

Bio Data

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3. Institution : National Institute of Hydrology,
Roorkee- 247 667 (Uttarakhand)
4. Date of Birth : 25-06-1973
5. Gender : Male
6. Category : General



7. Academic Qualifications:

Education

Degree	Subjects/ Specialization	Year	University/Board
M.Sc.	SOIL SCIENCE & WATER MANAGEMENT- Specialization SOIL CHEMISTRY	1997	Dr. YSP UHF, NAUNI, SOLAN(HP)
PhD	SOIL SCIENCE & WATER MANAGEMENT- Specialization SOIL CHEMISTRY	2001	Dr. YSP UHF, NAUNI, SOLAN(HP)
National Eligibility Test	SOIL MICROBIOLOGY/CHEMISTRY/ FERTILITY	1999	Agricultural Scientists Recruitment Board- ICAR

Trainings

Sr. No.	Title of training	Date/duration	Place	Sponsored
1	Basics of Groundwater Flow Modeling	02-12-2019 to 06-12-2019	Rajiv Gandhi National Ground Water Training & Research Institute, Raipur	NHP
2	Remediation and management of polluted groundwater sites	16-05-2016 to 29-05-2016	DOH, IIT-Roorkee	GIAN, MHRD
3	Groundwater modeling using iMod	08-03-2016 to 10-03-2016	o/o Project Officer, Ganga River Basin Planning	MoWR, RD, GR

			Project Team Mohan Singh Place, N. Delhi	
4	Groundwater Modeling Using MODFLOW and MIKE SHE (GWM – 2015)	02-02-2015 to 06-02-2015 5 days	National Institute of Hydrology (NIH), Roorkee, (Uttarakhand)	BGS, UK
5	Advanced soft Computing Techniques in Hydrology and its Application	29-10-2012 to 02-11-2012 5 days	-do-	DST-IWIN Project
6	Hydrological Investigation Techniques for Water Resource Development & Management	27-08-2012 to 30-08-2012 4 days	-do-	Purpose driven studies Hydrology Project-II
7	Hydrological Investigations in Conservation and Management of Lakes	26-03-2012 to 28-03-2012 3 days	-do-	NIH (MoWR)
8	Isotope Hydrology	19-12-2012 to 24-12-2012 6 days	-do-	DST-SERC, New Delhi
9	Hydrological Investigations in Conservation and Management of Lakes	01-03-2011 to 03-03-2011 3 days	-do-	NIH (MoWR)
10	Advanced techniques for hydrological investigations	16-08-2010 to 21-08-2010 6 days	-do-	DST-IWIN Project
11	Application of Remote Sensing & GIS in Agriculture and Soils	05-05-2008 to 27-06-2008 8 weeks	IIRS, Dehradun	NNRMS, ISRO, Bangalore
12	Gram++ & DSS for Bioenergy Resources	15-01-2005 to 22-01-2005 8 days	IIT-Roorkee, Roorkee (uttarakhand)	NRDMS, DST, New Delhi
13	22 nd FAI-NR Fertilization Orientation Course	24-11-1995 to 25-11-1995 2 days	Dr. Y.S.P UHF, Nauni, Solan (HP)	Fertilization Association of India

8. Work Experience (20 Years)

Sr. No.	Designation	Employer	Funding	Period		Year	Month
				From	To		
1	Scientist-C	NIH, Rke	DoWR, MoJS NDelhi	Sep, 2015	-contd-	4	7
2	Res.	NIH, Rke	Wapcos,	July,	Sep,	0	1

	Person		Ltd	2015	2015		
3	Researcher	BGS, UK	BGS, UK	Oct, 2014	Jul, 2015	0	9
4	Res. Sci. 'C'	NIH, Rke	BGS-DFID	Mar, 2013	Sep, 2014	1	7
5	Res. Sci. 'B'	NIH, Rke	DST-SERC	Jul, 2009	Mar, 2013	3	7
6	Res. Assoc.	IIRS-ISRO	DoS, Bluru	Apr, 2006	Apr, 2009	3	0
7	Res. Assoc.	UHF, Solan	DST, NDelhi	Jun, 2002	Mar, 2006	3	9
8	Res. Assoc.	UHF, Solan	GBPIHD	Aug, 2001	May, 2002	0	9
9	Res. Fellow	UHF, Solan	ICFRE (WB)	Apr, 1997	Mar, 1999	1	11

9. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

Sr. No.	Name of Award	Awarding Agency	Year
1	Certificates of appreciation	Shri Venkateshwar University, Gajrauala American Water Resources Association Conference Scientific Impacts on a Historic Landscape American Water Resources Association Montana Section Atal Bihari Vajpayee Trust Abhav Foundation, Bilaspur, Chattisgarh Geoethics and GW management congress as member Scientific committee held in Portugal during May 18-22, 2020 jointly organized by International Association of Hydrogeologists (IAH) and International Association for Promoting Geoethics (IAPG) Department of Agriculture and Department of applied and basic sciences Galgotia University	2020
2	Best paper award in a National Seminar on Hindi on the topic Water Resources and Environment on the paper entitled "Issues of soil and water in Sunderban"	National institute of Hydrology, Roorkee	2019
3	The Sentinels of Science Awards	PUBLONS	2016, 17, 18
4	BEST PRACTICE RESEARCHER AWARD	Bangalore University in International conference and Exhibition on Innovative Technologies and field applications for Sustainable water, wastewater & energy management-SWWEM-16, during 17-19 August, 2016 IISC, Bangalore	2016
5	ITS –DST Travel Support to USA	Department of Science and Technology, New Delhi	2012
6	Certificate of Appreciation	American Water Resources Association, USA	2012

7	Certificate of best presentation in a session-Peas-2012	Faculty of engineering, GKV, Haridwar	2012
8	Fellow	Society of Earth Scientists (F/486)	2015

10. Publications (List of papers published in SCI Journals,).

1. **Krishan, Gopal**, Prasad, Gokul, Anajli, Kumar, C.P., Patidar, Nitesh, Yadav, Brijesh, Kansal, M.L., Singh, Surjeet, Sharma Mohan, Lalit, Bardley, Allen, Verma, S.K. 2020. Identifying the seasonal variability in source of groundwater salinization using deuterium excess- a case study from Mewat, Haryana, India. Journal of Hydrology- Regional Studies, 31: 100724 <https://doi.org/10.1016/j.ejrh.2020.100724>
2. MacDonald, Alan, Bonsor, Helen, Ahmed, Kazi, Burgess, William, Basharat, Muhammad, Calow, Roger, Dixit, Ajaya, Foster, Stephen, **Krishan, Gopal**, Lapworth, Daniel, Lark, Murray, Moench, Marcus, Mukherjee, Abhijit, Rao, M.S., Shamsudduha, Mohammad, Smith, Linda, Taylor, Richard, Tucker, Josephine, Steenbergen Frank van, Yadav, Shobha. 2016. Groundwater quality and depletion in the Indo-Gangetic basin from ground observations. **Nature Geosciences 9:762-766 (Impact Factor-13.94; NAAS RATING: 20) SPRINGER-NATURE.**
3. Bonsor HC, MacDonald AM, Ahmed KM, Burgess WG, Basharat M, Calow RC, Dixit A, Foster SSD, **Gopal K**, Lapworth D, Lark RM, Moench M, Mukherjee A, Rao MS, Shamsudduha M, Smith L, Taylor R, Tucker J, van Steenbergen F, Yadav SK. 2017. Hydrogeological typologies of the Indo-Gangetic basin alluvial aquifer, South Asia. Hydrogeology Journal . DOI: 10.1007/s10040-017-1550-z. (Impact Factor-2.40; NAAS RATING: 8.40) SPRINGER
4. Rao, M.S., **Krishan, Gopal**, Kumar, C. P., Purushotmanan P., Kumar, Sudhir. 2017. Observing changes in groundwater resource using hydro-chemical and isotopic parameters: a case study from Bist Doab, Punjab. Environmental Earth Science 76:175. DOI: 10.1007/s12665-017-6492-1(Impact Factor-1.871; NAAS RATING: 7.87) SPRING
5. **Krishan, Gopal**, Rao, M.S., Kumar, Bhishm, Kumar, C.P.2014. Possibility of using isotopic composition of ground level vapour (GLV) for monitoring arrival and withdrawal of southwest monsoon. Current Science 108(5): 784-786 (Impact Factor-0.756; NAAS RATING: 6.76) Indian Academy of Sciences, Bangalore
6. Lapworth DJ, MacDonald AM, **Krishan G**, Rao MS, Goody DC, Darling WG. 2015. Groundwater recharge and age-depth profiles of intensively exploited groundwater resources in northwest India. Geophys. Res. Lett., 42, doi:10.1002/2015GL065798(Impact Factor-4.50; NAAS RATING: 10.58)
7. Saranya, **Krishan, Gopal**, Rao, MS, Kumar, Sudhir, Kumar, Bhishm. 2018. Controls on water vapor isotopes over Roorkee, India: Impact of convective activities and depression systems. Journal of Hydrology. 557: 679-687 (Impact Factor-3.727; NAAS RATING: 10.40)
8. **Krishan, Gopal**, Rao, M.S. and Kumar, Bhishm. 2011. Instrumentation for measurement of isotopic composition of air moisture. Journal of Instrument Society of India, 41:217-220. Instrument Society of India, IISc, Bang.
9. Lapworth, DJ, **Krishan, Gopal**, MacDonald, Alan, Rao, MS. 2017. Groundwater quality in the alluvial aquifer system of northwest India: new evidence of the extent of anthropogenic and geogenic contamination. Science of the Total Environment, (Impact Factor-5.589; NAAS RATING: 11.59) ELSEVIER
10. Lapworth, Dan; Das, Prerona; Shaw, Ashok; Mukherjee, Abhijit; Civil, Wayne; Petersen, Jade; Goody, Daren; Wakefield, Oliver; Finlayson, Andrew; **Krishan, Gopal**; Sengupta, Probal; MacDonald, Alan. 2018. Deep urban groundwater vulnerability in India revealed through the use of emerging organic contaminants and residence time tracers. Environmental Pollution (Impact Factor-5.714; NAAS RATING: 11.71), ELSEVIER
11. **Krishan Gopal**. Rao, M.S. and Kumar C.P. 2014. Radon Concentration in Groundwater of East Coast of West Bengal, India. Journal of Radioanalytical and Nuclear Chemistry. DOI: 10.1007/s10967-014-3808-4. (Impact Factor-0.983 NAAS RATING: 7.19) Springer
12. **Krishan Gopal**. Rao, M.S. and Kumar C.P. 2014. Estimation of Radon concentration in groundwater of coastal area in Baleshwar district of Odisha, India. Indoor and Built Environment. DOI: 10.1177/1420326X14549979 (Impact Factor-1.72) Sage
13. **Krishan, Gopal**, Rao, M.S., Kumar, C.P., Kumar, Sudhir, Rao, M. Ravi, Anand. 2015. A study on identification of submarine groundwater discharge in northern east coast of India. International Conference on Water Resources, Coastal and Environmental Engineering. March 12-14, 2015 NIT Surathkal. Aquatic Procedia. 4:3-10 Elsevier
14. **Krishan, Gopal**, Srivastav, S.K.; Kumar, Suresh.; Saha, S.K. and Dadhwal, V.K. 2009. Quantifying the underestimation of soil organic carbon by Walkley and Black technique- an example from Himalayan landscape and Central Indian soils. Current Science. 96: 1133-1136. (Impact Factor-0.756; NAAS RATING: 6.76) Indian Academy of Sciences, Bangalore

11. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
Book				
1	Isotope Hydrology (Book)	Krishan, Gopal and Rao, M.S.	Lambert Publishing House, Germany . pp. 513	2013
Reports				
1	Understanding aquifer systems of Indian Sundarbans	Krishan G., Dasgupta P., and McKenzie, A	The India-UK Water Centre. 31pp. Wallingford, UK and Pune, India	2020
2	Country-wide capacity building program on "Bank filtration for sustainable drinking water supply	Ghosh, NC, Krishan, Gopal	DST, New Delhi	2018
3	Investigation of Physical Groundwater Table and Ascertaining its Fluctuation and Trend in Stretch from Chainage 59+600 m to 67+300 m in Rewari to Dadri of CTP-14 Package of Western Dedicated Freight Corridor Project	Ghosh, NC, Krishan, Gopal , Singh, Surjeet, Gurjar, Suman	submitted to L&T, Limited, Faridabad	2018
4	Impact of Metro Railroads Viaduct on Groundwater Recharge in NCT Delh	Krishan, Gopal , Ghosh, NC, Ranade, Ashwini, Chaudhry, Anju	Submitted to DMRC, New Delhi	2018
5	Groundwater recharge source in deep aquifer using isotopes in Punjab	Krishan, Gopal , Rao, MS, Ghosh, NC, Kumar, Sudhir, Rai, SP	Report submitted to DWSS, SAS Nagar, Mohali, Punjab.	2017
6	The use of environmental isotopes to assess sustainability of intensively exploited aquifer systems in north eastern parts of Punjab, India	Rao, M.S. Krishan, Gopal , Kumar, Sudhir and Kumar, C.P	Report submitted to IAEA, Vienna (F 3.30.19; Research Contract 17429	2016
7	Groundwater Resources in the Indo-Gangetic basin- Resilience to climate change and abstraction.	MacDonald AM, Bonsor HC, Taylor R, Shamsudduha M, Burgess WG, Ahmed KM, Mukherjee A, Zahid A, Lapworth D, Gopal K , Rao MS, Moench M, Bricker SH, Yadav SK, Satyal Y, Smith L, Dixit A, Bell	Technical Report. NERC Open Research Archive, BGS-UK	2015

