> March 2016
2. International conference on Innovations in Structural Engineering and Construction, Amal Jyothi College of Engineering, Kanjirappally, 29<sup>th</sup> to 30<sup>th</sup> July 2016
3. International conference and Expo of corrosion: CORCON 2016, Delhi, 21<sup>st</sup> September 2016
4. International conference on Frontiers of construction technology and computational mechanics, Mangalam College of Engineering, Ettumanoor, 18<sup>th</sup> and 19<sup>th</sup> May 2018

##### ***As Participant***

1. FACE08, 2nd National Conference on Focusing on Advances in Civil Engineering, TKM College of Engineering, Kollam, Kerala, February, 2008
2. Continuing Education Programme on Durability, Service life and Performance Specification for concrete, organized by the Department of Civil Engineering, 21st September, 2011.
3. Workshop on Electrochemical Kinetics and Thermodynamics – Principles and applications, Department of Chemical Engineering, IIT Madras, 11th to 13th April 2012.
4. International conferences on Advances in building sciences and rehabilitation and restoration of structures, Indian Institute of Technology, Madras, Chennai, 12th to 16th February 2013.
5. The Fourth International fib Congress 2014 10th to 14th February 2014. Fib, Mumbai
6. 10th fib International ph. D. symposium in Civil Engineering, Universite Laval Quebec Canada, 21st to 23<sup>rd</sup> July 2014.
7. Two day workshop on Intelligent Transportation Systems for Road Safety, RIT, Kottayam, 16th to 17th July 2015.

8. One day international symposium on 3D printing of concrete, 8<sup>th</sup> August 2016, ICI Chennai Centre
9. International conference and Expo of corrosion: CORCON 2016, NACE International Gateway India Section, 18<sup>th</sup> to 21<sup>st</sup> September 2016.
10. Research colloquium on Transportation Engineering, 23<sup>rd</sup> September 2016, RIT Kottayam
11. International conference on Advances in Construction Materials and Systems, 5<sup>th</sup> to 7<sup>th</sup> September 2017, RILEM, Chennai
12. Carmen Andrade workshop on corrosion control in concrete structures, 8<sup>th</sup> September 2017, IIT Madras
13. 3<sup>rd</sup> R.N. Raikar Memorial International Conference and Gettu-Kodur International Symposium, On Advances in Science and Technology of Concrete, 14-15 December 2018, Mumbai, India
14. SPARC Workshop on Sustainability and durability of concrete structures with by-products and recycled materials, 17 – 18 January 2020, IIT Madras Research Park
15. NIGIS-SERB 1 day national research symposium on Interpretation of Electrochemical Responses from New-age-steel-cementitious Systems (ERNS), 19 January 2020, IIT Madras Research Park

**i) International conference attended abroad: 1**

The 10<sup>th</sup> fib international Ph. D. Symposium in Civil Engineering, Universite Laval, Canada, July 2014.

**j) Resource person in training programmes/ workshops:**

***Details of Presentations in various international and national workshops and short term training programmes***

1. “Concrete durability and performance specifications”, One Day National Colloquium on Concrete Construction for Coastal Conditions- Causes, Concerns & Challenges (7-Cs), Indian Concrete Institute, Cochin, 8<sup>th</sup> December, 2012.
2. “Transport mechanisms in concrete and durability test methods”, One day national workshop on Achieving Durable Concrete Construction Through Performance Testing, IIT Bombay, 1<sup>st</sup> February 2014.
3. “Transport mechanisms in concrete and durability test methods”, One day national workshop on Achieving Durable Concrete Construction Through Performance Testing, IIT Madras, 3<sup>rd</sup> February 2014.
4. “Bridging Gaps in Structural Conservation-Philosophy and Practise of Conservation of Built-Heritage” Short Term Training Programme held at RIT Kottayam, 9<sup>th</sup> to 15<sup>th</sup> July 2015
5. “Transport mechanisms and durability test methods”, Concrete Cube Strength Competition 2014 Award Ceremony, Indian Concrete Institute, Kochi Centre, Kochi, 3<sup>rd</sup> May 2014.
6. “Durability design of concrete”, International conference on structural engineering and construction management, MACE, Kothamangalam, March 2016.

