Name and full correspondence address

Dr. Pankaj Kumar
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Research specialization

- Monsoon dynamics
- High resolution climate modeling
- Climate change projection, extremes
- Uncertainties associated with climate models
- Himalayan Glacier modeling for mass-balance and area change studies.

Fellowship Awarded

- Dr. Pankaj Kumar have been nominated as **Editorial board member** of Climate Services Journal, publisher Elsevier.
- Award **Indo-Russia project**, "Impact of Climate Change on South Asia Extremes: A high-resolution regional Earth System Model assessment".
- Dr. Pankaj Kumar have been unanimously selected as **Chairperson of Executive Committee** of India Meteorological Society Bhopal Chapter.
- Nominated as International Expert on Open Panel of CCI Experts (OPACE) by United Nations (**World Meteorological Organization**) on the recommendations of its permanent representative (i.e. DG, IMD, Govt. of India), June 2016.
- SERB, Government of India "Ramanujan Fellowship" for the period 2015-2020 [serb.gov.in/pdfs/guideline/ramanujan-guideline.pdf].
- Max Planck Institute of Tropical Meteorology, Hamburg **Germany Visiting Scientist Fellowship** for the period February 2008 – June 2009.
- Indian Institute of Tropical Meteorology, Research Associate fellowship, for the period 2006 June to 2008 January.

- India Meteorological Department, Government of India, fellowship for conducting research on "Development of Long Range Forecast Capabilities", 2001-2006.
- University Grants Commission, India, Studentship during M. Sc. (Tech) in 2000.

Academic Profile

Since 29th Sept. 2015	:	Asst. Professor, Dept. of Earth and Environmental Sciences, IISER Bhopal, India
1st - 28th Sept. 2015	:	Ramanujan Fellow, Jawaharlal Nehru University, New Delhi, India
June 2014 to Aug. 2015	:	Research Scientist, Climate Service Center 2.0, Hamburg, Germany
July 2009 to May 2014	:	Research Scientist, Max Planck Institute for Meteorology, Hamburg, Germany
July 2010 to May 2014	:	Guest Scientist, Climate Service Center 2.0, Hamburg, Germany
Feb. 2008 to June 2009	:	Visiting Scientist, Max Planck Institute for Meteorology, Hamburg, Germany
June 2006 to Feb. 2008	:	Research Associate, Indian Institute of Tropical Meteorology, Pune, India
May 2001 to Jan. 2007	:	Ph.D., Indian Institute of Tropical Meteorology, Pune, India. Supervisor: Dr. Rupa Kumar Koli and Co-supervisor: Dr. M. Rajeevan

Awards & Distinctions

- Recently (March 2018), again I have been nominated as International Expert on Open Panel of CCI Experts (OPACE) by United Nations (World Met. Organization), on the recommendations of its permanent representative (i.e., Director General, India Meteorological Department, Govt. of India).
- Nominated as International Expert on Open Panel of CCI Experts (OPACE) by United Nations (World Meteorological Organization) on the recommendations of its permanent representative (i.e. DG, IMD, Govt. of India), June 2016.
- "Ramanujan Fellowship" SERB, Government of India for the period 2015-2020.
- SysTem for Analysis, Research and Training (START), University of Hawaii, USA fellowship for the period 2-12 January 2008.
- Indian Institute of Tropical Meteorology, Research Associate fellowship, for the period 2006 June to 2008 January.
- India Meteorological Department, Government of India, fellowship for conducting research on "Development of Long Range Forecast Capabilities", 2001-2006.
- University Grants Commission, India, Studentship during M. Sc. (Tech) in 2000.

Peer Reviewed Publications

1. Sein Dimitry, Yu Anton, Dvornikov, Martyanov Stanislav, David CabosNarvaez William, Ryabchenko Vladimir, Groeger Matthias, **Kumar P** (2020), "Impact of the Indian Ocean temperature - phytoplankton feedback on simulated South Asia climate", Earth and Space Science Open Archive *(discussion)*. https://doi.org/10.1002/essoar.10503384.1
2. Sharma Sahil, Kumari Amita, M Navajyoth, **Kumar P**, Saharwardi Md. Saquib (2020), "Impact of air-sea interaction during two contrasting monsoon seasons", Theoretical and Applied Climatology https://doi.org/10.1007/s00704-020-03300-6

