

Bibliography

- [1] O.P.N. Calla, Rahul Sharma, Kishan Lal Gadri, et al., “Microwave Remote Sensing Application for Monitoring of Floods,” *Mausam*, vol. 65, pp. 147–152, April 2014.
- [2] O.P.N. Calla, *Microwave Remote Sensing*. DRDO, Ministry of Defence, India, 2009.
- [3] Suzanne J. Sippel, Stephen K. Hamilton, John M. Melack, et al., “Determination of Inundation Area in the Amazon River Floodplain Using the SMMR 37 GHz Polarization Difference,” *Remote Sens Environ*, vol. 48, pp. 70–76, 1994.
- [4] Marouane Temimi, Teodosio Lacava, Tarendra Lakhankar, et al., “A Multi-temporal Analysis of AMSR-E Data for Flood and Discharge Monitoring during the 2008 Flood in Iowa,” *Wiley Online Library*, vol. 25, pp. 2623–2634, 4 March 2011.
- [5] Joy Sanyal, Lu XX, “GIS Based Flood Hazard Mapping at Different Administrative Scales,” *Singap. J. Trop. Geogr.*, vol. 27, pp. 207–220, 2006.
- [6] Kachi Misako, Keiji Imaoka, Hideyuki Fujii, et al., “Overview of the first Satellite of The Global Change Observation Mission-Water (GCOM-W1),” Earth Observation Research Centre (EORC), Japan Aerospace Exploration Agency (JAXA), 2-1-1 Sengen Tsukaba, Japan.
- [7] T.D. Groeve, Riva P, “Early Flood Detection and Mapping for Humanitarian Response,” in *Proceedings of the 6th International ISCRAM Conference*, Gothenburg, Sweden, May 2009.
- [8] I.H. Woodhouse, *Introduction to Microwave Remote Sensing*, Taylor and Francis, First Indian Reprint, ISBN: 0-415-27123-1.
- [9] Giustarini Laura, Renaud Hostache, Patrick Matgen, et al., “A Change Detection Approach to Flood Mapping Urban Areas Using TerraSAR-X,” *IEEE T Geosci Remote Sens.*, vol. 51, issue 4, pp. 2417–2430, April 2013.
- [10] G.R. Brakenridge, Nghiem SV, Anderson E, et al., “Orbital Microwave Measurement of River Discharge and Ice Status,” *Water Resour Res.*, vol. 43, pp. 1–16, 2007.

- [11] Tom De Groeve, P. Riva, “Global Real-time Detection of Major Floods using Passive Microwave Remote Sensing,” in *33rd International Symposium on Remote Sensing of Environment, Sustaining the Millennium Development Goals*, pp. 587–590, 2009.
- [12] Tom De Groeve, “Flood monitoring and mapping using passive microwave remote sensing in Namibia,” *Geomatics, Natural Hazards and Risk*, vol. 1, no. 1, pp. 19-35, 2010.
- [13] N. Pierdicca, L. Pulvirenti, M. Chini, L. Guerriero, and L. Candela, “Observing floods from space: Experience gained from COSMO-SkyMed observations,” *Acta Astronautica*, vol. 84, pp. 122-133, 2013.
- [14] Frédéric Frappart, Frédérique Seyler, Jean-Michel Martinez, Juan G. León, and Anny Cazenave, “Floodplain water storage in the Negro River basin estimated from microwave remote sensing of inundation area and water levels,” *Remote Sensing of Environment* 99, vol. 4, pp. 387-399, 2005.
- [15] Jean-Michel Martinez, and Thuy Le Toan, “Mapping of flood dynamics and spatial distribution of vegetation in the Amazon floodplain using multitemporal SAR data,” *Remote sensing of Environment*, vol. 108, no. 3, pp. 209-223, 2007.
- [16] Sadiq I. Khan, et. al., “Satellite remote sensing and hydrologic modeling for flood inundation mapping in Lake Victoria basin: Implications for hydrologic prediction in ungauged basins,” *IEEE Transactions on Geoscience and Remote Sensing*, vol. 49, no. 1, pp. 85-95, 2011.
- [17] Rajat Bindlish, Wade T. Crow, & Thomas J. Jackson, “Role of passive microwave remote sensing in improving flood forecasts,” *IEEE Geoscience and Remote Sensing Letters*, vol. 6, no. 1, pp. 112-116, 2009.
- [18] H. A. P. Hapuarachchi, Q. J. Wang, and T. C. Pagano, “A review of advances in flash flood forecasting,” *Hydrological Processes*, vol. 25, no. 18, pp. 2771-2784, 2011.
- [19] Someshwar Das, Raghavendra Ashrit, and M. W. Moncrieff, “Simulation of a Himalayan cloudburst event,” *Journal of earth system science*, vol. 115, no. 3, pp. 299-313, 2006.
- [20] Renoj J.Thayyen, A. P. Dimri, Pradeep Kumar, and G. Agnihotri, “Study of cloudburst and flash floods around Leh, India, during August 4–6, 2010,” *Natural hazards* vol. 65, no. 3, pp. 2175-2204, 2013.
- [21] Fawwaz Tayssir Ulaby, Richard K. Moore, and Adrian K. Fung, *Microwave Remote Sensing: Microwave remote sensing fundamentals and radiometry*. Addison-Wesley publishing company, vol. 1, 1981.

