* ***PERSONAL PARTICULARS***

|  |  |  |
| --- | --- | --- |
| **Name :** | **Dr. PramodKumar Sharma** |  |
| **Present Address :** | **Associate Professor**  Department of Civil Engineering  I. I. T. Roorkee,  Roorkee-247667,(U.K) , India  Phones (O): 01332-285684  (R ): 01332-285121  **Emai**l: [pramod\_6s@rediffmail.com](mailto:pramod_6s@rediffmail.com)  drpksharma07@gmail.com |

* ***EDUCATIONAL QUALIFICATIONS***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of Examinations** | **Board/Institution/ University** | **Year of passing/Awarded** | **% of marks obtained** | **Subjects/ Specialization** |
| Ph.D. | IndianInstitute of Technology Kanpur, India | 2004 | 7.79/10 (CPI) | Civil Engineering (HWRE) |
| M.E | Government Engineering College, Raipur (Presently N.I.T.), India | 1996 | 69.80 | Civil Engineering (WRD&I) |
| B.E. | M.M.M. Engineering College, Gorakhpur, (Presently MMMTU) India | 1994 | 79.56 | Civil Engineering |

* **DETAILS OF STUDIES DURING M.E. & Ph.D*.***

**Specialization in M.E.:**Water Resources Development and Irrigation Engineering (WRD&I)

**Title of Dissertation in M.E.:** Comparative Study of Consolidation with the use of

Sand Drains and Geosynthetics

**Specialization in Ph.D.:** Hydraulics and Water Resources Engineering (HWRE)

**Title of Thesis in Ph.D.:** Analysis of Spatial Moments and Temporal Moments for

Reactive Transport in Porous Media

**Courses Studied during Ph.D.:**

1. Groundwater Hydrology
2. Fluid Mechanics
3. Open Channel Hydraulics
4. Hydrologic Analysis and Design
5. Programming and Numerical Analysis
6. Transient in Pipes

**Programming Language Known:**FORTRAN-77/90

* ***AREA OF ACADEMIC /RESEARCHINTEREST***
* Flow and Contaminant Transport through Porous media and Fractured-Porous Rock.
* Experimental and Numerical modeling of Contaminant Transport through Fractured porous.
* ***Research Training:*** worked with **Dr. M. Sekhar**, Department of Civil Engineering, **Indian Institute of Science, Bangalore**, during the period from 11-12-2007 to 10-02-2008, for research/training.
* ***Honors and Award***
* **Endevour Postdoctoral Research Fellowship Award** **by** DEEWR, Australian Government in 2015
* **G.M. Nawathe best paper award** for best paper presentation during HYDRO 2014 held at MANIT Bhopal
* **JalvigyanPurskar (2011**) by Indian society for Hydraulics (ISH)
* ***Teaching Experience***:

**Lecturer** in Civil Engineering Department, M.M.M. Engineering College, Gorakhpur-273010, (U.P.), India, from June 26, 2003 to May 26, 2008.

**Assistant Professor**, Indian Institute of Technology Roorkee, (U.K.), India, from**May 27, 2008 to April 03, 2014**

**Associate Professor**, Indian Institute of Technology Roorkee-247667, (U.K.), India, since **April 04, 2014 till now**

* ***Visit to outside Institute***

Edith Cowan University, Perth, Australia as Post Doctoral Fellowship from May 04, 2015 to November 03, 2015

