Title	:	Prof.
Name	:	Nitin Kumar Tripathi
FoS	:	Remote Sensing and Geographic Information Systems
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EDUCATIONAL BACKGROUND

Ph.D. in Remote Sensing, Indian Institute of Technology, Kanpur, India, 1994
M. Tech. in Remote Sensing, Indian Institute of Technology, Kanpur, India, 1987
B. Tech.. in Civil Engineering, National Institute of Technology, Warangal, India, 1984

RESEARCH INTERESTS

My research focuses in the application of Geoinformatics in environment, marine, health and agriculture fields. I also work on development of wireless GIS using the concept of Internet GIS and wireless devices such as wireless LAN, personal digital assistant (PDA) with mobile phone (GPRS). This technology has been used for real-time spatial data logger and also air-pollution monitoring.

TEACHING

Geographic Information Systems
Advance Spatial Analysis Methods
GIS Programming and Modeling
GIS for Health

SELECTED PUBLICATIONS

- **Tripathi, N.K.,** Siddiqi, M.U. and Gokhale, K.V.G.K., 2000, Directional morphological image transforms for lineament extraction from remotely sensed images, International Journal of Remote Sensing, Vol. 21, No. 17, pp 3281-3292.
- **Tripathi, N.K**. and Rao, A. M., 2001, Bathymetric Mapping in Kakinada Bay, India, using IRS-1D LISS-III Data, International Journal of Remote Sensing, Vol. 23, No. 6, pp 1013-1025.
- Daniel KW, **Tripathi, N.K**., Honda K, 2003, Artificial neural network analysis of laboratory and in situ spectra for the estimation of macronutrients in soils of Lop Buri (Thailand).Aust. J. Soil Res. Vol. 41, 47-59.

- **Tripathi, N.K.,** and Vasan, C. 2005, Open GIS based wireless data logger for flood mitigation, Role of water sciences in trans-boundary river basin management, Ed. By Dr. S. Herath, Dr. Dusmantha Dutta, Dr. A. Dasgupta. Published by: United Nations University, Asian Institute of Technology, 75-80.

- Muhammad Sarfraz, **Nitin Tripathi** and Asanobu Kitamoto. 2013. Near real-time characterization of urban environments: A holistic approach for monitoring dengue fever risk areas, Journal of Digital Earth, (ID: 786144 DOI:10.1080/17538947.2013.786144, Impact Factor: 1.80)

- Reda AG, **Tripathi NK,** Soni P, Tipdecho T, Phalke A, 2013. Temporal climate trend of Ping Basin of Thailand and implications for Mekong Region, J Earth Sci Clim Change, Vol.4, Issue 4. 4:146, http://dx.doi.org/10.4172/2157-7617.1000146 doi: 10.4172/2157-7617.1000146. (Impact Factor: 1.0)

- Kritsana Kityuttachai, **Nitin Kumar Tripathi** , Taravudh Tipdecho , Rajendra Shrestha, 2013. CA-Markov Analysis of Constrained Coastal Urban Growth Modeling: Hua Hin Seaside City, Thailand, Sustainability, 5, 1480-1500; doi:10.3390/su5041480;www.mdpi.com/journal/sustainability, (Impact Factor:)

- Plangoen, P.; Babel, M.S.; Clemente, R.S.; Shrestha, S.; **Tripathi, N.K.** 2013. Simulating the Impact of Future Land Use and Climate Change on Soil Erosion and Deposition in the Mae Nam Nan Sub-Catchment, Thailand. Sustainability, 5, No. 8, 3244-3274. doi:10.3390/su5083244. www.mdpi.com/journal/sustainability,

- Diep Thi Hong Nguyena, **Nitin Kumar Tripathia**, Wenresti G. Gallardob and Taravudh Tipdecho, 2013. Coastal and Marine Ecological Changes and Fish Cage Culture Development in Phu Quoc, Vietnam (2001 to 2011), Geocarto International, Taylor and Francis. http://dx.doi.org/10.1080/10106049.2013.798358 (Taylor and Francis, ISSN 1010-6049, Impact Factor: 0.575)

- Mishra, Bhogendra, Mukand S. Babel and **N. K. Tripathi,** 2013. Analysis of climatic variability and snow cover in the Kaligandaki River Basin, Himalaya, Nepal, Theoretical and Applied Climatology, DOI 10.1007/s00704-013-0966-1, Springer, ISSN: 0177-798X. 116 (3-4), 681-694. (Impact Factor: 1.759)

- Supachai, N, and **Tripathi, N.K.,** 2013. Comparing Analytical Hierarchy Process and Fuzzy-Analytical Hierarchy Process Approach for Influenza Risk Mapping in Chiang Mai Province, Thailand, Archives Des Sciences, Vol. 66, No. 5, pp 329-351. . http://www.archiveofscience.com/ (ISSN: 1661-464X, Impact Factor: 0.47)

- Mishra, Bhogendra, **Nitin K. Tripathi**, and Mukand S. Babel, 2014. Prediction of snow cover in the higher Himalayas based on non-linear autoregressive neural networks with exogenous inputs, The Journal of Mountain Science, 11 (4), 825-837. DOI 10.1007/s11629-

014-2985-5, Springer, ISSN: 1672-6316 (print version) ISSN: 1993-0321 (electronic version) (Impact Factor: 1.0).