- [22] Niko Wanders, Derek Karssenber, A. de Roo, S. M. De Jong, and M. F. P. Bierkens, "The suitability of remotely sensed soil moisture for improving operational flood forecasting," *Hydrology and Earth System Sciences*, vol. 18, no. 6, pp. 2343-2357, 2014.
- [23] W. T. Crow, R. Bindlish & T. J. Jackson, "The added value of spaceborne passive microwave soil moisture retrievals for forecasting rainfall runoff partitioning," *Geophysical Research Letters*, vol. 32, no. 18, 2005.
- [24] Edwin T. Engman, & Narinder. Chauhan, "Status of microwave soil moisture measurements with remote sensing," *Remote Sensing of Environment*, vol. 51, no. 1, pp. 189-198, 1995.
- [25] James P. Hollinger, James L. Peirce, and Gene Poe, "SSM/I instrument evaluation," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 28, no. 5, pp. 781-790, 1990.
- [26] Ranganath R. Navalgund, V. Jayaraman, and P. S. Roy, "Remote sensing applications: An overview," *Current Science*, vol. 93, no. 12, pp. 1747-1766, 2007.
- [27] Alberto Mugnai, Eric A. Smith, and Gregory J. Tripoli, "Foundations for statistical-physical precipitation retrieval from passive microwave satellite measurements. Part II: Emission-source and generalized weighting-function properties of a time-dependent cloud-radiation model," *Journal of Applied Meteorology*, vol. 32, no. 1, pp. 17-39, 1993.
- [28] Alpana Shukla, et al., "Soil moisture estimation using gravimetric technique and FDR probe technique: a comparative analysis," *Int J Res Formal, Appl Nat Sci*, vol. 8, pp. 89-92, 2014.
- [29] Daniel Berhane, "Development of methods and techniques for land resource surveying for Eritrea," University of Pretoria, December, 2000.
- [30] Arthur Y. Hou, et al., "Global precipitation measurement," *Precipitation: advances in measurement, estimation and prediction*, Springer Berlin Heidelberg, pp. 131-169, 2008.
- [31] Eni G. Njoku, et al., "Soil moisture retrieval from AMSR-E," *IEEE transactions on Geoscience and remote sensing*, vol. 41, no. 2, pp. 215-229, 2003.
- [32] Elizaveta V. Zabolotskikh, et al., "New possibilities for geophysical parameter retrievals opened by GCOM-W1 AMSR2," *IEEE journal of selected topics in applied earth observations and remote sensing*, vol. 8, issue 9, pp. 4248-4261, 2015.
- [33] Bikramjit Goswami, et al., "Evaluation of Soil Moisture Data of Advanced Microwave Scanning Radiometer (AMSR) 2 for Azara area of Assam, India," *Journal of Basic and Applied Engineering Research*, Volume 2, Issue 19, pp. 1656-1659, December, 2015.
- [34] H. J. Barneveld, J. T. Silander, Mikko Sane, and Eirik Malnes, "Application of satellite data for improved flood forecasting and mapping," in *4th International Symposium on Flood*

Defence: Managing Flood Risk, Reliability and Vulnerability, Toronto, Ontario, Canada, pp. 77, 2008.