* ***PUBLICATIONS***

1. **JOURNAL:**
2. Pandey, M., Ahmad, Z., and **Sharma, P. K**. (2015). Estimation of Maximum Scour Depth near a Spur Dike. *Canadian Journal of Civil Engineering*, (ja).
3. **Sharma, P.K**.,Ojha, C.S.P., Swami, D., Joshi, N., and Shukla, S.K. (2015). Semi-Analytical Solutions of Multiprocessing Non-Equilibrium Transport Equations with Linear and Exponential Distance-Dependent Dispersivity. Water Resources Management, 29(14), 5255-5273
4. Sharma, P. K., Ojha, C. S. P., Abegaze, T. A., Swami, D., and Yadav, A. (2015). Simulation of Fluoride Transport through Fine Sand Column Experiments. Journal of Hydrogeol Hydrol Eng 4: 2. of, 8, 2.
5. Lodhi, A. S., Jain, R. K., and **Sharma, P. K.** (2015). Influence of cohesion on scour around submerged dike founded in clay–sand–gravel mixtures. ISH Journal of Hydraulic Engineering, 1-18.
6. Abgaze, T. A., and **Sharma, P. K.** (2015). Solute transport through porous media with scale-dependent dispersion and variable mass transfer coefficient. ISH Journal of Hydraulic Engineering, 21(3), 298-311.
7. **Sharma, P. K**., & Abgaze, T. A. (2015). Solute transport through porous media using asymptotic dispersivity. Sadhana, 40(5), 1595-1609.
8. Joshi, N., Ojha, C. S. P., **Sharma, P. K**., & Madramootoo, C. A. (2015). Application of non-equilibrium fracture matrix model in simulating reactive contaminant transport through fractured porous media. Water Resources Research, 51(1), 390-408.
9. **Sharma, P. K**., Joshi, N., Srivastava, R., and Ojha, C. (2014). "Reactive Transport in Fractured Permeable Porous Media." Journal of hydrologic Engineering, ASCE,[10.1061/(ASCE)HE.1943-5584.0001096](http://ascelibrary.org/doi/abs/10.1061/%28ASCE%29HE.1943-5584.0001096) , 04014078.
10. **Sharma, P. K.** and Srivastava, R. (2014). Numerical analysis of spatial moments for reactive transport through fractured porous media. ISH Journal of Hydraulic Engineering published by Taylor and Francis UK.P. 1-13, **DOI:**10.1080/09715010.2014.884360
11. **Sharma, P.K.,** Savant, V.A., Shukla, S.K., and Khan, Z. (2014). Experimental and numerical simulation of contaminant transport through layered soil. International Journal of Geotechnical Engineering.Vol. 8(4), 345-351,DOI 10.1179/1939787913Y.0000000014
12. **Sharma, P.K.** and Dixit, U. (2014). Contaminant Transport through Fractured Porous Media: An Experimental Study. Journal of Hydro-Environment Research, Elsevier,Vol.8(3), 223–233,<http://dx.doi.org/10.1016/j.jher.2013.08.003>
13. Deepak, S., **Sharma, P.K**., Ojha C.S.P (2014). Simulation of experimental breakthrough curves usingmultiprocess non-equilibrium model for reactive solute transport in stratified porous media. Sadhana Vol. 39( 6), 1425–1446, Indian Academy of Sciences.
14. **Sharma, P.K**., Ojha, C.S.P., and Joshi, N. (2014).Finite volume model for reactive transport in fractured porous media with distance and time dependent dispersion. Hydrological Sciences Journal, 59 (8), 1-11.