3. F Tangang, J X Chung, L Juneng, S Supari, E Salimun, S T Ngai, A F Jamaluddin, M S Faisal, F Cruz, G Narisma, J Santisirisomboon, T Ngo-Duc, T V Phan, P Singhruck, D Gunawan, E Aldrian, A Sopaheluwakan, N Grigory, A Remedio, D Sein, DHein-Griggs, J L. McGregor, H Yang, H Sasaki, **Kumar P** (2020), "Projected Future Changes in Rainfall in Southeast Asia based on CORDEX – SEA Multi-model Simulations", Climate Dynamics, https://doi.org/10.1007/s00382-020-05322-2
4. Everard Mark, Ahmed Shakeel, Gagnon Alexandre, **Kumar P**, T Thomas, Sinha Sumit, Dixon Harry and Sarkar Sunita (2020), "Can nature-based solutions contribute to water security in Bhopal ?", Science of the Total Environment. Volume 723 (2020) 138061 https://doi.org/10.1016/j.scitotenv.2020.138061
5. **Kumar P**, Md. Saquib Saharwardi, Argha Banerjee, Mohd. Farooq Azam, Aditya Kumar Dubey and Raghu Murtugudde (2019), "Snowfall Variability Dictates Glacier Mass Balance Variability in Himalaya-Karakoram" Nature Scientific Report, 1-9. https://doi.org/10.1038/s41598-019-54553-9
6. P. Lal, A. K. Dubey, A. Kumar, **Kumar P**, and C. S. Dwivedi (2019), "SAR – Optical Remote Sensing Based Forest Cover and Greenness Esti-Mation Over INDIA", ISPRS https://doi.org/10.5194/isprs-annals-IV-5-W2-49-2019

7. Engelhardt M, Leclercq P, Eidhammer T, **Kumar P**, Landgren O, and Rasmussen R (2017), "Meltwater runoff in a changing climate (1951-2099) at Chhota Shigri Glacier, Western Himalaya, Northern India, Annals of Glaciology, 1-12. doi: 10.1017/aog.2017.13
8. Engelhardt M, Ramanathan A, Eidhammer T, **Kumar P**, Landgren O, Mandal A and Rasmussen R (2017), "Modelling 60 years of glacier mass balance and runoff for Chhota Shigri Glacier, Western Himalaya, Northern India", Journal of Glaciology. https://doi.org/10.1017/jog.2017.29
9. Koldunov N, **Kumar P**, Rasmussen R, Ramanathan AL, Nesje A, Engelhardt M, Tiwari M, Haensler A, Jacob D (2015), "Identifying climate change information needs for the Himalaya region - Results from the GLACINDIA Stakeholder Workshop and Training Program", *Bulletin of the American Meteorological Society*. http://dx.doi.org/10.1175/BAMS-D-15-00160.1
10. **Kumar P**, Kumar, P., S. Kotlarski, C. Moseley, K. Sieck, H. Frey, M. Stoffel, and D. Jacob (2015), "*Response of Karakoram-Himalayan glaciers to climate variability and climatic change: A regional climate model assessment*". Geophysical Research Letters, 42, 1818–1825. http://dx.doi.org/10.1002/2015GL063392
11. **Kumar P**, Podzun R, Hagemann S and Jacob D (2014) "Impact of modified soil thermal characteristic on the simulated monsoon climate over South Asia", *Journal of Earth System Science*, Vol. 123, No 1, pp151-160. http://dx.doi.org/10.1007/s12040-013-0381-0
12. Neha M, Mishra A, Singh R, **Kumar P** (2014) "Assessing future changes in seasonal climatic extremes in the Ganges river basin using an ensemble of regional climate models", *Climate Change*, Volume 123, Issue 2, pp273-286. https://doi.org/10.1007/s10584-014-1056-9
13. Teichmann C, Eggert B, Elizalde A, Haensler A, Jacob D, **Kumar P**, Moseley C, Pfeifer S, Rechid D, Remedio A, Ries H, Petersen J, Preuschmann S, Raub T, Saeed F, Sieck K, Weber T (2013) "How does a regional climate model modify the projected climate change signal of the driving GCM: A study over different CORDEX regions using REMO", *Atmosphere*, 4(2), 214-236. http://dx.doi.org/10.3390/atmos4020214 Open access
14. Biemans, H., Speelman L, Ludwig F, Moors E, Wiltshire A, **Kumar P**, Gerten D, Kabat P (2013) "Future water resources for food production in five South Asian river basins and potential for adaptation - a modelling study", *Science of Total Environment*, Volumes 468–469, pp117–131.