		R, van Steenburgen F, Basharat M, Gohar MS, Tucker J, and Maurice L.		
8	Intensive Groundwater Exploitation in the Punjab – an Evaluation of Resource and Quality Trends.	Lapworth, Dan, Krishan, Gopal , Rao, MS, MacDonald, Alan	Technical Report. NERC Open Research Archive, BGS-UK	2014
9	Hydro-geological assessment of Ghar area for artificial recharge and water management planning.	Garg, P.K., Kumar, Bhishm, Kumar, CP, Rao, MS, Krishan, Gopal , Agarwal, Rajesh, Ahmed, Tanvir.	Technical Report. National Institute of Hydrology, Roorkee	2014
10	Groundwater dynamics of Bist Doab, Punjab using isotopes.	Rao, MS, Kumar, Bhishm, Kumar, CP, Kumar, Sudhir, Krishan, Gopal .	Technical Report. National Institute of Hydrology, Roorkee	2014
11	National Programme on Isotope Fingerprinting of Waters of India.	Rao, MS, Kumar, Bhishm, Kumar, CP, Kumar, Sudhir, Krishan, Gopal .	Technical Report. National Institute of Hydrology, Roorkee	2014
12	Indo-gangetic groundwater resilience project- Punjab case study. In: Report of IBG-Groundwater Resilience Project (eds. H.C. Bonsor and A.M. MacDonald)	Krishan, Gopal , Rao, M. S., Lapworth, D.J. and MacDonald, A.M.	BGS Internal Report, IR/13/060. http://nora.nerc.ac.uk/505660/1/IR13060.pdf	2013
13	Forest and land degradation assessment in upper catchment of river Tons, Uttarkashi.	Kushwaha S.P.S., Singh, I.J., Velmurgan, A., Gopal Krishan and Nandy, S	Technical Report, Indian Institute of Remote Sensing, Dehradun.	2007
Book Chapters				
1	Groundwater salinity in north west of India: a critical appraisal	Krishan, Gopal , Bisht, Mamta, Ghosh, N.C., Prasad, Gokul	Singh R., Shukla P., Singh P. (eds) Environmental Processes and Management. Water Science and Technology Library, vol 91. Springer, Cham	2020
2	Identification and Planning of Water Quality Monitoring Network in Context of Integrated Water Resource Management (IWRM)	Singh S., Krishan G. , Ghosh N.C., Jaiswal R.K., Thomas T., Nayak T.R.	Singh V., Yadav S., Yadava R. (eds) Environmental Pollution. Water	2018

			Science and Technology Library, vol 77. Springer, Singapore	
3	Hydrologic regimes under climate change in Indo-Gangetic basin and their impact on fruit production	Krishan, Gopal and Lohani, A.K.	Horticultural Sciences- perspectives and applications (Editor : K V Peter). Brillion Publishing, New Delhi. 10: 257-273	2017
4	Assessment of groundwater level in southwest Punjab, India. In: Hydraulics, Water resources, Coastal & Environmental Engineering-Hydro 2014 (Editors: H.L. Tiwari, S. Suresh, R.K. Jaiswal)	Krishan, Gopal , Rao, M.S., Lohani, A.K., Kumar, C.P., Takshi, K.S., Tuli, N.K., Loyal, R.S. and Gill, G.S.	Excellent Publishing House, New Delhi. 23: 248-254.	2014
5	Groundwater fluctuation and trend in Amritsar, Punjab, India. In: Geo-statistical and Geospatial approaches for the characterization of natural resources in the environment: challenges, processes and strategies (Editor: N. Janardhana Raju)	Krishan, Gopal , Lohani, A.K., Rao, M.S., Kumar, C.P. and Takshi, K.S..	Capital Publishing House, New Delhi Pp. 108-111. (ISBN. 978-93-81891-25-4).	2014
6	Application of isotopes of water vapour in climate studies – A world perspective. In: Climate Change and Himalayan Ecosystem indicator, Bio and Water Resources. (Eds. J. Sunderasan, Pankaj Gupta, K.M. Santosh and Ram Bhoojh).	Krishan, Gopal , Rao, M.S. and Kumar, C.P.	Scientific Publishers, India. 10: 119-127	2013
7	Remote Sensing for Soil Fertility Evaluation and Management. In: Bioresources for Sustainable Plant Nutrient Management (Ramesh Chandra and K.P. Raverkar, Editors).	Krishan, Gopal , Saha, S.K., Kumar, Suresh and Patel, N.R.	Satish Serial Publishing House, New Delhi, pp 509-533. (ISBN.978-93-81226-88-9)	2012

8	Identification of recharge zones and sources of springs in mountainous region using isotopes. In: Drinking Water: Source, Treatment & Distribution. Edited by Rajendra Dobhal, Thomas Grischek, H.P. Uniyal, D.P. Uniyal and C. Sandhu, ,	Kumar, Bhishm; Rai, S. P.; Krishan, Gopal and Rawat, Y. S.	Bishen Singh Mahendra Pal Singh ISBN : 8121108133. 8:61-74	2011
9	Organic Farming in Himalayan Region. In: Sustainable Land Resource Management in Himalayan Region: Land degradation, Water management, Soil fertility and Organic farming. (Eds. J.N. Raina, I.P. Sharma, R. Bawa and D. Tripathi).	Tripathi, D; Krishan, Gopal and Raina, J.N.	Bishen Singh Mahendra Pal Singh. 20: 265-279.	2006
10	Soil Bioresources in Agriculture. In: Bioresource Technology (Ed. G. Tripathi).	Sharma, Uday; Krishan, Gopal and Talatam, Satya Narayan.	CBS, Publishers, New Delhi, India. 44-56.	2002
General articles				
1	Soil organic carbon sequestration in Himalayan landscape. An example from SW Garhwal Himalaya.	Kumar, Suresh,;; Srivastav, S.K.,; Dadhwal, V.K. and Krishan, Gopal .	<i>Contact</i> . (Volume 9 No. 2). Published from IIRS, Dehradun.	2007
2	Heavy metal pollution in soil.	Tripathi, D; Uday Sharma and Gopal Krishan .	<i>Kisan World</i> . 30 : 49.	2003