15. Joshi, N., Ojha, C.S.P, **Sharma P. K**., Surampalli, R.Y**.** (2013). Parameter identification of virus transport in porous media using equilibrium and non-equilibrium models. Journal of Environmental Chemical Engineering, Vol. 1(4), 1099-1107.
16. **Sharma, P.K. (2013)** Temporal moments for solute transport through fractured porous media**.** ISH Journal of Hydraulic Engineering published by Taylor and Francis UK,DOI:10.1080/09715010.2013.798908
17. Deepak, S., **Sharma, P.K**., Ojha C.S.P (2013). Experimental investigation of solute transport through stratified porous media. ISH, Journal of Hydraulic Engineering published by Taylor and Francis UK, **DOI:**10.1080/09715010.2013.793930.
18. **Sharma, P. K.,** Joshi, N. and Ojha, C.S.P. (2013). Stochastic Numerical Method for Analysis of Solute Transport in Fractured Porous Media. Journal of Hydro-Environment Research, Elsevier, **(7), 61-71**.
19. Joshi N, Ojha CSP, **Sharma, P.K.** (2012) A non-equilibrium model for reactive contaminant transport through fractured porous media: Model development and semi analytical solution. Water Resour. Res., Vol. 48, W10511, doi:10.1029/2011WR011621.
20. **Sharma, P. K.,** Sekhar, M., Srivastava, R. and Ojha, C.S.P. (2012). Temporal Moments for Reactive Transport through Fractured Impermeable / Permeable Formations. J. Hydrologic Engineering (ASCE) 17: 1302-1314.
21. **Sharma, P. K.** andSrivastava, R. (2012). Concentration profiles and spatial moments for reactive transport through porous media. **ASCE** Journal of **Hazardous, Toxic, and Radioactive Waste, Vol. 16 (2), P-125-133.**
22. Ojha, C.S.P., Surampalli, R. Y., **Sharma, P. K**., and Nitin Joshi (2011). Breakthrough curves and simulation of virus transport through fractured porous media. Journal of Environmental Engineering, **ASCE**, Vol. 137 (8), 731-739.
23. **Sharma, P. K**. and Srivastava, R (2011). Numerical analysis of virus transport through heterogeneous porous media”. Journal of Hydro Environment Research (5), 93-99.
24. **Sharma, P. K**., Nitin Joshi and Ojha C. S. P. (2011) Reactive transport through porous media using Finite difference and Finite Volume Methods. **Journal of Hydraulic Engineering** published by Taylor and Francis UK**,**Vol 17(2), 77-86.
25. Kashyap, D, **Sharma, P. K.** and Subrahnanyam (2011). Stochastic modeling of groundwater contamination around an ash slurry holding dyke. ISH **Journal of Hydraulic Engineering**, Vol 17(1), 58-70.
26. Srivastava, R., **Sharma, P. K**., and Brusseau (2004). Reactive Transport in Homogeneous Porous Media: Analytical Solutions for Temporal Moments”. J. of Contaminant Hydrology, 69, 27-43.
27. Srivastava, R., **Sharma, P. K**., and Brusseau (2002.) Spatial Moments for Reactive Transport in Heterogeneous Porous Media”. J. Hydrologic Engineering, **ASCE**, July/August, 336-341.
28. **INTERNATIONAL CONFERENCES**:
29. Sharma, P.K. and Shukla,S.K. (2015). Flow and contaminant transport through heterogeneous fractured rock. HYDRO 2015 INTERNTIONAL Conference, December 17-19, 2015, at IIT Roorkee, India (HYD-284).