http://dx.doi.org/10.1016/j.scitotenv.2013.05.092

15. Siderius C, Biemans H, Wiltshire A, Rao S, Franssen W, **Kumar P**, Gosain A, Vliet M, Collins D (2013) "Snowmelt contributions to discharge of the Ganges", *Science of Total Environment*, Volumes 468–469, pp93–101. http://dx.doi.org/10.1016/j.scitotenv.2013.05.084

16. **Kumar P**, Wiltshire A, Mathison C, Asharaf S, Ahrens B, Lucas-Picher P, Christensen J, Gobiet A, Saeed F, Hagemann S, Jacob D (2013) "Downscaled climate change projections with uncertainty assessment over India using a high resolution multi-model approach", *Science of Total Environment*, Volumes 468–469, pp18–30. http://dx.doi.org/10.1016/j.scitotenv.2013.01.051

17. Dimri A P, T. Yasunari T, Wiltshire A, **Kumar P**, Mathison C, Ridley J and Jacob D (2013) "Application of regional climate models to the Indian winter monsoon over the western Himalayas", *Science of Total Environment*, Volumes 468–469, pp36–47. http://dx.doi.org/10.1016/j.scitotenv.2013.01.040

18. Mathison C, Wiltshire A, **Kumar P**, Dimri A P, Jeff Ridley J, Jacob D, Pete Falloon, T. Yasunari, Siderius C (2013) "Regional Projections of South Asian Climate for Adaptation studies", *Science of Total Environment*, Volumes 468–469, pp4–17. http://dx.doi.org/10.1016/j.scitotenv.2012.04.066

19. Jacob D, Elizalde A; Haensler A, Hagemann S, **Kumar P**, Podzun R, Rechid D, Remedio A, Saeed F, Sieck K, Teichmann C, Wilhelm C (2012) "Assessing the Transferability of the Regional Climate Model REMO to Different COordinated Regional Climate Downscaling EXperiment (CORDEX) Regions", *Atmosphere* 3, no. 1, pp181-199. http://dx.doi.org/10.3390/atmos3010181 Open-access,

20. Lucas-Picher P, Christensen J H, Saeed F, **Kumar P**, Asharaf S, Ahrens B, Wiltshire A, Jacob D, Hagemann S (2011), "Can regional climate models represent the Indian monsoon ?", *Journal of Hydrometeorology*, 12, 849–868. http://dx.doi.org/10.1175/2011JHM1327.1

21. Eddy M, Hester B, Groot A, Terwissch van Scheltinga C, Siderius C, Stoffel M, Huggelb C, Wiltshire A, Mathison C, Ridley J, Jacob D, **Kumar P**, Bhadwal S, Gosain A, Collins D N (2011) "Adaptation to changing water resources of the Ganges basin in northern India", *Environmental Science & Policy*, Volume 14, Issue7, pp758–769. http://dx.doi.org/10.1016/j.envsci.2011.03.005

22. **Kumar P**, K. RupaKumar, Rajeevan M and Sahai A K (2007) "On the recent strengthening of the relationship between ENSO and Northeast monsoon rainfall over south Asia", *Climate Dynamics*, Vol-28, pp 649-660. http://dx.doi.org/10.1007/s00382-006-0210-0

23. Kripalani R H and **Kumar P** (2004) "Northeast Monsoon Rainfall Variability over South Peninsular India vis-à-vis Indian Ocean Dipole Mode", *International Journal of Climatology*, Vol-24, pp 1267-1282. http://dx.doi.org/10.1002/joc.1071

Papers under Review/preparation

(i) **Kumar P**, et al., Warming and Cooling of Land by Landscape Modifications over India (*under review*)

(ii) **Kumar P**, et al., Understanding drought dynamics and variability over Bundelkhand region (*under review*)

(iii) **Kumar P**, et al., Does the recent revival of Western Disturbances govern the Karakoram Anomaly? (*under review*)

(iv) **Kumar P**, et al., Understanding the hot season dynamics and variability across India (*under review*)