12. Current projects and collaboration

- Impact of high abstraction on groundwater resources and water quality in the Punjab (BGS, UK)
- Baseline hydrological and hydrogeological data collection and analysis in Mewat, Haryana (Sehgal Foundation, Gurgaon + IIT-R)
- River Bank Filtration under Peyjal Suraksha Project (MoWR, RD, GR-New Delhi)
- Study of river - aquifer interactions and groundwater potential in the upper Ganga basin up to Dabrani (DST, New Delhi)

Skills

- Soil Sciences; Isotope Hydro-meteorology ; Hydro-geochemistry; Water quality studies

Professional association

- Member International Association of Hydrogeologist (IAH)- 141319
- Member International Association of Hydrological Sciences (IAHS) - 17349
- Life Member Association of Global Groundwater Scientists LM-AGGS-133
- Fellow Society of Earth Scientists (F/486)

- 2015 : Life member “Indian Association of Hydrologists (IAH-1878)”
- 2012 : American Water Resources Association (member ship no. 55384)
- 2008 : Indian Society of Remote Sensing (C-3299)
- **Full Members of the SCOR Working Group on Global Groundwater Fluxes to the Ocean for year 2015**
http://scor-int.org/Annual%20Meetings/2015EC/NEXT_SGD.pdf
- **Fellow of The Society of Earth Scientists**
- Member International Advisory Board –**International Journal of Earth Sciences and Engineering, International Journal of Applied Environmental Sciences**
- Co Editor in Chief of the Journal: **Current World Environment**
- **Editor: Journal of Environment and Waste Management, Premier Publishers, USA**
- Reviewer of the Journals: **Plos One, Journal of Hydrology, Applied Radiation and Isotopes, Hydrological Sciences, Quaternary International, Science of Total Environment (Elsevier), Hydrological Processes, Arabian Journal of Geosciences (Springer), Journal of Earth System & Science (Springer), Sustainable Water Resource Management (Springer), Applied Water Science (Springer), Journal of Irrigation and Drainage Engineering (ASCE), Environmental System Research (Springer),**
- Member **Organizing committee** International Conference on Earth Sciences and Geo science organized by SCIFED Limited, 27 Old Gloucester Street, London, UK E : contact@scifed.com to be organized during August 13-14, 2018 at Amsterdam, Netherlands
- Andalas University, Padang, Indonesia, and CAFET-INNOVA TECHNICAL SOCIETY (CITS) Hyderabad, INDIA held during 29th -31st August, 2017 at Andalas University, Padang, Indonesia
- Member **Technical committee** 4th International Conference on Earth Sciences and Engineering (ICEE-2017) jointly organized by Andalas University, Padang, Indonesia, and CAFET-INNOVA TECHNICAL SOCIETY (CITS) Hyderabad, INDIA held during 29th -31st August, 2017 at Andalas University, Padang, Indonesia
- Member **Advisory committee** International Conference On Recent Trends And Developments In Environmental Sustainability organized by Environment Matters (NGO), National Institute of Technical Teachers Training and Research (NITTTR), Institution of Water & Environment (India) Punjab Chapter at NITTTR, Chandigarh on May 20, 2016
- Member **Technical committee** International Conference on “Innovative trends in civil engineering for sustainability (ICICES-2016)” organized by Department of Civil Engineering, Toc H Institute of Science & Technology (TIST) Arakkunnam, Ernakulam, Kerala, India In Technical Collaboration with CAFET-INNOVA TECHNICAL SOCIETY (CITS) Hyderabad, INDIA In Association with Indian Concrete Institute (ICI) ISTE - TIST Chapter and Indian Green Building Council (IGBC) held during 8-9 January, 2016 at Toc H Institute of Science & Technology (TIST) Arakkunnam, Ernakulam, Kerala, India
- Member **Advisory committee** National Conference on “Innovations in Civil Engineering (NCICE-2016)” held during 8-9 January, 2016 at Govt. college of Engineering, Karad, Maharastra
- Member **Technical committees** of international Conferences “ICWRCOE-2015” held at NITK, Suratkhal, Mangalore during March 12-14, 2015; “ICEE-2015” held at NIT-Coimbatore during March 20-21, 2015; “ICEE-2016” held at NIT-Coimbatore during June 17-18, 2016
- Member **Advisory committee** National Conference on “ Advances in Civil and Structural Engineering” Sponsored by Technical Education Quality Improvement Programme (TEQIP Phase II) held during 18-19 April, 2014 at Govt. college of Engineering, Karad, Maharastra
- Member **Coordination and Editorial committee** of international conference “Advances in Water Resources Development and Management-2013” held during Oct. 23-27, 2013 at PU, Chandigarh
- Member **coordination committee** of Regional workshop on “Water availability and management in Punjab” held at PU Chandigarh during Dec. 13-15, 2010