[35] Yang Hong, Robert F. Adler, Andrew Negri, and George J. Huffman, "Flood and landslide applications of near real-time satellite rainfall products," *Natural Hazards*, vol. 43, no. 2, pp. 285-294, 2007.

[36] Eni G. Njoku, & Li Li, "Retrieval of land surface parameters using passive microwave measurements at 6-18 GHz," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 37, issue 1, pp. 79-93, 1999.

[37] T. J. Jackson, A. J. Gasiewski, A. Oldak, et al., "Soil Moisture Retrieval Using the C-Band Polarimetric Scanning Radiometer During the Southern Great Plains 1999 Experiment," *IEEE T. Geosci. Remote*, vol. 40, no. 10, pp. 2151–2161, 2002.

[38] S. Paloscia, G. Macelloni, E. Santi, "Soil Moisture Estimates From AMSR-E Brightness Temperatures by Using a Dual-Frequency Algorithm," *IEEE T. Geosci. Remote*, vol. 44, no. 11, pp. 3135–3144, 2006.

[39] X. K. Shi, J. Wen, L. Wang, et al., "Application of Satellite Microwave Remote Sensed Brightness Temperature in the Regional Soil Moisture Simulation," Laboratory for Climate Environment and Disasters of Western China, Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, Lanzhou, Gansu, China, February 2009.

[40] Teodosio Lacava, et al., "Improving soil wetness variations monitoring from passive microwave satellite data: the case of April 2000 Hungary flood," *Remote Sensing of Environment*, vol. 96, no. 2, pp. 135-148, 2005.

[41] Hamid Moradkhani, "Hydrologic remote sensing and land surface data assimilation," *Sensors*, vol. 8, no. 5, pp. 2986-3004, 2008.

[42] Thomas J. Jackson, & Thomas J. Schmugge, "Passive microwave remote sensing system for soil moisture: Some supporting research," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 27, no. 2, pp. 225-235, 1989.

[43] Thomas J. Jackson, "Measuring surface soil moisture using passive microwave remote sensing," *Hydrological processes*, vol. 7, no. 2, pp. 139-152, 1993.

[44] Thomas J. Jackson, et al., "Large area mapping of soil moisture using the ESTAR passive microwave radiometer in Washita '92," *Remote sensing of Environment*, vol. 54, no. 1, pp. 27-37, 1995.