- Ha Trang, N. and **Tripathi, N. K.**, 2014. Spatial Correlation Analysis between Particulate Matter 10 (PM10) Hazard and Respiratory Diseases in Chiang Mai Province, Thailand, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-8, 185-191, doi:10.5194/isprsarchives-XL-8-185-2014, 2014

- Mozumder, Chitrini and Nitin K. Tripathi, 2014. Geospatial scenario based modelling of urban and agricultural intrusions in Ramsar wetland Deepor Beel in Northeast India using a multi-layer perceptron neural network, International Journal of Applied Earth Observations and Geoinformation, DOI: http://dx.doi.org/10.1016/j.jag.2014.03.002, Elsevier, ISSN: 0303-2434, (Impact Factor: 2.557).

- Mozumder, Chitrini and **Nitin K. Tripathi**, 2014. Ecosystem evaluation (1989-2012) of a Ramsar wetland Deepor Beel using satellite derived indices", Environmental Monitoring and Assessment, Vol. 186, Springer, ISSN: 0167-6369, Online ISSN:1573-2959 (Impact Factor: 1.592).

- Hamid Mehmood, **Nitin K Tripathi**, Taravudh Tipdecho, 2014. Seamless switching between GNSS and WLAN based indoor positioning system for ubiquitous positioning, Earth Science Informatic, 1-11. DOI 10.1007/S12145-014-0157-3, ISSN: 1865-0473 (print version), ISSN: 1865-0481 (electronic version)Springer Berlin Heidelberg. (Impact Factor: 0.694)

- Sanit Arunpold , **Nitin K. Tripathi**, V. Rajesh Chowdhary, Durairaju Kumaran Raju, 2014. Comparison of GPS-TEC measurements with IRI-2007 and IRI-2012 modeled TEC at an equatorial latitude station, Bangkok, Thailand, Journal of Atmospheric and Solar-Terrestrial Physics, Volume 117, September 2014, Pages 88–94, Elsevier, DOI: 10.1016/j.jastp.2014.06.001, (Impact Factor: 1.8).

- Bhatti, S.S., **Tripathi, N.K.,** 2014, Built-up area extraction using Landsat 8 OLI imagery, GIScience & Remote Sensing 51 (4), 445-467 (Impact Factor: 1.4).

- Hamid Mehmood, **Tripathi, N.K.,** 2014. Seamless switching between GNSS and WLAN based Indoor Positioning System for Ubiquitous Positioning, Int. J. of Wireless and Mobile Computing, (awaited acceptance July 21, 2014), (Impact Factor: 2.557).

- W Phonphan, **N. K. Tripathi**, T Tipdecho, A Eiumnoh. 2014. Modelling electrical conductivity of soil from backscattering coefficient of microwave remotely sensed data using artificial neural network, Geocarto International, 1-18. Taylor and Francis. (Impact Factor: 0.9)

- V. Rajesh Chowdhary, **N.K. Tripathi,** S Arunpold, DK Raju. 2014. Variations of Total Electron Content in the Equatorial Anomaly Region in Thailand, Advances in Space Research. Pergamon.

- Shweta Sinha, and **Nitin Kumar Tripathi**, 2014. Assessment of crop insurance international practices, policies and technologies as risk mitigation tools in India and Thailand, Int. J. of Adv. Res. 2 (9).] (ISSN 2320-5407). www.journalijar.com -See more at: http://journalijar.com/article/2756/assessment-of-crop-insurance-international-practices,-policies-and-technologies-as-risk-mitigation-tools-in-india-and-thailand/#sthash.PRxiUMWk.dpuf , (Impact Factor: 1.659).