Guidance of M.E./M.Tech./Ph.D. Thesis

- **P.hD**
Completed: 01
Ongoing: 02
- **M.Tech**
Completed: 05
Ongoing: 01
- **M.Sc.**

Completed: 02

CV Raman Fellow

1	Potential of River bank Filtration in Ghana	Mr. David Saka, PhD student of Environmental Engineering Department, University of Energy and Natural Resources, Sunyani, Ghana, West Africa, CV Raman Fellow	September 2017-March, 2018
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DAAD Fellow

1.	Experiment on grading of EC and mixing of fresh water with saline water	Mr. Johannes M. Medick, (HTWD, Germany)	November 2018-January, 2019
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Research interests

- Application of stable isotopes for –Monitoring of south-west monsoon using air moisture isotopes, tracking recharge sources, surface water-ground water interaction
- Sub-marine groundwater discharge using Radon as tracer
- Emerging organic contaminants in groundwater
- Urban groundwater quality and use
- Water resources (integrated approach) – recharge, water quality, vulnerability and impact of climate variability
- Soil Chemistry

Lectures/Talks Delivered

1. Delivered a talk on "Groundwater crisis: a threat to water security" in an International webinar on theme "Advances in water and transport industry for sustainable development" organized by Shri Venkateshwar University, Gajraula on October 23, 2020
2. Talk delivered in a IUKWC sponsored Virtual User Engagement Initiative (UEI) on topic " Groundwater resilience to climate change and abstraction in the Indo-Gangetic basin" hosted by on September 09, 2020
3. Talk delivered in a Live webinar on topic "COVID-19 CHALLENGES IN WATER SECTOR" hosted by Atal Bihari Vajpayee Trust Abhav Foundation, Bilaspur, Chattisgarh on June 12, 2020
4. Talk delivered in a Live webinar on topic "COVID-19 IMPACT ON WATER RESOURCES " hosted by School and Agriculture and school and Basic and Applied Sciences, Galgotia University on May 17, 2020
5. Formulation of Research Objectives in a national workshop on Research Methodology in Physics on February 15, 2020 at Khalsa College Patiala
6. Environmental tracers in water resource management in a workshop on Assessment and management of groundwater resources under changing climatic conditions under NAHEP on February 06, 2020 at PAU, Ludhiana
7. Understanding aquifer systems of Sunderbans in a webinar on Sunderbans- The case of Water, water everywhere but not a drop to drink'? on February 04, 2020 at NIH Roorkee organized by IUKWC.
8. Soil carbon pools and dynamics: assessment tools at department of Hydrology, IIT Roorkee in brain storming session on Role of Wetlands in Carbon/Nitrogen sequestration and its impact on In-situ bioremediation of NAPL pollutants on January 22, 2020
9. Salinity remedial measures during special meeting on water conservation and livelihood enhancement programme for Indian Sunderbans at Department of Panchayats and Rural Development salt lake Kolkata 700106 on September 19, 2019
10. Groundwater salinity and remedial measures in context of Sunderbans at India-UK one-day workshop on "The influence of the monsoon of freshwater availability for Agriculture in the Sunderbans region of West Bengal, India, under current and climate change conditions" Jointly organized by Department of

Agricultural Meteorology and Physics, BCKV and India-UK water Centre, Indian Institute of Tropical Meteorology (IITM), Pune, India on September 03, 2019

