

C. P. Kumar

Groundwater Hydrologist



Research & Development | Technology Transfer

Key Skills

Research & Development

Research Analysis

Project Management

Reporting & Documentation

Technical Reports

Technical Papers

Technical Books & Chapters

Mentoring & Knowledge Sharing

Editorial Board of Journals

Technical Websites

Online Technical Groups

Training Courses

Technology Transfer

Profile Summary

- An Acclaimed Scientist and an Esteemed Academician with **34 years** of experience across Research & Development in water sector
- Conducting and guiding research in the area of assessment, development and management of groundwater resources
- Impressive success in conducting and mentoring **technical studies pertaining to Hydrology** covering groundwater assessment, modelling of unsaturated flow, modelling of sea water intrusion, modelling of groundwater flow and solute transport, application of hydrological models and impact of climate change
- Contribution in **sponsored projects** related to development and management of groundwater resources
- Credited with developing **35 technical reports**, publishing **121 technical papers**, authoring **6 books** and **7 book chapters**
- Gained **international exposure** by travelling to Denmark for training on Hydrological Computerized Modelling System (SHE) in Danish Hydraulic Institute, Horsholm and Australia for training on The Modelling of Salt Water Intrusion in National Tidal Facility, Adelaide
- Proficiently headed a scientific division and regional centre and supervised technical studies and projects
- Associated with World Bank Funded **National Hydrology Project**
- Supervision of M.Tech. dissertations
- Organization of training courses and workshops
- Contributing as Editorial Board Member of various national and international journals
- Excellent communication & interpersonal skills with strong analytical, team building, problem-solving and organizational capabilities

Soft Skills



Communicator



Innovator

Personal Details

Date of Birth: 07 September 1960

Languages Known: Hindi & English

Address:

150/11, Vikas Nagar,
New Teacher Hostel,
Roorkee – 247667 (Uttarakhand)

Awards & Achievements

- Recognized with:
 - The Certificate of Merit by The Institution of Engineers (India) for his paper entitled "Modelling of Soil Moisture Movement" published in the Journal of the Institution (Twenty-first day of December, 2000)
 - The Certificate of Merit for 1996-97 by The Institution of Engineers (India) for his paper entitled "Prediction of Evaporation Losses from Shallow Water Table using a Numerical Model"

Education

- B.Sc. Engg. (Civil)
- M.E. (Hydraulic Engg.)

Target Industries

- Any organization dealing with assessment, development and management of water resources
- Principal of Engineering College

Work Experience

Since Apr'85 with National Institute of Hydrology, Roorkee

Growth Path:

Apr'85-Nov'85 as S.R.A
Nov'85-Aug'91 as Scientist 'B'
Aug'91-Aug'97 as Scientist 'C'
Aug'97-Jul'09 as Scientist 'E1'
Jul'09-Jun'15 as Scientist 'F'
Since Jul'15 as Scientist 'G'

Key Result Areas:

- Conducting and mentoring research in the areas of assessment of groundwater potential; sea water intrusion in coastal aquifers; numerical modelling of unsaturated flow, groundwater flow and contaminant transport; management of aquifer recharge; and impact of climate change on groundwater
- Significant contribution in many sponsored projects related to estimation of irrigation return flow; hydrogeological investigations to assess causes of seepage from reservoir; coastal groundwater dynamics and management; integrated hydrological investigations of lake; groundwater fluctuations and conductivity monitoring etc.
- Publication of technical reports based-upon research studies
- Publication of technical papers in national and international journals and conferences
- Authored a comprehensive book on "*Groundwater Assessment and Modelling*" (Paperback and Kindle Editions), ISBN: 978-1511520492, CreateSpace Independent Publishing Platform (An Amazon Company), USA, 2015, 332 p.
- Contributed book chapters on various topics such as ground water modelling, surface water and ground water resources, groundwater balance, groundwater flow models, management of groundwater in salt water ingress coastal aquifers, impact of climate change on groundwater resources etc.
- Head of Hard Rock Regional Centre of NIH at Belgaum (Karnataka) for 4 years during 1999 to 2003
- Head of Hydrological Investigations division of NIH headquarters at Roorkee (Uttarakhand) during 2012 to 2014
- Head of Ground Water Hydrology division of NIH headquarters at Roorkee (Uttarakhand) w.e.f. April 2019
- Coordinated the 40 Purpose Driven Studies (PDS) being conducted by various states under World Bank funded National Hydrology Project (India)
- Supervised M.Tech. dissertations on various topics such as one dimensional solute movement in unsaturated medium, simulation of sea water intrusion, modelling of soil moisture movement and solute transport in an agricultural field, soil moisture flow modelling using HYDRUS 1D etc.
- Organization of various training courses and workshops on the topics related to hydrology and water resources
- Review of large number of technical papers for various national and international journals
- Moderating few online technical discussion groups on Yahoo! and Google (for more than 15 years) related to Hydrology and Water Resources