(v) **Kumar P**, et al., Future drought changes and associated uncertainty over the homogenous regions of India: a multimodel approach (*under review*)

(vi) **Kumar P**, et al., Understanding recent decades drought spatiotemporal variability and its drivers over homogenous regions of India (*under review*)

(vii) **Kumar P**, et al., Sea-level variability over the northern Indian ocean in recent decades: A satellite data assessment (*under review*)

(viii) **Kumar P**, et al., Impact of Atmospheric and Oceanic parameters during two contrasting monsoon seasons (*under review*)

(ix) **Kumar P**, et al., Understanding the Dynamics of warm MAM season over India during the recent decades seasons (*under review*)

Teaching

S. No.	**Courses Developed**	
	Name	**Topic**
1	EES 201	Components of the Earth System
2	EES 406	Natural Hazards and their Mitigation
3	EES 404	Global Climate Change
4	EES 410	Global Climate Change Practical
5	EES 515 & EES 605	Indian Monsoon and its variability
6	EES 428 & EES 628	Introduction to climate and climate change
7	EES 630	Climate Change: Extreme Events
	Courses Taught	
	Name	**Topic**
1	EES 201	Components of the Earth System
2	EES 515 & EES 605	Indian Monsoon and its variability
3	EES 428 & EES 628	Introduction to climate and climate change
4	EES 630	Climate Change: Extreme Events
5	EES 404	Global Climate Change
6	EES 410	Global Climate Change Practical

Climate Models used/working

- Regional Climate Model - - REMO (mainly), and PRECIS, RegCM3, WRF (partially known)
- Global Climate Model - - MPI-ESM

Computational Skills and Software

- Good computing skills, including the knowledge of UNIX/Linux
- Working experience on parallel HPC system. Language known FORTRAN, Shell Scripts. Working experience on Linux and Windows environments.
- NCL, GrADS, Gnuplot, Xmgrace, climate data operators, ipython-notebook, python (partially)

Organization Skill

- Organized **India –UK** workshop on "Grassroots Field Exposure Session", at IISER Bhopal from 25-27 Feb, 2019.
- Organized **India –UK** workshop on "Water Resource Management and Supply in Central India" at IISER Bhopal from 28th Feb to 2nd March 2019.
- Organized one-week "coupled climate modeling workshop" for Ph.D. students conducted by **Dr. Dmitry Sein**, from AWI, **Germany**, from 14-21Dec. 2017.
- Organized **DST-FIST** Expert Committee meeting - Earth and Atmospheric Sciences Area on 13th, 14th October 2017 at IISER, Bhopal.
- Organized one-week course on "Hydrology and climate change", lectures delivered by **Prof. Eddy Moors** from Wageningen University, **The Netherlands**, from 13-17 Feb 2017.
- Part of the organizing team of '82nd Indian Academy Sciences (IAS) Meeting" held at IISER Bhopal, 4-6 November 2016.
- Organized a GLACINDIA: Stakeholder WORKSHOP ON IDENTIFYING CLIMATE CHANGE INFORMATION NEEDS and Training on Climate modeling and Climate Change Research, innovation and Services (**Indo-European Initiative**), 8-10 April 2015 at JNU New Delhi. http://www.climate-service-center.de/058047/index_0058047.html
- Organized HighNoon project partners meeting at MPI-M, Hamburg, Germany, June 2011.
- Part of the organizing team of project "HighNoon Spring School" conducted at IIT Delhi India, 2-6April 2012.
- Part of the organizing team which conducted a course on Regional Climate Modeling (Model: REMO) for the international participants at MPI-M, Hamburg Germany.

Guided Student

- Paula Arce Vicente graduate student from University of EXETER, for short training to do a project in March 2019.
- Guiding six Ph.D. students at IISER Bhopal.
- Guiding three Master Thesis dissertation
- Guided three-summer intern at IISER Bhopal.
- Guided student from IIT Kharagpur, India for her summer internship in 2011.
- Guided student from JNU, India for short training on climate modeling in early 2015.
- Students from Hamburg University for internship, 2010-2014.