11. GW measurement techniques and data analysis in a training course on "Groundwater issues of Punjab with special emphasis on groundwater salinity organized during July 16-18, 2019 at Forest complex Mohali under NHP
12. Salinity experiment demonstration in a training course on "Groundwater issues of Punjab with special emphasis on groundwater salinity organized during July 16-18, 2019 at Forest complex Mohali under NHP
13. GW level fluctuations: A Case Study of Punjab in a training course on "Groundwater issues of Punjab with special emphasis on groundwater salinity organized during July 16-18, 2019 at Forest complex Mohali under NHP
14. Uses of environmental tracer in field investigations: examples from Punjab studies in a training course on "Groundwater issues of Punjab with special emphasis on groundwater salinity organized during July 16-18, 2019 at Forest complex Mohali under NHP
15. Measures of salinity remediation in a training course on "Groundwater issues of Punjab with special emphasis on groundwater salinity organized during July 16-18, 2019 at Forest complex Mohali under NHP
16. Groundwater salinity in a training course on "Groundwater issues of Punjab with special emphasis on groundwater salinity organized during July 16-18, 2019 at Forest complex Mohali under NHP
17. Tracer experiments for groundwater analysis in a training course on "Applied groundwater flow and contaminant transport modelling" TEQIP is being organized during June 24-28, 2019 at Department of Hydrology, IIT-Roorkee
18. Groundwater monitoring practices, applications and challenges in Punjab at University College London on February 13, 2019
19. Application of Isotopes in South West Monsoon studies, at CEH conference hall Wallingford, UK on February 06, 2019
20. Groundwater fluctuations and monitoring in Punjab, at Lyell Centre, BGS, UK on January 30, 2019
21. Fundamentals of Soil Science and soil engineering - Galgotias University, Greater Noida January 27, 2019
22. Groundwater salinity status of Mewat- State IOWA University Faculty and Students at Sehgal Foundation, Gurgaon, January 11, 2019
23. RBF in extreme environments along Yamuna River in Indo-German Workshop on Riverbank Filtration for Sustainable Water Supply in India – Vision 2030 at Dehradun on December 17, 2018
24. Isotopes in Hydrograph Separation- Examples from Gangetic Region - DST-SERB training course on "Application of isotopes in water resource management" at CWRDM, Kozhikode July 30 to August-04, 2018
25. Use of isotopes in bank filtration technique-few case studies - DST-SERB training course on "Application of isotopes in water resource management" at CWRDM, Kozhikode July 30 to August-04, 2018
26. Application of isotopes in groundwater management at GIAN training course on "Applied Groundwater Flow and Transport Modeling with MODFLOW" at DOH, IIT-Roorkee, July 30, 2018
27. Design, operation and maintenance of Bank Filtration sites in a training course on "Hydrology, Water Resources Management and Climate Change" for participants from the Pacific Island Countries is being organized during June 25-July 20, 2018 at NIH, Roorkee
28. Protocol for groundwater and surface water sampling, monitoring and assessment in a training course on "Hydrology, Water Resources Management and Climate Change" for participants from the Pacific Island Countries is being organized during June 25-July 20, 2018 at NIH, Roorkee
29. Environmental tracers in groundwater contamination studies in an Indo-UK workshop on "Bioremediation of LNAPL Polluted Groundwater" during 26-27 March, 2018 at Department of Hydrology, IIT-Roorkee
30. Investigation of RBF sites in Agra Mathura in a training course on "Bank filtration for sustainable drinking water supply" during 05-09 March, 2018 at NIH, Roorkee organized in association with HTWD, Germany; UJS, Dehradun; UCOST, Dehradun; DST, New Delhi
31. Groundwater quality in northwest India in India UK Water sponsored UEI 1: Improving freshwater monitoring frameworks and data for research and management during January 23-25, 2018 at Kochi, Kerala. http://www.iukwc.org/sites/www.iukwc.org/files/images/Gopal_K-UEI.pdf

32. Tracers Techniques in soil and groundwater contaminant investigations in a training course on "Investigation, remediation and management of soil and groundwater contaminated sites" during 20-22 November, 2017 at Department of Hydrology, IIT-Roorkee sponsored by Central Pollution Control Board, New Delhi
33. Integrated Watershed Management, Introduction to integrated planning, conjunctive use and rainwater harvesting in a training course on "Basic Hydrology" during 06-10 November, 2017 at IMTI, Kota, Rajasthan organized by Water Resources Department, Rajasthan under NHP.
34. Groundwater Hydrology: basic concepts, aquifer properties, aquifer mapping, groundwater flow concepts in a training course on "Basic Hydrology" during 06-10 November, 2017 at IMTI, Kota, Rajasthan organized by Water Resources Department, Rajasthan under NHP.
35. Preliminary investigations to develop RBF sites in Agra Mathura area of UP, India in a training course on "Bank filtration for sustainable drinking water supply" during 18-22 September, 2017 at PHED, Shillong jointly organized by NIH, Roorkee; PHED, Shillong; HTWD, Germany; UJS, Dehradun; UCOST, Dehradun; DST, New Delhi
36. Groundwater fluctuations – case studies in a training course on "*Groundwater Hydrology under NHP*" during August 21-25, 2017 at NIH-Roorkee
37. Environmental tracers in groundwater investigation in a training course on "*Groundwater Hydrology under NHP*" during August 21-25, 2017 at NIH-Roorkee
38. Preliminary investigations to develop RBF sites in Agra Mathura area of UP, India in a training course on "Bank filtration for sustainable drinking water supply" during 06-10 February, 2017 at Goa jointly organized by NIH, Roorkee; HTWD, Germany; UJS, Dehradun; UCOST, Dehradun; DST, New Delhi
39. Environmental tracers in groundwater investigation in a GIAN training course on "Integrated modelling of subsurface flow and transport in porous media – Challenges and Opportunities" during January 02-14, 2017 at IIT-Roorkee
40. Environmental tracers in groundwater investigation in a training course on "*Identification of Contaminated Sites and its Treatment Technologies, Interferences and Data management using GIS - Hands-on-Training*" during November 14-18, 2016 at IIT-Roorkee sponsored by CPCB, New Delhi
41. Preliminary investigations to develop RBF sites in Agra Mathura area of UP, India in a training course on "Bank filtration for sustainable drinking water supply" during 12-16 September, 2016 at NIH, Roorkee jointly organized by NIH, Roorkee; HTWD, Germany; UJS, Dehradun; UCOST, Dehradun; DST, New Delhi
42. Environmental tracers in groundwater investigations in Faculty Development Programme on "Environmental science and engineering, in Civil Engineering" in Civil Engineering" funded by TEQIP-II at IFTM University, Moradabad, August 30, 2016
43. Radon measurements in groundwater and applications in Faculty Development Programme on "Environmental science and engineering, in Civil Engineering" in Civil Engineering" funded by TEQIP-II at IFTM University, Moradabad, August 30, 2016
44. Environmental tracers in groundwater investigations at GIAN training course on "Remediation and management of polluted groundwater sites" at DOH, IIT-Roorkee, May 21, 2016
45. Isotopes for groundwater investigation in semi-arid alluvial regions- case studies from Punjab, India DST-SERB training course on "Isotope Hydrology" at CWRDM, Kozhikode March 14-19, 2016
46. Radon measurement in groundwater- case studies north east coast and Gangetic basin (Haridwar) India DST-SERB training course on "Isotope Hydrology" at CWRDM, Kozhikode March 14-19, 2016
47. Analysis of air moisture isotopes and its application in hydrology - in context of climate change training course on "Climate Resilient Fruit Production Technology, at SKUAST, Jammu November 30-December 1, 2015
48. Hydrologic Regimes under Climate Change in Indo-Gangetic Basin (IGB) and impact assessment in training course on "Climate Resilient Fruit Production Technology, at SKUAST, Jammu November 30-December 1, 2015
49. Advanced Techniques to understand the Response of Groundwater Resources to Sustained Abstraction in training course on "Integrated Water Resources Development and Management" during November 30, 2015 to December 5, 2015 at National Institute of Hydrology, Roorkee sponsored by MoWR, RD GR, New Delhi
50. Advanced Techniques to understand the Response of Groundwater Resources to Sustained Abstraction in training course on "Integrated Water Resources Development and Management" during September 28-October 3, 2015 at National Institute of Hydrology, Roorkee sponsored by MoWR, RD GR, New Delhi
51. Analysis of air moisture isotopes and its application in hydrology - in context of climate change training course on "Water Resources Investigations and Management in Coastal Regions", at DRC-NIH-Kakinada, AP during February 3-7, 2014