Other Duties

- Scientist-in-charge, Ground Water Laboratory
- Scientist-in-charge, Indian National Committee on Hydrology (INCOH)
- Assistant Engineer (Civil)
- Finance Officer
- Officer-in-Charge, Communication & Telephones
- Officer-in-Charge, Computer Centre
- Head, Computer Centre
- Coordinator, Purpose Driven Studies (Hydrology Project, Phase – II)
- Chairman, Annual Report Committee
- Chairman, e-Governance Committee
- Coordinator, Hard Rock Regional Centre, Belgaum
- Nodal Officer, e-Governance
- Chief Editor, Jal Chetna (Technical Magazine)
- Coordinator, Purpose Driven Studies (National Hydrology Project)
- Member Secretary, Expert Committee for Purpose Driven Studies (NHP)
- Chairman, e-Governance Cell
- Coordinator, INCIHP (Indian National Committee for International Hydrological Programme of UNESCO)
- Member-Secretary, Achievements Review Committee
- Member Secretary, Sub-Committee on PDS (National Hydrology Project)
- Chairman, Standing Works and Services Committee
- Chairman, External Project Management Cell

Website

<http://www.angelfire.com/nh/cpkumar/>

Publications

<http://www.angelfire.com/nh/cpkumar/publication/>

Google Scholar citations

<https://scholar.google.com/citations?user=Wp8-kHUAAAAAJ&hl=en>



Professional Affiliations

- American Journal of Water Resources
<http://www.sciepub.com/journal/AJWR/editors>
- Advances in Engineering & Scientific Research
<http://advancejournals.org/advances-in-engineering-and-scientific-research/editor-board/>
- International Journal of Current Trends in Engineering & Research
<http://www.ijcter.com/editorial-board/>
- Earth Science India
<http://www.earthscienceindia.info/members.aspx>
- Current World Environment
<http://www.cwejournal.org/editorial-board/>
- Environmental Science: An Indian Journal
<https://www.tsijournals.com/journals/environmental-science-an-indian-journal-editors.html>
- Madridge Journal of Agriculture and Environmental Sciences
<https://madridge.org/journal-of-agriculture-and-environmental-sciences/editors>
- International Journal of BioSciences and Technology (IJBST)
<https://board.ijbst.org/>
- Central Asian Journal of Environmental Science and Technology Innovation
<http://www.cas-press.ru/journal/editorial.board>
- The Institution of Engineers (India)
- Indian Association of Hydrologists
- Indian Water Resources Society
- Association of Hydrologists of India
- The Indian Society for Hydraulics
- Indian Society of Soil Science
- Indian Association of Soil & Water Conservationists
- Soil Conservation Society of India
- Geological Society of India
- Indian Society of Applied Geochemists
- Association of Global Groundwater Scientists



Other Accolades

Managing the following websites and e-mail discussion groups:

- Kumar Links to Hydrology Resources
<http://www.angelfire.com/nh/cpkumar/hydrology.html>
 - Hydrology Forum
<http://groups.yahoo.com/group/hydforum/>
 - Hydrological Modelling Discussion Group
<http://in.groups.yahoo.com/group/hydrologymodel/>
 - Ground Water Modelling Discussion Group
<http://groups.yahoo.com/group/gwmodel>
- Besides the technical achievements, Mr. C. P. Kumar is also practicing Reiki healing from 2015.
<http://reiki-roorkee.blogspot.com/>

Annexure

Sponsored Projects:

- Hydrostatic Pressure Imbalance Study for Kayamkulam Gas Power Project, Kerala (sponsored by NTPC Limited, New Delhi)
- Assessment of Impact of Irrigation Application in a part of IGNP Stage-II Command Area underlain by Hydrologic Barrier (sponsored by Command Area Development, IGNP, Bikaner)