- Muhammad Shahzad Sarfraz, **Tripathi, Nitin K**., Fazlay S. Faruque, Usama Ijaz Bajwa, Asanobu Kitamoto, Marc Souris, 2014. Mapping urban and peri-urban breeding habitats of Aedesmosquitoes using a fuzzy analytical hierarchical process based on climatic and physical parameters, Geospatial Health 8(3), 2014, pp. S685-S697 . (Impact Factor.: 1.82)

- Ratchaphon Samphutthanon, **Nitin Kumar Tripathi**, Sarawut Ninsawat and Raphael Duboz, 2014. Spatio-Temporal Distribution and Hotspots of Hand, Foot and Mouth Disease (HFMD) in Northern Thailand, Int. J. Environ. Res. Public Health, 11, 312-336; ISSN 1660-4601 www.mdpi.com/journal/ijerphdoi:10.3390/ijerph110100312 (Impact Factor: 2.035)

- Saad Saleem Bhatti, **Nitin Kumar Tripathi**, Vilas Nitivattananon, Irfan Ahmad Rana, Chitrini Mozumder. 2015. A multi-scale modeling approach for simulating urbanization in a metropolitan region, Habitat International 50 (2015), 354- 365, http://dx.doi.org/10.1016/j.habitatint.2015.09.005, 0197-3975/© 2015 Elsevier Ltd. (Impact Factor: 2.285)

- V Rajesh Chowdhary, **Nitin K. Tripathi**, Sanit Arunpold, Durairaju Kumaran Raju, and Taravudh Tipdecho, 2015. Characterization of GPS-TEC in a low-latitude region over Thailand during 2010–2012", Annals of Geophysics. (Impact Factor: 1.157)

- Sawaid Abbas, Faisal Qamer, MSR Murthy, **Nitin Kumar Tripathi**, Wu Ning, Eklabya Sharma, Ghaffar Ali, 2015. "Grassland Phenology in Response to Climate Variability in the Upper Indus Basin, Pakistan", Climate. EISSN: 22251154, MDPI,

- Abbadi Girmay Reda, **Nitin K Tripathi**, Peeyush Soni and Taravudh Tipdecho, 2015. Rain Fed Rice Agriculture under Climate Variability in Southeast Asia: The Case of Thailand, J Earth Sci Clim Change, Vol. 6, Issue 8, http://dx.doi.org/10.4172/2157-7617.1000297 (Impact Factor: 2.089)

- Siriwan Hassarangsee, **Nitin Kumar Tripathi** and Marc Souris, 2015. "Spatial Pattern Detection of Tuberculosis: A Case Study of Si Sa Ket Province, Thailand", Int. J. Environ. Res. Public Health, 12, 16005–16018; doi:10.3390/ijerph121215040, www.mdpi.com/journal/ijerph (Impact Factor: 2.035)

- Priyanka Kakria, **Nitin Kumar Tripathi** and Peerapong Kitipawang, 2015."A Real-Time Health Monitoring System for Remote Cardiac Patients using Smartphone and Wearable Sensors", Int. J. of Telemedicine and Applications, Volume 2015 (2015), Article ID 373474, 11 pages, http://dx.doi.org/10.1155/2015/373474 (Impact Factor: 0.8)

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- Nimbalkar, Prakash. and **Tripathi, N.K.,** 2016. Space-time epidemiology and effect of meteorological parameters on influenza-like illness in Phitsanulok, a northern province in Thailand, Geospatial Health, Vol.11:447, No.3, 274-282. (Impact Factor.: 1.82)

- Sinha, S.; **Tripathi, N.K.,** 2016. Assessing the Challenges in Successful Implementation and Adoption of Crop Insurance in Thailand. Sustainability, 8, 1306. Available at: http://www.mdpi.com/2071-1050/8/12/1306 (Impact Factor: 1,789)

- Mozumder, C., **Tripathi, N. K**. and Losiri, C. (2016). Comparing Three Transition Potential Models: A Case Study of Built-up Transitions in North-East India. J. of Computers, Environment and Urban Systems, Elsevier, 59, 38-49 (Impact Factor: 1.5).

- Augustinus B. Primawan, **Nitin K. Tripathi**, 2016. The Study of Access Point Outdoor Coverage Deployment for Wireless Digital Campus Network, International Journal of Information and Communication Technology, Inderscience, Listed for publication, http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=IJICT (Impact Factor: 0.4)

- Bhatti, S. S., **Tripathi, N. K**., Nagai, M., & Nitivattananon, V. (2016) Spatial interrelationships of quality of life with land use/land cover, demography and urbanization. Social Indicators Research, 1-24. doi: 10.1007/s11205-016-1336-z. (Impact Factor.: 1.743)
- Bhatti, S.S., **Tripathi, N.K.,** Nagai, M., Nitivattananon, V., 2017. Spatial Interrelationships of Quality of Life with Land Use/Land Cover, Demography and Urbanization, Social Indicators Research, Volume 132, Issue 3, 1 July 2017, Pages 1193-1216.