30. Swami, D., Sharma, P.K. and Ojha, C.S.P. (2015). Comparative study of MPNE using different scle dependent dispersivity for reactive solute transport through heterogeneous porous medium. HYDRO 2015 INTERNTIONAL Conference, December 17-19, 2015, at IIT Roorkee, India (HYD-168)
31. Pandey, M., Ahmad, Z., & Sharma, P. K., Sharma, U.K. (2015). Evaluation of existing equation for maximum scour depth near a spur dike. HYDRO 2015 INTERNTIONAL Conference, December 17-19, 2015, at IIT Roorkee, India (HYD-312).
32. **Sharma, P.K**. and Srivastava, R. (2014). “Modeling of virus transport in unsaturated porous media using HYDRUS SOFTWARE”.Proceeding, 5th International and 41st National conference on fluid mechanics and Fluid Power, December 12-14, 2014, IIT Kanpur, India.
33. **Sharma, P.K**. and Sonowal, S. (2014) Experimental investigation of solute transport through Fractured Porous Rock. HYDRO 2014 INTERNTIONAL Conference, December 18-20, 2014, at M.A.N.I.T. Bhopal, India.
34. Teodrose A.A., **Sharma, P. K**. and Swami Deepak. (2014) Modeling solute transport through porous media with scale dependent dispersion. HYDRO 2014 INTERNTIONAL Conference, December 18-20, 2014, at M.A.N.I.T. Bhopal, India.
35. Pandey, M., Ahmad, Z., **Sharma, P.K**. (2014) Evaluation of existing equations for maximum scour depth near spur dikes. HYDRO 2014 INTERNTIONAL Conference, December 18-20, 2014, at M.A.N.I.T. Bhopal, India.
36. Pandey, M., Ahmad, Z., **Sharma, P.K**. and Lodhi A.S., (2014). "Scour and flow behaviour around single & multiple spur dike". Proceeding, ICES'14 (ASCE) 14-16 March 2014 VIT University, 74-82.
37. Lodhi, A.S., Jain, R.K., **Sharma, P.K.** and Karna, M., "Time Evolution Of Clear Water Bridge Pier Scour ". Proceeding, ICES'14 (ASCE) 14-16 March 2014 VIT University, 252-260.
38. Swami, D., **Sharma, P.K.,** Ojha C.S.P. (2013**)** “Reactive transport through stratified porous media**.** Proceeding of HYDRO-2013, (P-381-387), International, 4-6 December, 2013,IIT Madras, Chennai, India.
39. Lodhi, A.S., **Sharma, P.K**., Jain, R.K., Karna, N., (2013) "Time dependent scour around spur dykes in gravel and sand gravel bed, Proceeding of HYDRO-2013, (p-616-623), International, 4-6 December, 2013,IIT Madras, Chennai, India.
40. **Sharma, P.K.,** Swami, Deepak, Ojha C.S.P. (2013**)** “Simulation and experimental study of solute transport in stratified porous media**. IPWE 13, January 7-9, 2013 at Izmir, Turkey**
41. **Sharma, P.K**. and Dixit Umang (2012) “Simulation and experimental study of solute transport through fractured porous media. ICER-12, Number 22-24, 2012 **at UMT Kuala Terengganu, Malaysia.**
42. **Sharma, P. K**., Ojha, C.S.P., Nitin Joshi, and Rahul Choudhary (2012). “Numerical simulation of solute transport with observed data in soil column experiment”. ENSURE Feb. 23-26, 2012 at IIT Guwahati.
43. **Sharma, P.K**., Nitin Joshi, and Ojha, C.S.P. (2011). “Reactive transport through porous media with distance and time dependent dispersion model”. International conference on sustainable water resources management and climate change adaptation Feb 17-19, 2011 at NIT Durgapur.
