Dr. R. Someswaran, M. Tech., PhD.,

5/8 Kalipatty, Ammapatty-po, Thuraiyur-tk, Trichy, Tamilnadu, India. +91-9706572154 rksomes@gmail.com



Courses Handled:

- Construction Techniques and Practices (3)
- Construction Materials (1)
- Geographic Information System (GIS) (2)
- Physics for Civil Engineering (1)
- Industrial Safety (1)
- Environmental Sciences & Sustainability (1)

Relevant Courses / Lab:

- Fluid Mechanics
- Finite Element Method
- Hydrology
- Hydraulics Lab
- Remote Sensing

Software/Language:

- Fortran
- ArcGIS
- QGIS

Hobbies:

- Stamp Collection
- Reading Books
- Writing Blog

Personal Details: DOB:

January 28th, 1985

Nationality:

Indian

Marital Status:

Married

Languages Known:

Tamil, English and Hindi

EXPERIENCE: 3.3 Years

March-2022 to Till date: Assistant Professor/HoD (Civil Dept.)

Mohamed Sathak A J College of Engineering, Siruseri, Chennai, Tamilnadu.

Jan-2020 to Apr-2021: Assistant Professor (1.3Years)

VSB Engineering College, Karur, Tamilnadu.

Mar-2019 to Dec-2019: Assistant Professor (10 Months)

Imayam College of Engineering, Thuraiyur, Tamilnadu.

EDUCATION:

2010 - 2019: Ph.D. (Water Resources Engineering) Indian Institute of Technology Guwahati, Assam, India

2007 - 2009: M.Tech. (Remote Sensing & GIS) [9.37 CGPA], SRM Institute of Science and Technology, Kattankulathur.

2005 - 2007: M.Sc. (Physics) [8.35 CGPA], Bishop Heber College/Bharathidasan University, Tiruchirappalli.

2002 - 2005: B.Sc. (Physics) [70%],

Vivekananda College/Madurai Kamaraj University, Madurai.

2002: HSC (Maths, Physics, Chemistry & Computer science) [74.8%] Tamilnadu state board (Tamil medium)

2000 : SSLC [77%], Tamilnadu state board (Tamil medium)

RESEARCH INTERESTS:

- Groundwater flow and Contaminant Transport Modelling,
- Development of water purifying system / Solid Waste Management
- Rainwater harvesting and Groundwater quality improvement.

ACHIEVEMENTS:

- Got opportunity to **present our research work** in the "36th IAHR conference" held in "The Hague, the Netherlands" during 28th June 03rd July 2015.
- Got MHRD Teaching Assistantship (TA) during Jan-2010 to Dec-2015.
- Secured 2nd place in the competition "*Technical Quiz*" in the National Level Symposium "Geohorizon '09" held at Anna University, Chennai during March 2009.
- NCC 'B' Certificate.

EVENTS ORGANIZED:

- Symposium KONSTRUCTA- 2K22, A Technical Symposium, Mohamed Sathak A.J. College of Engineering, 28 October 2022.
- Poster Presentation Inter Departmental competition, Mohamed Sathak A.J. College of Engineering, 16 November 2022.

PUBLICATIONS:

BOOK CHAPTER (LECTURE NOTES):

• Someswaran R., Kartha S.A. (2017). "Unsaturated Physical Non-equilibrium Contaminant Transport Modeling Using Modified FEMWATER". In: Saha A., Das D., Srivastava R., Panigrahi P., Muralidhar K. (eds) Fluid Mechanics and Fluid Power – Contemporary Research. Lecture Notes in Mechanical Engineering. Springer, New Delhi, pp 1163-1170. (Scopus Journal)

JOURNALS:

- Someswaran R., and Kartha S.A (2020). "Reactive Transport of Ferrous ion in the Saturated/Unsaturated Porous Media under the Dual Porosity Flow: A Numerical Modeling Study". *e-Journal of Geohydrology*, 1(1), pp 71-74. (http://inciah.org/index.php/journal/)
- Senthil Kumar M., Kalyani G., Mahendran S., Joga Rao H., Gokulan R., **Someswaran R.,** Jenifa Latha C., and Palpandian M **(2021)**. "Treatment of RO Rejects Wastewater by Integrated Coagulation Cum Adsorption Process". *Polish Journal of Environmental Studies*, 30(5), pp 4031-4038. (DOI: 10.15244/pjoes/130274). (Scopus Journal)

CONFERENCES/POSTER PRESENTATION:

INTERNATIONAL CONFERENCES:

- Someswaran, R. and Kartha, S.A. (2019). "Reactive Transport of Ferrous ion in the Saturated/Unsaturated Porous Media under the Dual Porosity Flow: A Numerical Modeling Study". 8th International Groundwater Conference (IGWC 2019), Indian Institute of Technology Roorkee, Roorkee, Uttarakhand, 21- 24 October 2019.
- Someswaran, R. and Kartha, S.A. (2017). "Analysis of Contaminant Transport in the Saturated Aquifer under the Condition of Heterogeneity and Non-equilibrium Mass Transfer". International Conference on Modeling of Environmental and Water Resources Systems, Harcourt Butler Technical University (HBTU), Kanpur, 24–26 March 2017.
- Someswaran, R. and Kartha, S.A. (2015). "Non-equilibrium reactive transport modeling of Acid Mine Drainage in subsurface water". 36thIAHR World Congress, The Hague, the Netherlands, 28 June 03 July 2015. (Proceedings ISBN No:978-90-824846-0-1)
- Someswaran, R. and Kartha, S.A. (2014). "Unsaturated physical non-equilibrium contaminant transport modeling using modified FEMWATER". 5th International and 41st National Conference on Fluid Mechanics and Fluid Power (FMFP 2014), IIT Kanpur, 12-14 December 2014.
- Someswaran, R. and Kartha, S.A. (2013). "Reactive Solute Transport Modeling of Acid Mine Drainage to Unconfined Groundwater Aquifers". 40th International Association of Hydrogeologists Congress (IAH 2013), Perth Convention and Exhibition Centre, Perth, Australia, 15–20 September 2013.

NATIONAL CONFERENCE:

• Someswaran, R. and Kartha, S.A. (2014). "Analysis of Effects of Heterogeneity on Transport of Acid Mine Drainage". National Conference on Water and its Sustainability in Mining and Other Environment: Vision 2050 (WSME 2014), ISM Dhanbad, 28-29 March 2014, pp. 299-307.

POSTER PRESENTATION:

• **Someswaran**, **R**. and Kartha, S.A. 2016. "Subsurface reactive transport modeling of Acid Mine Drainage". Reflux, the annual Chemical Engineering Symposium of IIT Guwahati, 25-27 March 2016.

WORKSHOP/WEBINAR/COURSES/FDP/STTP/TRAINING:

- Participated in **IP Awareness/Training program under** National IP Awareness Mission. (20th July 2022)
- Participated in the 47th Edition of BRIDGE 2022 Chennai (A High Impact Industry-Institute Interaction Event of India), organized by ICT Academy at Chennai Trade Centre, Chennai. (13th July 2022).
- Attended ATAL-Online FDP on GIS & Remote Sensing conducted by Goa University. (12th 16th, October 2020).
- Attended **ATAL-Online FDP** on **Smart Cities** conducted by **Kumaraguru College of Technology.** (19th 23rd, October 2020).
- Attended online STTP on "Teaching and Learning Pedagogy" organized by REST Society for Research International (RSRI) and have cleared the online exam. (18th 22th May 2020).
- Attended online workshop on "Basic Optimization Technology" organized by REST Society for Research International (RSRI) and cleared the online exam. (4th 6th May 2020).
- Attended a webinar on "**Domestic Wastewater Management**" organized by **Department of Civil Engineering, Hindusthan College of Engineering & Technology Coimbatore.** (4th May 2020).
- Attended online workshop on EDUCATION 4.0 organized by IQAC, Atharva College of Engineering, Mumbai. (28th – 30th April 2020).
- Attended **NPTEL** course on **Electronic Waste Management Issues and Challenges** and received E-Certificate. (Jan-Feb 2019)
- Attended NPTEL course on Fluid Mechanics and received E-Certificate. (Aug-Oct 2019).
- Attended GIAN course on Moment Analysis for Contaminant Fate and Transport conducted by Indian Institute of Technology Kanpur. (20th-24th March 2018).
- Attended course on **Application of GIS for Land Use and Planning** conducted by **Survey Training Institute**, **Uppal**, **Hyderabad**. (14th May 13th June 2008).

THESIS WORK:

Ph.D (Water Resources Engineering)

Title: "Numerical Modelling of Non-equilibrium Reactive Transport in Acid Mine Drainage"

Abstract: Acid mine drainage (AMD) is one of the notable contaminant among various pollutants that pollutes water and biodiversity of our surroundings after the industrial revolution. Study of reactive nature and transport of AMD through subsurface zone under the presence of immobile water in the pore spaces is our objective. Simulation studies leads to the successful close prediction of contaminant transport.

M.Tech (Remote Sensing & GIS)

Title: Identification of Ground water recharge zones in Hard rock terrain

Abstract: Objective of our work was to find out the suitable locations for Recharging of aquifers in hard rock terrain, with the use of Satellite images, Topo sheets, Water level & rainfall data and GIS technique.

Date: 14/06/2023 Place: Chennai

(Dr R.SOMESWARAN)