- ⦿ Evaluating the Impact of Forest Rehabilitation Strategies (UNESCO Project)
- ⦿ Estimation of Irrigation Return Flow in Lokapavani Area in Krishnarajasagar Command (Hydrology Project)
- ⦿ Hydrological and Hydrogeological Investigations to Assess Causes of Seepage from the Reservoir of Jaswant Sagar Dam in Jodhpur (Water Resources Department, Rajasthan)
- ⦿ Coastal Groundwater Dynamics and Management in the Saurashtra Region, Gujarat (Hydrology Project - II)
- ⦿ Integrated Hydrological Investigations of Sukhna Lake, Chandigarh for its Conservation and Management (Forest Department, Chandigarh)
- ⦿ Groundwater Fluctuations and Conductivity Monitoring in Punjab – New Evidence of Groundwater Dynamics in Punjab from High Frequency Groundwater Level and Salinity Measurements (British Geological Survey)

Technical Studies:

Ground Water Assessment:

- ⦿ Ground Water Balance of Upper Ganga Canal Command Area
- ⦿ Ground Water Balance of Jamnagar District (Gujarat)
- ⦿ Estimation of Irrigation Return Flow
- ⦿ Impact of Rainwater Harvesting on Groundwater in Savna Watershed

Modelling of Unsaturated Flow:

Laboratory and Field Determination of Soil Moisture Characteristics:

- ⦿ RD 838 of Indira Gandhi Nahar Pariyojana, Stage-II
- ⦿ Upper Part of Hindon River Catchment
- ⦿ Malaprabha and Ghataprabha Basins
- ⦿ Savna Watershed

Modelling of Soil Moisture Movement:

- ⦿ Development of a Numerical Simulation Model for One-Dimensional Infiltration
- ⦿ Prediction of Evaporation Losses from Shallow Water Table
- ⦿ Evaporation from Layered Soils in the Presence of a Water Table
- ⦿ Estimation of Ground Water Recharge due to Rainfall
- ⦿ Effect of Water Table Depth on Recharge due to Rainfall

Modelling of Sea Water Intrusion

Simulation of Sea Water Intrusion and Tidal Influence:

- ⦿ Nauru Island (Central Pacific Ocean)
- ⦿ Ernakulam Coast
- ⦿ Goa Coast
- ⦿ Porbandar Coast (Minsar River Basin)

Modelling of Ground Water Flow and Solute Transport

- ⦿ Common Ground Water Modelling Errors
- ⦿ Modeling of Solute Transport in Agricultural Fields
- ⦿ Simulation of Solute Transport in Saline Areas of Ghataprabha Command

Application of Hydrological Models

- ⦿ Application of SHE Model to Narmada (Manot) Basin
- ⦿ Application of SHE Model to Hemavati (Sakleshpur) Basin
- ⦿ Simulation of Soil Moisture Movement in Barchi Watershed using SWIM Model

Impact of Climate Change

- ⦿ Impact of Climate Change on Groundwater
- ⦿ Impact on Dynamic Groundwater System in Sonar Sub-basin

Books:

- ⦿ Book on "Comprehensive Hydrological Studies of Narmada Basin - Summary of the Studies, Conclusions and Recommendations" by Rakesh Kumar and C. P. Kumar, National Institute of Hydrology, Roorkee, 1999, 133 p

- eBook on "Assessment of Groundwater Potential", Scientific Essay by C. P. Kumar, ISBN: 978-3-656-75555-5, GRIN Publishing GmbH, Munich, Germany, 2014, 23 p
- eBook on "Groundwater Data Requirement and Analysis", Scientific Essay by C. P. Kumar, ISBN: 978-3-656-75554-8, GRIN Publishing GmbH, Munich, Germany, 2014, 27 p
- eBook on "Impact of Climate Change on Groundwater Resources", Academic Paper by C. P. Kumar, ISBN: 978-3-656-75551-7, GRIN Publishing GmbH, Munich, Germany, 2014, 33 p
- Book on "Groundwater Assessment and Modelling" (Paperback and Kindle Editions) by C. P. Kumar, ISBN: 978-1511520492, CreateSpace Independent Publishing Platform (An Amazon Company), USA, 2015, 332 p
- Book on "Modelling of Sea Water Intrusion using SUTRA" by C. P. Kumar, ISBN: 978-3-659-87389-8, LAMBERT Academic Publishing, Germany, 2017, 56 p

Chapters:

- Chapter on "Ground Water Modelling" by C. P. Kumar; In. Hydrological Developments in India Since Independence", A Contribution to Hydrological Sciences, National Institute of Hydrology, Roorkee, 1992, pp. 235-261
- Self-instructional Course Material on "Surface Water and Ground Water Resources" by C. P. Kumar and Rakesh Kumar; School of Engineering & Technology, Indira Gandhi National Open University (IGNOU).
- Article on "Groundwater Balance" (GW-1518) by C. P. Kumar; In. The Encyclopedia of Water, John Wiley & Sons, Inc., New York, 2005, Volume 5, pp. 162-169
- Chapter on "Groundwater Flow Models: An Overview" by C. P. Kumar; In. Groundwater Modelling and Management (Eds. N. C. Ghosh & K. D. Sharma), Capital Publishing Company, New Delhi, 2006, pp. 153-178
- Chapter on "Management of Groundwater in Salt Water Ingress Coastal Aquifers" by C. P. Kumar; In. Groundwater Modelling and Management (Eds. N. C. Ghosh & K. D. Sharma), Capital Publishing Company, New Delhi, 2006, pp. 540-560
- Chapter on "Impact of Climate Change on Groundwater Resources" by C. P. Kumar; In. Handbook of Research on Climate Change Impact on Health and Environmental Sustainability (Editor: Soumyananda Dinda), A Volume in the Advances in Environmental Engineering and Green Technologies (AEEGT) Book Series, IGI Global, 2015, pp. 198-223
- Chapter on "Climate Change and Groundwater" by C. P. Kumar, Anupma Sharma, K. V. Sruthi, B. K. Purandara and Sumant Kumar; In. Climate Change and Its Impacts on Water Resources with Focus on India (Eds. Sharad K. Jain & P. K. Singh), Special Report-1/19, National Institute of Hydrology, Roorkee, India, July 2019, pp. 164-177

M.E./M.Tech. Dissertations Guided:

- Prediction of One Dimensional Solute Movement in Unsaturated Medium (Mr. Abdhesh Kumar Upadhyay, M.Tech., Applied Geophysics, 1995, University of Roorkee)
- Simulation of Sea Water Intrusion for Cochin Coast (Ernakulam District) (Deepanjali D. Bhosale, M.Tech., Environmental Engineering, 1999-2000, K.L.E. Society's College of Engineering and Technology, Belgaum)
- Utilisation of Saturated-Unsaturated Transport (SUTRA) Model for Goa Coast (Mayuree N. Natu, M.Tech., Environmental Engineering, 1999-2000, K.L.E. Society's College of Engineering and Technology, Belgaum)
- Modelling of Soil Moisture Movement and Solute Transport in an Agricultural Field using SWIM (Shilpa S. Ratnoji, M.Tech., Environmental Engineering, 2000-2001, K.L.E. Society's College of Engineering and Technology, Belgaum)
- Isotopic Characterization of Groundwater in Lower Part of Sutlej Basin (Mr. K. Sumanth Dutt, Geological Technology, 2014, Department of Earth Sciences, I.I.T. Roorkee)
- Soil Moisture Flow Modelling using HYDRUS 1D (Mr. Vikrant, Karunya University, Coimbatore, 2016)

Training Courses & Workshops:

- Training Course on "Software for Ground Water Data Management" at NIH, Roorkee during the period 7-18 October, 1996
- Workshop on "Modelling of Hydrologic Systems" at Hard Rock Regional Centre, NIH, Belgaum during the period 4-8 September, 2000
- Workshop on "Remote Sensing and GIS Applications in Hydrology" at Hard Rock Regional Centre, NIH, Belgaum during the period 23-25 September, 2002
- Training course on "Sustainable Ground Water Management in Arid and Semi-Arid Region" at NIH, Roorkee during the period 23 April – 4 May, 2007
- Training Course on "Coastal Groundwater Modeling & Management" at WALMI, Anand (Gujarat) during the period 22-26 November, 2010

- Training Course on "Hydrological Investigations for Conservation and Management of Lakes" at NIH, Roorkee during the period 26-28 March 2012
- Training Course on "Hydrological Investigation Techniques for Water Resource Development & Management" at NIH, Roorkee during the period 27-30 August, 2012
- Training Course on "Hydrological Investigations for Conservation and Management of Lakes" at NIH, Roorkee during the period 15-18 January, 2013
- Training Course on "Coastal Groundwater Development, Modeling & Management" at Ahmedabad (Gujarat) during the period 3-7 March, 2014

Technical Reports:

- Kumar, C. P. and P. V. Seethapathi (1987), "Assessment of Recharge from Various Sources to an Aquifer and Assessment of Aquifer Yield", Technical Report No. TR-18 (Secret/Restricted), 1986-87, National Institute of Hydrology, Roorkee
- Kumar, C. P. and P. V. Seethapathi (1988), "Effect of Additional Surface Irrigation Supply on Ground Water Regime in Upper Ganga Canal Command Area, Part I - Ground Water Balance", Case Study Report No. CS-10 (Secret/Restricted), 1987-88, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1989), "Estimation of Evapotranspiration", Technical Note No. TN-45, 1988-89, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1990), "Application of SHE Model to Narmada (Manot) Basin", Case Study Report No. CS-29, 1989-90, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1991), "Application of SHE Model to Hemavati (Sakleshpur) Basin", Case Study Report No. CS-46, 1990-91, National Institute of Hydrology, Roorkee
- Kumar, C. P. and G. C. Mishra (1991), "Development of a Soil Moisture Prediction Model", Technical Report No. TR-104, 1990-91, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1992), "Prediction of Evaporation Losses from Shallow Water Table using a Numerical Model", Technical Report No. TR-119, 1991-92, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1993), "Estimation of Ground Water Recharge due to Rainfall by Modelling of Soil Moisture Movement", Technical Report No. TR-142, 1992-93, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1994), "Soil Moisture Simulation by Improved Numerical Method", Technical Report No. TR(BR)-111, 1993-94, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1995), "Ground Water Balance before Introduction of Irrigation in the Canal Command Area", Technical Report No. TR(BR)-119, 1994-95, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1995), "Effect of Water Table Depth on Recharge due to Rainfall", Technical Report No. TR(BR)-120, 1994-95, National Institute of Hydrology, Roorkee
- Seethapathi, P. V., G. Ramaswamy, A. B. Palaniappan, C. P. Kumar and C. K. Jain (1995), "Hydrological Studies for the Proposed Gas Based Power Project at Kayamkulam, Alleppey District, Kerala", Sponsored by National Thermal Power Corporation Ltd., New Delhi, 76 p
- Kumar, C. P. (1996), "Evaporation from Layered Soils in the Presence of a Water Table", Technical Report No. TR(BR)-142, 1995-96, National Institute of Hydrology, Roorkee
- Mishra, G. C., C. P. Kumar and Vivekanand Singh (1997), "Assessment of Irrigation Return Flow", Technical Report No. TR(BR)-11/96-97, National Institute of Hydrology, Roorkee
- Kumar, C. P. (1997), "The Problems associated with Deltas with emphasis on Salt Water Intrusion", Status Report, UNDP Project (IND/90/003), National Institute of Hydrology, Roorkee
- Kumar, C. P. (1998), "The Modelling of Salt Water Intrusion", Training Report in the field of Deltaic Hydrology, UNDP Project (IND/90/003), National Institute of Hydrology, Roorkee
- Singh, Vivekanand, G. C. Mishra, Sudhir Kumar and C. P. Kumar (1998), "Feasibility Study of Rainwater Harvesting in Semi-Arid Region", Technical Report No. TR(BR)-6/97-98, National Institute of Hydrology, Roorkee
- Kumar, Rakesh and C. P. Kumar (1999), "Comprehensive Hydrological Studies of Narmada Basin - Summary of the Studies, Conclusions and Recommendations", National Institute of Hydrology, Roorkee, February 1999
- Kumar, C. P. (1999), "Variation of Soil Moisture Characteristics in a Part of Hindon River Catchment", Case Study Report No. CS(AR)4/98-99, 1998-99, National Institute of Hydrology, Roorkee
- Purandara, B. K., C. P. Kumar, B. Venkatesh and P. R. S. Rao (2000), "Spatial Variation of Soil and Hydrological Characteristics of Selected Watersheds in Hard Rock Region", Case Study Report No. CS/AR-5/1999-2000, National Institute of Hydrology, Roorkee
- Kumar, C. P. and B. K. Purandara (2001), "Simulation of Soil Moisture Movement in a Hard Rock Watershed using SWIM Model", Technical Report, 2000-2001, National Institute of Hydrology, Roorkee
- Jain, C. K., K. K. S. Bhatia, C. P. Kumar and B. K. Purandara (2001), "Ground Water Quality in Malaprabha River Basin, Karnataka", Technical Report, 2000-2001, National Institute of Hydrology, Roorkee
- Purandara, B. K., C. P. Kumar, B. Soni and N. Varadarajan (2002), "Simulation of Solute Transport in Saline Areas of Ghataprabha Command", Technical Report, 2001-2002, National Institute of Hydrology, Roorkee