44. **Sharma, P.K**. and Ojha, C.S.P. (2010). “Virus transport through fractured permeable porous media”. EWRI of ASCE India 2010, Third International conference Jna 5-7,2010 at IIT Chennai.
45. **Sharma, P. K**., and Srivastava, R. (2009). “Analysis of Concentration Profiles for Reactive Transport in Fractured-Porous media”.WEES–2009, India, P-1228-1234.
46. **Sharma, P. K**., and Srivastava, R. (2008). “Analysis of Spatial Moments for Reactive Transport through Fracture-Porous Matrix System”.12thIACMAG–2008,GOA,India, P-2456-2462.
47. Shriram, **Sharma, P. K**., and Jawaid, S.M.A. (2008). “Numerical Analysis of Solute Transport through Porous Media”. 12thIACMAG–2008, GOA, India, P-2529-2535.
48. **NATIONAL CONFERENCES/SYMPOSIUMS/WORKSHOP:**
49. Pandey, M., Ahmad, Z., **Shrama, P.K**., (2014), "Experimental Study Of Temporal Scour Around Spur Dikes." Proceeding,SITACEE'14 26-27 April 2014 JNU, ISBN: 978-93-83083-78-7, 164-171
50. Kumar, S., **Sharma, P.K**., Prasad, K.S.H (2014). “Modeling of unsaturated flow using HYDRUS Software”. National conf. RACE, May21-22, 2014, Held MMMUT Gorakhpur.
51. Pandey, M., Ahmad, Z, **Sharma, P.K**., Lodhi, A (2014). “Temporal variation of scour around single spur dyke and effect of multiple spur”. National conf. RACE, May21-22, 2014, Held MMMUT Gorakhpur.
52. Workshop on **HYDRUS** Feb. 4-5, 2012 at **IISC Bangalore**.
53. **Sharma, P.K.,** (2011). “Sorption study of Fluoride chemical through clayey soil” HYDRO, Dec. 29-30, 2011, PP. 43-53, (NIT Surat).
54. Sharma, P.K., (2009). “Stochastic analysis of solute transport in Fractured Impermeable Formation with Random Diffusion”. HYDRO 2009, Dec 17-18, 2009 India, p 222-231.
55. Sharma, P. K., Jawaid, S. M (2007). “Virus Transport through Subsurface Porous media”. National Conference on Sustainable Technologies for Better Tomorrow, VIT University, Vellore, December 19-20,2007.
56. Jawaid, S. M., Sharma, P. K., Kumar, A. (2006). “Application of Electric Resistivity in Site Characterization”. National Conference on Corrective Engineering Practices in Troublesome Soils, Kakinada, PP-11-13.
57. Sharma, P.K., and Srivastava, R. (2005). “Breakthrough Curves for Reactive Transport through Porous Media”. National Conference HYDRO, SIT Tumkur, pp-129-138.
58. Sharma, P.K., and Srivastava, R. (2005). “Analysis of spatial moments for reactive transport through heterogeneous porous media”. National Conference on GEN, MNNIT, Allahabad, PP-IV-1-5.
59. Jawaid, S. M., Sharma, P. K., Chowdhary, S.N. (2005). “Solid Waste Disposal of Gorakhpur- A Case Study”. National Conference on GEN, MNNIT, Allahabad, PP-VII-1-4.
60. Sharma, P.K., and Srivastava, R., “Solute Transport through Heterogeneous Porous Media”. National Symposium on Hydrology NIH Roorkee, pp-91-99, 2004.
61. Sharma, P.K., and Srivastava, R., (2003). “Virus Transport through Heterogeneous Porous Media”. Symposium on Advances in Geotechnical Engineering, IIT-Kanpur. pp360-367.