7. "Sustainability in concrete construction through the effective use of SCMs", Technical Talk, Mangalam college of engineering, Ettumanoor, April 2016
8. "Performance based specification and testing for concrete durability, I NIGIS-SZ two day workshop on Corrosion Control in Concrete Structures (C3S), IIT Madras, September 2016.
9. "Research avenues for concrete in Transportation Engineering", Research Colloquium in Transportation Engineering, RIT, Kottayam, September 2016.
10. "Sustainability in concrete construction through the effective use of supplementary cementitious materials", Technical Talk organised by Nirmithi Kendra, Adoor at Sree Budha College of Engineering, Elavumthitta, November 2016.
11. "Durability design of concrete", STTP on Advances in concrete technology with special emphasis on sustainable development, TKMCE, Kollam, February 2017
12. "Principles of durability based design of concrete", Research colloquium in Civil Engineering, College of Engineering, Kidangoor, 27th February, 2017.
13. "Transport mechanisms in concrete and durability test methods", FDP on Advanced Concrete Technology, MA College of Engineering, Kothamangalam, December 2017.
14. "Durability design of concrete", One day ICI Workshop on Quality Concrete Construction, Cochin, 24th February, 2018.
15. "Non-destructive evaluation of concrete", ICI Workshop on Non Destructive Testing, RIT, Kottayam, 17th March 2018.
16. "Principles of durability based design of concrete", STTP on Advances in Design, Construction and Rehabilitation of concrete structures, Sree Budha College of Engineering, Pattoor, 23rd May 2018
17. "Durability design of concrete", One day ICI Workshop on Quality Concrete Construction, Cochin, 25th May 2018.
18. "Durability tests of concrete", STTP on sustainable construction materials, College of Engineering, Trivandrum, 17th July 2018
19. "Durability tests of concrete – Principles and Classification", 3 day training programme on Advanced Concrete Technology – Tips on practical implementation, Kerala Highway Research Institute, Trivandrum, 7th to 9th November 2018.
20. "Embedded metal corrosion", 3 day training programme on Advanced Concrete Technology – Tips on practical implementation, Kerala Highway Research Institute, Trivandrum, 7th to 9th November 2018.
21. "Sustainability in concrete construction through the effective use of Supplementary Cementitious Materials", FDP on Sustainable Building Technologies and Environment, National Institute of Technology, Calicut, November 2018.
22. "Durability design of reinforced concrete", One day ICI workshop on Quality Concrete Construction, Kottayam, 21st November 2018.
23. "Non-destructive evaluation of concrete", 3 day training programme on Advanced Concrete Technology and Good Construction Practices, Kerala Highway Research Institute, Trivandrum, 25th January 2019.
24. "Major Deterioration phenomena and transport mechanisms in concrete", Seminar on concrete durability, IIT Bombay, 23<sup>rd</sup> August 2019 (Seminar conducted during the release function of Handbook on concrete durability).

25. "Sustainability in concrete construction through the effective use of Supplementary Cementitious Materials", Sri Vellappally Natesan College of Engineering, 4<sup>th</sup> November 2019.
26. "Durability Design of Concrete", 2 Day FDP titled Sustainable advancements in concrete and geotechnology, organised by NSS College of Engineering and Coimbatore Institute of Technology, NSS College of Engineering, Palakkad, 5<sup>th</sup> December 2019.

**k) Duties and responsibilities:**

***National level:***

- Secretary of Indian Concrete Institute Technical Committee on Concrete Durability
- Contributing author to the Technical document on concrete durability by Indian Concrete Institute, document under preparation. Author of three chapters in this document
- A research work is initiated for the development of acceptance criteria for durability parameters by collaborating with many premier educational institutes and research labs. As a first step, a round robin testing was done at 9 different laboratories including 5 IITs (IIT Madras, IIT Bombay, IIT Chennai, IIT Bhuvaneshwar, IIT Guwahati), NIT Jalandhar, SERC, Madras, RMCMA, Mumbai and RIT, Kottayam. Co-ordinated the entire work and compiled the data. Outcome of this work is published in Indian Concrete Journal in July 2017
- Organising and scientific committee member, RILEM International Conference of Advances in Construction Materials and Systems, Chennai, 3<sup>rd</sup> to 8<sup>th</sup> September