Key note Delivered

1. Delivered a talk on "Groundwater dynamics- storage, depletion, management and climate variability" 7th annual international virtual convention organized by Suresh Gyan Vihar University during November 04-07, 2020
2. Application of isotopes in groundwater salinity studies at department of Hydrology, IIT Roorkee in IGWC 2019 during Oct 21-24, 2019
3. Application of isotopes in water resources management at National seminar on "Forest and Tree-Based Land Use Systems for Livelihood, Nutritional and Environmental Security", from Dec. 21st - 23rd 2016 at NAU, Navsari, Gujarat
4. Decision support system for natural resource system at National seminar on "Forest and Tree-Based Land Use Systems for Livelihood, Nutritional and Environmental Security", from Dec. 21st - 23rd 2016 at NAU, Navsari, Gujarat
5. Groundwater conditions in Punjab at International Conference on Recent Trends and Development in Environmental Sustainability (RTDES-2016), 20th May, 2016 at Chandigarh, India

TRAININGS/SEMINARS/WORKSHOPS/SYMPOSIUM

Organized

Trainings

Sr. No.	Title of training	Date/duration	Place	Sponsored
1	Groundwater issues in Punjab with special emphasis on salinity	16-07-2019 to 18-07-2019	Forest complex, Mohali	NHP

Workshops/Symposium/Seminars

Sr. No.	Title of workshop/symposium/Seminars	Date/duration	Place	Sponsored
1	Sunderbans- The case of Water, water everywhere but not a drop to drink'?	February 04, 2020	NIH, Roorkee	IUKWC
2	Understanding aquifer systems of Sunderbans- special emphasis on ASR using saline aquifers to improve farmers livelihood	December 09, 2019	Salt lake, Kolkata	IUKWC
3	8th International groundwater conference "IGWC 2019- Sustainable management of soil and water resources" (Joint Organizing Secy)	October 21-24, 2019	DOH, IIT Roorkee	NHP, DHI, ICAR, DST
4	Regional workshop on Groundwater Recharge, Reduction in Soil Salinity- solutions and way forward for Indian Sunderbans"	August 07, 2019	ICAR-CSSRI, Canning town, West Bengal	IUKWC
5	Community workshop on participatory groundwater management (PGWM)	August 03, 2019	Karakoti, Sunderabn, West Bengal	IUKWC
6	Community workshop on participatory groundwater management (PGWM)	June 14, 2019	Gosaba, Sunderabn, West Bengal	IUKWC
7	Community workshop on participatory groundwater management (PGWM)	June 13, 2019	Sandeshkhali, Sunderabn, West Bengal	IUKWC