* ***Membership of Professional Bodies***

1. Member of Institution of Engineers (MIE)

2. Member of Indian Water Resources Society

3. Member of Indian Society for Hydraulics (ISH)

* ***PhDDissertations Supervising***

1. Scour around Bridge pier in gravel stream by Student, Manish Pandey ( pursuing)
2. Modeling of contaminant transport through porous media using asymptotic dispersivityby Student **Teodrose (**pursuing**)**
3. Scour around circular piers in clay-sand gravel mixtures by Student Ajay Singh Lodhi (co-supervisors: Dr. Chakrapani and Dr. RK Jain) (**Awarded in November 2015)**
4. Study on Reactive solute transport through porous media by Deepak Swami (Co-supervisor CSP Ojha) (**Awarded in 2014)**
5. Reactive contaminant transport through fractured porous media by Nitin Joshi (Co-supervisor: CSP Ojha) (**Awarded in 2013)**

* ***M.Tech. Dissertations Supervised*:**

1. Modeling contaminant transport through fractured porous media (Single)
2. Contaminant transport through porous media: an experimental study (Single)
3. Modeling Pathogen transport through subsurface (Co-supervisor- Dr. K.S. Hari Prasad)
4. Flow Pattern and scour around multiple spur-dikes in channels. (Co-supervisor-Dr. Z. Ahmad)
5. Modeling of unsaturated flow using HYDRUS Software (Co-supervisor- Dr. K.S. Hari Prasad)
6. Solute transport through homogeneous and heterogeneous porous media: Experimental study(Single)
7. Model Assisted planning of Ground water Development(Co-supervisor-Dr. D. Kashyap)
8. Sediment removal efficiency of vortex chamber type of sediment extractor(Co-supervisor-Dr. Z. Ahmad)
9. Discharge characteristics of orifice type Spillway under oblique Approach Flow(Co-supervisor-Dr. Z. Ahmad)
10. Stochastic modeling of Groundwater flow and Contaminant Transport(Co-supervisor-Dr. D. Kashyap)
11. Planning of Groundwater Development using Embedding Technique (Co-supervisor-Dr. D. Kashyap)
12. Analysis of Furrow Irrigation and Estimation of Infiltration Parameters(Co-supervisor-Dr. KSHP)
13. Experimental and numerical study of solute transport in layered soil(Co-supervisor-CSPO)
14. Transport of reactive contaminants through porous media-an experimental study(Single)
15. Simulation of riverbank filtrate turbidity-case study(Co-supervisor-Dr. KSHP)
16. Simulation and experimental study on solute transport in soil columns (Single)
17. Contaminant transport through fractured porous media: An experimental study(Single)
18. Numerical modeling of contaminant transport through layered soil(Co-supervisor-Dr. V.A. Sawant)
19. Treatment of Arsenic Contaminated Groundwater using Iron Oxide and Local Sand
20. Effect of industrial Effluent on the Engineering Properties of Expensive clays (Co-supervisor-Dr. SMAJ)
21. Numerical Analysis of Microbial Contaminant Transport through Porous media
22. Dye Waste Water to Remove Color and Dissolved Organic Matter from Waste Product (FLYASH &BAGASSE)(Single)

* ***International and national Conferences Attended:***

1. HYDRO-2015 at **IIT Roorkee**
2. HYDRO-2014 at **MANIT Bhopal**
3. FMFP-2014 at **IIT Kanpur**
4. IPWE-2013 at **Izmir, Turkey**.
5. ICER-2012 at **UMT Kuala Terengganu Malaysia**
6. International conference, ENSURE-2012 at IIT Guwahati
7. HYDRO-2011 at NIT Surat
8. International conference 2011 at NIT Durgapur
9. EWRI ASCE Conference 2010 at IIT Chennai
10. WEES-2009, at New Delhi.
11. EU-India International River Bank Filtration Conference, November 18-19,2006, at I.I.T. Roorkee
12. National Conference HYDRO-2005, SIT Tumkur
13. National Conference on GEN-2005, MNNIT, Allahabad.
14. National Symposium on Hydrology, 2004, NIH Roorkee.
15. SAGE 2003, I.I.T. Kanpur

* ***Courses Taught:***

1. Engineering Graphics,(U.G.)

2. Engineering Hydrology, (U.G.)

3. Computer Graphics, (U.G.)

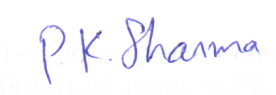
4. Groundwater (M.Tech.)

5. Advanced Fluid Mechanics, (M.Tech.)

6. Irrigation and drainage (M.Tech.)

* **Research project**
* “Development of Stochastic Numerical Model for Reactive Solute Transport through Fractured-Impermeable Porous Formations with Random Matrix Diffusion” (**Amount Rs. 4.75 Lakhs under Faculty Initiation Grants (F.I.G**.) **Completed**.
* “Experimental evaluation and numerical modeling for flow and solute transport through soil column and two-dimensional fractured porous formations” Funded by **DST New Delhi,an amount of Rs. 18.24 Lakhs duration three years (i.e.Aug 2009 to July 2012**).**Completed.**
* “Pier and jet scour in cohesive sediments consisting of clay-sand-gravel mixtures” Funded by **DST New Delhi,an amount of Rs. 29 Lakhs. Completed.**

It is declared that all the information given above is true to the best of my knowledge and belief.



Date: 0**4-02-2016 (P. K. Sharma)**

Place:Roorkee