Paper reviewed

- Nature Commination's
- Geophysical Research Letters
- Climate Dynamics
- Journal of Geophysical Research
- Climate Services
- International Journal of Climatology
- Hydrological Processes
- Meteorology and Atmospheric Physics
- Theoretical and Applied Climatology

- Journal of Earth System Science
- Science of the Total Environment

Membership

- AGU - Life membership of American Geophysical Union
- EGU - Life membership of European Geosciences Union
- IMS –Life membership of India Meteorological Society and Chairman of Bhopal Chapter

Proceedings/Reports

- **Kumar P** (2014) Improvement of simulated monsoon precipitation over South-Asia with a regionally coupled model ROM, 3rd Lund Regional-scale Climate Modelling Workshop, 21st Century Challenges in Regional Climate Modelling, Lund, Sweden, 16 - 19 June 2014 http://www.baltic-earth.eu/events/RCM2014/Material/IBESPS_No.3_low.pdf
- **Kumar P** (2012) HighNoon: First assessment of Himalayan Glaciers with regional model. (http://www.eu-highnoon.org/case-studies/glaciersimulation
- **Kumar P** (2011) The Fate of the Big Rain, Max Planck Research Magazine, No.1, 2011. http://www.mpg.de/1346811/MPR_2011_1.pdf
- **Kumar P**, Podzun R, Jacob D (2009) MPI regional climate model REMO simulations over South Asia, 2nd International Lund RCM Workshop, 4 - 8 May 2009, Lund, Sweden. http://www.baltex-research.eu/RCM2009/Material/RCM2009_Proceedings_low.pdf
- Moors, E.J., Harding, R., Biemans, H., Collins, D., Froebrich, J., Gosain, A., Groot, A., Haerter, J., **Kumar, P.,** Shrestha, M.L., Ludwig, F., Mishra, A., Sarthi, P.P., Rees, G., Terwisscha Van Scheltinga, C.T.H.M., Tomar, S., Siderius, C., Stoffel, M., Werners, S.E. (2009) Water Resources of the Ganga under a Changing Climate: interaction between Glaciers and Monsoon in the Himalaya In: Proceedings of the 37th IAH congress, 6-12 September, Hyderabad, India. - Hyderabad, India: IAHS, 37th IAHS Congress, 2009-09-06/ 2009-09-12. http://edepot.wur.nl/165614
- Wiltshire A, **Kumar P**, Hagemann S, Ridley J (2010) HighNoon: Report on domain sizes for RCMs and topography, http://www.eu-highnoon.org/publications/delivery-reports/10674147/Delivery-Report-on-domain-sizes-for-RCMs-and-topography-D1-1
- Wiltshire A and **Kumar P** (2010) RCM simulation on recent past, http://www.eu-highnoon.org/publications/delivery-reports/10674150/Delivery-Report-on-RCM-Simulations-of-the-Recent-Past-D1-2
- Wiltshire A, Mathison C, Ridley J, **Kumar P**, Jacob D (2010) Climate simulation 1989-2050, http://www.eu-highnoon.org/publications/delivery-reports/10674154/Delivery-Report-on-climate-simulations-1989-2050-D1-3
- Wiltshire A, Mathison S, Ridley J, Witham C, McSweeny C, **Kumar P**, Jacob D (2010) Analysis of climate uncertainty, http://www.eu-highnoon.org/publications/delivery-reports/10674157/Delivery-Report-with-analysis-of-climate-uncertainty-D1-4
- **Kumar P**, Wiltshire A (2011) Report on the analysis of model changes to be applied, http://www.eu-highnoon.org/publications/delivery-reports/10798561/Report-on-the-analysis-of-model-changes-to-be-applied-D1-5
- Wiltshire A, **Kumar P**, Mathison C, Jacob D (2011), Report on Dataset of modified model

simulations, http://www.eu-highnoon.org/publications/delivery-reports/10798564/Dataset-of-modified-model-simulations-D1-6

- Mathison C, Wiltshire A, Dimri A P, Falloon P, Jacob D, **Kumar P**, Moors E, Ridley J, Siderius, C, Stoffel M, Yasunari T, Wednesday (2012) Report on the analysis of RAM performance, http://www.eu-highnoon.org/publications/delivery-reports/10798570/Report-on-the-analysis-of-RAM-performance-D1-7
- Yasunari T, Dimri A P, Wiltshire A, **P. Kumar**, Mathison C, Ridley J (2012) Role of topography on winter precipitation over the western Himalayas, http://www.eu-highnoon.org/publications/delivery-reports/10798577/Role-of-topography-on-winter-precipitation-over-the-western-Himalayas-D1-8
- Collins D N, Siderius C, Biemans H, Rao S, Wiltshire A, Franssen W H, **Kumar P**, Gosain A K, van Vliet M T H (2012) Report on intercomparison of the relative performance of the three modelling approaches, http://www.eu-highnoon.org/publications/delivery-reports/10798701/Report-on-intercomparison-of-the-relative-performance-of-the-three-modelling-approaches-D2-4