- [45] T. J. Jackson, & David E. Le. Vine, "Mapping surface soil moisture using an aircraft-based passive microwave instrument: Algorithm and example," *Journal of Hydrology*, vol. 184, no. 1-2, pp. 85-99, 1996.
- [46] Thomas J. Jackson, et al., "Soil moisture mapping at regional scales using microwave radiometry: The Southern Great Plains Hydrology Experiment," *IEEE transactions on geoscience and remote sensing*, vol. 37, no. 5, pp. 2136-2151, 1999.
- [47] Marouane Temimi, et al., "Flood monitoring over the Mackenzie River Basin using passive microwave data," *Remote Sensing of environment*, vol. 98, no. 2, pp.344-355.
- [48] Eni G. Njoku, & Dara Entekhabi, "Passive microwave remote sensing of soil moisture," *Journal of hydrology*, vol. 184, no. 1-2, pp. 101-129, 1996.
- [49] Yann H. Kerr, et al., "Soil moisture retrieval from space: The Soil Moisture and Ocean Salinity (SMOS) mission," *IEEE transactions on Geoscience and remote sensing*, vol. 39, no. 8, pp. 1729-1735, 2011.
- [50] Dara Entekhabi, et al., "The soil moisture active passive (SMAP) mission," *Proceedings of the IEEE*, vol. 98, no. 5, pp. 704-716, 2001.
- [51] Steven W. Ellingson, & Joel T. Johnson, "A polarimetric survey of radio-frequency interference in C-and X-bands in the continental United States using WindSat radiometry," *IEEE transactions on geoscience and remote sensing*, vol. 44, no. 3, pp. 540-548, 2006.
- [52] S. Qikai, et al., "S-band backscattering analysis of wheat using tower-based scatterometer," *Geoscience and Remote Sensing Symposium (IGARSS), 2012 IEEE International*, IEEE, 2012.
- [53] B. Goswami, and M. Kalita, "Radar backscattering measurement of bare soil and vegetation covered soil using X-band and full polarization," *ISPRS-International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, vol. 1, pp. 733-736, 2014.
- [54] Kaijun Song, Xiaobing Zhou, and Yong Fan, "Retrieval of soil moisture content from microwave backscattering using a modified IEM model," *Progress In Electromagnetics Research*, vol. B 26, pp. 383-399, 2010.
- [55] A. Shubert Keith and George T. Ruck, "Canonical representation of the radar range equation in the time domain," *OE/LASE'92, International Society for Optics and Photonics*, 1992.
- [56] Z. Bartalis, Scipal K., Wagner W., "Soil Moisture Products From C-band Scatterometers: From ERS 1/2 to Metop," *Envisat Symposium: Salzburg*, Institute of

Photogrammetry and Remote Sensing, Vienna University of Technology, Austria, April 2005.

[57] W. L. Crosson, A. S. Limaye, C. A. Laymon, "Parameter Sensitivity of Soil Moisture Retrievals From Airborne C- and X-Band Radiometer Measurements in SMEX02," *IEEE T. Geosci. Remote*, vol. 43, no. 12, pp. 1–12, 2005.

[58] J. A. Muñoz-Castelblanco, J. M. Pereira, P. Delage, and, Y. J. Cui, "The Influence of Changes in Water Content on the Electrical Resistivity of a Natural Unsaturated Loess," *Geotechnical Testing Journal*, vol. 35, no. 1, pp. 1-7, 2012.

[59] Sudhir Bhatt, and Pradeep K. Jain, "Correlation between electrical resistivity and water content of sand—a statistical approach," *American International Journal of Research in Science, Technology, Engineering & Mathematics*, pp. 115-121, 2014.

[60] W. J. McCarter, "The electrical resistivity characteristics of compacted clays," *Geotechnique*, vol. 34, no. 2, pp. 263-267, 1984.

[61] J. A. Bruder, J. Carlo, J. Gurney, and J. Gorman, "IEEE standard for letter designations for radar-frequency bands," *IEEE Aerospace & Electronic Systems Society*, pp. 1-3, 2003.

[62] <https://www.nrcan.gc.ca/>

[63] <https://www.dartmouth.edu/~floods/>

[64] asdma.gov.in/reports.html

[65] <https://earth.esa.int/handbooks/asar/CNTR5-2.html>

[66] <https://earth.esa.int/handbooks/asar/CNTR5-3.html>

[67] <https://www.thehindu.com/news/national/other-states/cloudburst-in-tehri-district-kills-three/article6266979.ece>

[68] <https://indianexpress.com/article/india/india-others/meghalaya-cloud-burst-flash-floods-leave-trail-of-devastation-in-assam-districts/>

[69] <https://medcraveonline.com/IJH/IJH-01-00030>

[70] <https://reliefweb.int/report/india/india-situation-report-uttrakhand-cloud-burst-2nd-july-2016>

[71] https://www.doc.ic.ac.uk/~nd/surprise_96/journal/vol4/cs11/report.html

[72] https://nrsc.gov.in/EO_Bhuvan_Objective

[73] <https://www.isro.gov.in/space-technology-inputs-to-operationalise-flood-early-warning-system-flews-assam>