- Jain, C. K., C. P. Kumar and M. K. Sharma (2002), "Ground Water Quality in Ghataprabha Command Area, Karnataka", Technical Report, 2001-2002, National Institute of Hydrology, Roorkee
- Mishra, G. C., S. K. Singh, C. P. Kumar, Sudhir Kumar and M. K. Shukla (2003), "Final Report on Assessment of Impact of Irrigation Application in a Part of IGNP Stage-II Command Area underlain by Hydrologic Barrier", Sponsored by Command Area Development, Indira Gandhi Nahar Pariyojana, Bikaner, 225 p
- Ghosh, N. C., B. Venkatesh, Sudhir Kumar, C. P. Kumar, A. V. Shetty and B. K. Purandara (2003), "Surface and Subsurface Data Compilation, Analyses and Lumped Water Balance of the Lokapavani Area in Krishnaraja Sagar Command", Part I of R & D Project – Estimation of Irrigation Return Flow in Lokapavani Area of Krishnaraja Sagar Command, Karnataka
- Vivekanand Singh, N. C. Ghosh, Sudhir Kumar, C. P. Kumar, A. V. Shetty and B. K. Purandara (2003), "Estimation of Irrigation Return Flow using Process Level Modelling", Part II of R & D Project – Estimation of Irrigation Return Flow in Lokapavani Area of Krishnaraja Sagar Command, Karnataka
- Rathore, D. S., N. C. Ghosh, Sudhir Kumar, C. P. Kumar, A. V. Shetty and B. K. Purandara (2003), "Distributed Modeling of the Hydrologic Systems of the Lokapavani Area in Krishnaraja Sagar Irrigation Command using MIKE SHE WM MODULE", Part III of R & D Project – Estimation of Irrigation Return Flow in Lokapavani Area of Krishnaraja Sagar Command, Karnataka
- Jain, S. K., Anupma Sharma, Rakesh Kumar and C. P. Kumar (2003), "The Global and Indian Freshwater Crisis: A Perspective", National Institute of Hydrology, Roorkee
- Kumar, C. P., A. G. Chachadi, B. K. Purandara, Sudhir Kumar, N. Varadarajan and Raju Juyal (2007), "Modelling of a Coastal Aquifer using FEFLOW", Report No. TR/BR-1/2006-07, National Institute of Hydrology, Roorkee, 36 p
- Singh, Surjeet, C. P. Kumar, Anupma Sharma and Rajan Vatsa (2012), "Impact of Climate Change on Dynamic Groundwater System in a Drought Prone Area", National Institute of Hydrology, Roorkee
- Sharma, Anupma, C. P. Kumar, C. K. Jain, Sudhir Kumar, D. S. Rathore, M. S. Rao, Surjeet Singh, Rajan Vatsa (2014), "Coastal Groundwater Dynamics and Management in the Saurashtra Region, Gujarat", Purpose Driven Study, Hydrology Project – II, National Institute of Hydrology, Roorkee, 122 p
- Kumar, C. P., B. K. Purandara and P. R. Rao (2014), "Simulation of Soil Moisture Movement in a Hard Rock Watershed using SWIM Model", Technical Report, ISBN (eBook): 978-3-656-76884-5, ISBN (Book): 978-3-656-76883-8, GRIN Publishing GmbH, Munich, Germany, 79 p
- Kumar, Sumant, N. C. Ghosh, C. P. Kumar, Surjeet Singh, R. P. Singh, Sanjay Mittal (2015), "Managed Aquifer Recharge (MAR) and Aquifer Storage Recovery (ASR)", National Institute of Hydrology, Roorkee, 92 p
- Rao, M. S., Gopal Krishan, C. P. Kumar and Sudhir Kumar (2016), "The Use of Environmental Isotopes to assess Sustainability of Intensively Exploited Aquifer Systems in North Eastern Parts of Punjab, India", National Institute of Hydrology, Roorkee

Technical Papers:

National and International Journals

- Kumar, C. P. and S. K. Pathak (1987), "Triangular Side Weirs", Journal of Irrigation and Drainage Engineering, American Society of Civil Engineers, Vol. 113, No. 1, February 1987, pp. 98-105
- Mishra, G. C. and C. P. Kumar (1991), "Hydrological Forecast of Soil Moisture", Jalvigyan Sameeksha (Hydrology Review), A Publication of Indian National Committee on Hydrology, Volume V, Number 1 & 2, June 1991, pp. 79-84
- Kumar, C. P. (1991), "Application of SHE Model to Hemavati (Sakleshpur) Basin", Hydrology Journal, Indian Association of Hydrologists, Roorkee, Vol. XIV, No. 4, October-December 1991, pp. 209-227
- Kumar, C. P. (1992), "Ground Water Modelling", In: Hydrological Developments in India Since Independence", A Contribution to Hydrological Sciences, National Institute of Hydrology, Roorkee, pp. 235-261
- Kumar, C. P. (1994), "Review of Analytical Procedures of Unsaturated Flow", Hydrology Journal, Indian Association of Hydrologists, Roorkee, Vol. XVII, No. 3 & 4, July-December 1994, pp. 59-71
- Kumar, C. P. (1995), "Physically - Based Distributed Modelling of Narmada (Manot) Basin using the Systeme Hydrologique Europeen", Journal of Indian Water Resources Society, Volume I, Number 2, 3 & 4, June, July & Oct. 1995, pp. 11-16
- Kumar, C. P. (1996), "Developments in Ground Water Hydrology : An Overview", SATI Journal of Science and Technology, Sati Vigyan and Takniki Parishad (Samrat Ashok Technological Institute), Vidisha, Volume 1, No. 1, January 1996, pp. 80-92
- Kumar, C. P. (1996), "Prediction of Evaporation Losses from Shallow Water Table using a Numerical Model", Journal of The Institution of Engineers (India), Civil Engineering Division, Volume 77, August 1996, pp. 103-107
- Mittal, Sanjay and Chandra Prakash Kumar (1996), "Bhu-Jal Santulan", Bhagirath Journal (Hindi), April-September 1996, pp. 19-24
- Kumar, C. P. (1996), "Development of a Soil Moisture Prediction Model", Journal of Applied Hydrology, Association of Hydrologists of India, Vol. IX, No. 3 & 4, July & Oct. 1996, pp. 1-15

- Kumar, Chandra Prakash and Neeraj Kumar Bhatnagar (1996), "Uthle Bhu-Jal Star Se Vashpan - Ek Punarvalokan", Bhagirath Journal (Hindi), October-December 1996, pp. 16-18
- Kumar, C. P. (1997), "Estimation of Natural Ground Water Recharge", ISH Journal of Hydraulic Engineering, Volume 3, No. 1, March 1997, pp. 61-74
- Kumar, C. P. (1997), "Effect of Water Table Depth on Recharge due to Rainfall", Journal of Indian Water Resources Society, Volume 17 (3), Number 2, April 1997, pp. 13-19
- Kumar, C. P. (1998), "Determination of Hydraulic Conductivity for Sub-surface Flow Studies", Journal of Applied Hydrology, Association of Hydrologists of India, Vol. XI, No. 1, January 1998, pp. 25-35
- Kumar, C. P. (1998), "A Numerical Simulation Model for One-Dimensional Infiltration", ISH Journal of Hydraulic Engineering, Volume 4, No. 1, March 1998, pp. 5-15
- Kumar, C. P. (1998), "Estimation of Ground Water Recharge due to Rainfall by Modelling of Soil Moisture Movement", ISH Journal of Hydraulic Engineering, Volume 4, No. 2, September 1998, pp. 55-62
- Kumar, C. P. (1998), "Estimation of Ground Water Recharge from Rainfall through Numerical Modelling", Journal of Applied Hydrology, Association of Hydrologists of India, Vol. XI, No. 4, October 1998, pp. 39-45
- Kumar, C. P. (1999), "Evaporation from Shallow Water Table through Layered Soil Profiles", ISH Journal of Hydraulic Engineering, Volume 5, No. 2, September 1999, pp. 65-75
- Kumar, C. P. and Manohar Arora (1999), "Mrada Ardrata ke Sthanantaran ka Pratirupan", Journal of The Institution of Engineers (India), Year 80, October 1999, pp. 9-11
- Kumar, C. P. and Manohar Arora (1999), "Varsha dwara Bhaumjal ka Puneh Pura", Journal of The Institution of Engineers (India), Year 80, October 1999, pp. 12-14
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