Running Projects

DRDO : Defense Research and Development Organisation.
DST : Department of Science and Technology.
IISERB : Indian Institute of Science Education and Research, Bhopal.
SERB : Science and Education Research Board.
DST-RSF : Department of Science and Technology and Russian Science Federation.

Projects Associated/finished

GLACINDIA : Defense Research and Development Organisation.
HIGHNOON : Department of Science and Technology.
CORDEX : Indian Institute of Science Education and Research, Bhopal.
AQWA : Science and Education Research Board.

Invited Talk in Conferences/Workshops

1. **Kumar P** (2020), Addressing Climate Change Extremes using Dynamical Models and Big Data (An Integrated Approach), The Fourth Paradigm : From Data to Discovery, at Indian Institute of Science Education and Research (IISER) Bhopal, Madhya Pradesh, 27-30 January 2020. *(Invited Talk)*
2. **Kumar P**, (2020), Forcing of mass-balance variability in Karakoram-Himalaya, EGU General Assembly 2020, Vienna Austria, 4–8 May 2020. *(Invited talk)*
3. **Kumar P**, (2019) Energy and climate and broader topics on technology assessment: Seminar Series - IDP in Climate Studies, at Indian Institute of Technology Bombay, India, 12 September 2019. (*Invited Talk*)
4. **Kumar P**, (2019) "Onset of Indian Summer Monsoon: Theory and Prediction", at Indian Institute of Science Bengaluru, India, 25-26 July 2019. (*Invited Talk*)

5. **Kumar P**, (2019) Regional Earth System Modeling Over South Asia & Lessons learned from Water-Food-Energy nexus Workshop, International Workshop on "Water-Energy-Food Nexus Perspective: Path Making for Sustainable Development Goals (SDGs) to Country Actions in Asia" Central University of Rajasthan (CURAJ), 25-26 June 2019. (*Invited Talk*)
6. **Kumar P**, (2019) The response of Himalayan glaciers to climate variability and climatic change, International workshop on Climate Change and Extreme Events, IIT Mandi, India, 18-20 April 2019. (*Invited Talk*)
7. **Kumar P**, (2019), Air-Sea Interaction improves the monsoon climate: A regional coupled atmosphere-ocean model assessment, MoES Brainstorm Meeting (AI/ML), IITM Pune, 25-27 March 2019 (*Invited Talk*)
8. **Kumar P**, (2018), Indicators and Drivers of Mass-balance over Karakoram Himalayan glaciers, Indian geophysical union-2018 5-7 Dec. 2018, RNTU, Bhopal (*Invited Talk*)
9. **Kumar P**, (2018) Indicators and drivers of mass-balance over Karakoram-Himalayan glaciers, TROPMET 2018, BHU, Varanasi, India, 24-27 October 2018. (*Invited Talk*)
10. **Kumar P**, (2018), India-UK Water Centre workshop on "Advancing Drought Monitoring, Prediction, and Management Capabilities" at **Lancaster, UK**, 18-20 September 2018. (*Invited Presentation*)
11. **Kumar P**, (2018) Glaciers Mass balance changes in the Karakoram: A dynamic regional coupled glacier-climate model assessment, India-UK Water centre workshop on 2-4 May 2018 at Wildlife Institute of India, Dehradun, India. (*Invited Talk*)
12. **Kumar P**, (2017) Regional coupled model simulation improves precipitations dry bias and extremes over India, IN TROMET 2017, SAC, Ahmedabad, 7th Nov. 2017. (*Invited Talk*)
13. **Kumar P**, (2017) Response of Himalayan glaciers to climate variability and climatic change, at India Meteorological Department, Pune India, 2nd June 2017. (*Invited Talk*)
14. **Kumar P**, (2017) Developing Hydro-climatic Services for Water Security, at International workshop organized by India-UK Water Centre, Pune during 29 Nov. to 1 Dec. 2016. (*Invited Talk*)
15. **Kumar P**, (2016) Identifying climate information needs for Himalayan India, Regional Stakeholder Consultation on Climate Services for the Third Pole Region, Jaipur, Rajasthan, India, 9-11 March 2016. (*Invited Talk*)
16. **Kumar P**, (2015) Identifying Climate Change Information Needs for Himalayan Region of India, International Workshop Climate Change Impact and Adaptation in Himalaya: Science and Policy Interface Kumaun University, Nainital, 2-3 Nov. 2015. (*Invited Talk*)
17. **Kumar P**, Kotlarski S, Christopher M, Sieck K, Frey H, Stoffel M, Jacob D (2015) "Past evolution of Himalayan glaciers: a regional climate model study", TROPMET2015, 15-18 February 2015, Chandigarh, India. (*Invited Talk*)
18. **Kumar P** and Jacob D D (2012) "Simulation of the regional climate model REMO over CORDEX West-Asia", 25-26 February 2012, Pune, India. (*Invited Talk*)
19. **Kumar P**, Wiltshire A, Ahrens B, Gobiet A, Jacob D (2012) "Climate change and changing monsoon patterns", Delhi Sustainable Development Summit (DSDS) 2012 side event "Water: our global common" 31January 2012, New Delhi, India. (*Invited Talk*)
20. **Kumar P** (2012) "Climate change and changing monsoon patterns," Round-table discussion on bi and multilateral Indo-European Cooperations on Climate Research and innovation, 25th Nov 2012, New Delhi, India. (*Invited Talk*)
21. **Kumar P** (2012) "Climate Scenarios for the Ganges Basin", EU project HighNoon special event