***University level:***

- Doctoral Committee Member (Ms. Milu Mary and Mr. Manoj, SaintGits College of Engineering)
- Ph.D. Guidance
- External examiner, Ph. D. Comprehensive examination
- Question Paper Setting (KTU)
- Question Paper Scrutiny (KTU)
- External Examiner (M tech Viva)

***Institute level:***

- Lab in charge – Geo technical Engineering. Lab (2006 – 2009)
- Co-ordinator, Vastheya 2008
- Lab in charge – MT Lab II (Period 2009 – 2011; 2014 - till date)
  - Established "Research Centre for Durability of Concrete Systems" at RIT, Kottayam which is the first exclusive facility in Kerala to assess durability of concrete.
  - Set up facilities to assess durability parameters following international standards.

- Augmented the facilities available in the lab to strengthen the research facilities in the area of concrete technology
  - Set up facilities to assess corrosion of steel reinforcement in RC structures
  - Four Ph. D. scholars (1 in MG University and 3 in KTU) is attached to this lab
- Department level Co-ordinator – NBA Accreditation 2015
- Treasurer, Silver Jubilee Celebrations, RIT Kottayam, 2015 - 16
- Staff in charge – Civil Engineering association, 2016-17, 2017- 18
- Faculty advisor- 2017-2021 batch
- Visiting faculty programme co ordinator, 2016 till date
- Member, Anti ragging committee, RIT Kottayam, 2016 -17.
- Member, Internal audit committee, RIT Kottayam, 2017 – 2019
- Member, Staff club, RIT, Kottayam, 2018 – 19
- Staff Welfare Committee Member
- Member, Innovation and Enterprenurship
- Member, Internal Quality Assurance Committee, RIT, Kottayam, 2019- till date
- Member, Academic committee member, TEQIP, RIT Kottayam, 2019- till date
- Consultant for mix design, structural design
- Staff co ordinator, ICI students’ chapter, RIT (Took initiative to establish the same)

***Additional responsibilities:***

- Active consultant in concrete mix design works, Non-destructive testing and structural design / scrutiny works for both public and private sector organisations
- Compilation of technical information to augment the technical content of Engineer’s diary, 2009, for Association of Engineers, Kerala
- Reviewer of International journals and conferences:

***International Journals:***

- Construction and Building Materials (Elsevier)
- Advances in cement research (ICE publication)
- Journal of materials in Civil Engineering (ASCE)

***Conferences:***

- NCTT 2016, CET Trivandrum
- RILEM International Conference of Advances in Construction Materials and Systems, Chennai, 3<sup>rd</sup> to 8<sup>th</sup> September 2017
- International Conference on Modelling and Simulation in Civil Engineering (ICMSC 2017), TKMCE, Kollam
- 3<sup>rd</sup> international conference on Materials mechanics and management, CET, 2017
- NCTT 2017, CET Trivandrum
- RAREST, SJCET Pala, 2018
- Kerala Technological Science Congress, 2019
- International Conference on Modelling and Simulation in Civil Engineering (ICMSC 2019), TKMCE, Kollam
- SECON 2020, FISAT Angamali

12. Experience / service before joining: Nil

13. Membership of professional bodies:

- Indian concrete Institute Life member (LMN 10091, Registered in July 2013)
- ISTE Life member (LM 109403, Registered in 2015)

14. Performance appraisal during past three (3) years:

Academic year	Semester and Name of subjects taught
2019-20	<b>January 2020 - May 2020</b> S6 Design of concrete structures II Ph. D. Course work - 04CE6116 Microstructure and innovations in structural concrete (Arya and Tiju) <b>August 2019 -December 2019</b> S7 - Quantity surveying and valuation S5 - Advanced concrete technology (Honour's elective)
2018-19	<b>January 2019 - May 2019</b> S4 Construction Technology S6 Design of concrete structures II <b>August 2018 -December 2018</b> S3 - Surveying S5 - Advanced concrete technology (elective)
2017-18	<b>January 2018 - May 2018</b> S8 Advanced concrete design S6 Design of concrete structures II <b>August 2017 -December 2017</b> S1 - Introduction to Civil Engineering S5 - Advanced concrete technology (elective)

15. Self-Appraisal:

Major Strengths: Hard working, Sincerity, Adaptability to new environments

Major Weaknesses: More sensitive, Strict