at Delhi Sustainable Development Summit, 2012, 3rd February 2012, New Delhi, India. (*Invited Talk*)

22. **Kumar P** and Jacob D (2010) "South Asia Summer Monsoon Climate: Recent Past and Future", Continents under Climate Change, Conference on the Occasion of the 200th Anniversary of the Humboldt-Universität zu Berlin, 21-23 April 2010, Berlin, Germany. (*Invited Talk*)

Talk/Paper Presented in Conferences/Workshops

1. Dubey Swatantra Kumar, **Kumar P**, Sharma Devesh, Dubey A. K., and Saharwardi Md. Saquib (2020), Climate Change Impact on Water Yield and Water Security in the Semi-arid Region of Rajasthan, India EGU General Assembly 2020, Vienna Austria, 4–8 May 2020. *(Poster)*
2. Saharwardi Md Saquib and **Kumar P** (2020), Drought variability and projections over India under high emission scenario with uncertainty assessment, EGU General Assembly 2020, Vienna Austria, 4–8 May 2020. *(Talk)*
3. Martyanov Stanislav D., Sein Dmitry V., Ryabchenko Vladimir A., Dvornikov Anton Y., and **Kumar P** (2020), The influence of water temperature-phytoplankton feedback in a Regional Earth System Model upon the hydrography and biogeochemistry of the northern Indian Ocean, EGU General Assembly 2020, Vienna Austria, 4–8 May 2020. *(Talk)*
4. Sein Dmitry, Cabos William, **Kumar P**, Ryabchenko Vladimir, Martyanov Stanislav, and Dvornikov Anton (2020), Impact of biogeochemistry feedbacks on the projected climate change signal over the Indian Continent EGU General Assembly 2020, Vienna Austria, 4–8 May 2020. *(Talk)*
5. Saharwardi Md. Saquib and **Kumar P** (2020), Assessing the performance of a high resolution earth system model (RESM) for monitoring the drought dynamics over India, Sixth International Conference on Climate Services, at Indian Institute of Tropical Meteorology, Pune, India 11-13 February, 2020. *(Talk)*
6. Kumari Amita, **Kumar P** and Dubey A. K. (2020), On the Impacts of Extreme Precipitation over Central India under the present and projected climate, Sixth International Conference on Climate Services, at Indian Institute of Tropical Meteorology, Pune, India 11-13 February 2020. *(Poster)*
7. Dubey Swatantra Kumar, **Kumar P** and Saharwardi Md. Saquib and (2020), Climate Change Impacts on Irrigation and Crop Water Requirements in Agro-climatic Zones of India, Sixth International Conference on Climate Services, at Indian Institute of Tropical Meteorology, Pune, India 11-13 February 2020. *(Poster)*
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