- Rahmadya Trias Handayanto, **Nitin Kumar Tripathi**, Sohee Minsun Kim, Sumanta Guha, (2017). Achieving a sustainable urban form through land use optimization: Insights from Bekasi City land-use plan (2010-2030), Sustainability, Vol. 9, No. 2, 221. (Impact Factor: 1,789)

- Nargis Kamal, Muhammad Imran, **Nitin Kumar Tripathi**, 2017. Greening the Urban Environment Using Geospatial Techniques, A Case Study of Bangkok, Thailand, Procedia Environmental Sciences, Elsevier, Volume 37, 2017, Pages 141–152, http://dx.doi.org/10.1016/j.proenv.2017.03.030

- Bhoj Raj Ghimire, Masahiko Nagai, **Nitin Kumar Tripathi**, Apichon Witeyangkurn, Bhogendra Mishra, Nophea Sasaki, 2017. Mapping of Shorea robusta Forest using Time Series MODIS Data, Forests, MDPI 8(10), 384; doi:10.3390/f8100384 (Impact Factor: 2.08)

- Haoran Zhang and **Nitin KumarTripathi**, 2017. Geospatial hot spot analysis of lung cancer patients correlated to fine particulate matter (PM2.5) and industrial wind in Eastern Thailand,

Journal of Cleaner Production, Vol. 170, 407-424. https://doi.org/10.1016/j.jclepro.2017.09.185 (Imapct Factor 5.5)

- Viswanath, S.K., **Tripathi, N.K.** & Salin, K.R., 2018. Mapping of marine Chl-a and suspended solid concentration using OCM-2 sensor, J Indian Soc Remote Sens (2018) 46 (4): 675-685, Taylor and Francis. . https://doi.org/10.1007/s12524-017-0742-2

- Kumarihamy, R.M.K. & **Tripathi, N.K,** 2018. Geostatistical predictive modelling for asthma and chronic obstructive pulmonary disease using socio-economic and environmental determinants, Environmental Monitoring and Assessment. Springer. 366. https://doi.org/10.1007/s10661-019-7417-0

- E Yizengaw, E Zesta, MB Moldwin, M Magoun, **NK Tripathi**, 2018. ULF Wave Associated Density Irregularities and Scintillation at the Equator, Geophysical Research Letters 45 (11), 5290-5298

- Rashid Mahmood , Shaofeng Jia , **Nitin Kumar Tripathi** and Sangam Shrestha. 2018. Precipitation Extended Linear Scaling Method for Correcting GCM Precipitation and Its Evaluation and Implication in the Transboundary Jhelum River Basin, 3-15, Atmosphere, 9, 160; doi:10.3390/atmos9050160
- Handayanto, Rahmadya Trias, **Tripathi, Nitin K** and Kim, Sohee M. 2018. Use Growth Simulation and Optimization for Achieving a Sustainable Urban Form, J of Telkomnika, Vol. 16, No, 5, 2063-2072 .
- Puram Sai Suraj, J. R. K. Kumar Dabbakuti, V. Rajesh Chowdhary, **Nitin K. Tripathi**, D. Venkata Ratnam. 2018. Linear Time Series Modeling of GPS-Derived TEC Observations over the Indo-Thailand region, Journal of Geodesy, https://doi.org/10.1007/s00190-017-1099-6, I.F. 2.949
- Raghavendra Neeli, J R K Kumar Dabbakuti, V. Rajesh Chowdhary, **Nitin K. Tripathi,** Venkata Ratnam Devanaboyina. 2018. Modeling of local ionospheric time varying characteristics based on singular value decomposition over low-latitude GPS stations, Astrophys Space Sci (2018) 363:182, https://doi.org/10.1007/s10509-018-3403-1
- Kulapramote Prathumchai, Masahiko Nagai, **Nitin K. Tripathi** and Nophea Sasaki. 2018. Forecasting Transplanted Rice Yield at the Farm Scale Using Moderate-Resolution Satellite Imagery and the AquaCrop Model: A Case Study of a Rice Seed Production Community in Thailand, ISPRS Int. J. Geo-Inf. 2018, 7, 73; doi:10.3390/ijgi7020073
- S Skawsang, M Nagai, **N K Tripathi**, P Soni, 2019. Predicting Rice Pest Population Occurrence with Satellite-Derived Crop Phenology, Ground Meteorological Observation, and Machine Learning: A Case Study for the Central Plain of Thailand, Applied Sciences 9 (22), 4846. Appl. Sci. 2019, 9, 4846; doi:10.3390/app9224846
- Rujee Rodcha, **Nitin K. Tripathi** and Rajendra Prasad Shrestha, 2019. Comparison of Cash Crop Suitability Assessment Using Parametric, AHP, and FAHP Methods, Land 2019, 8, 79; https://doi:10.3390/land8050079
- Jannet C. Bencure, **Nitin K. Tripathi**, Hiroyuki Miyazaki, Sarawut Ninsawat and Sohee Minsun Kim. 2019. Development of an Innovative Land Valuation Model (iLVM) for Mass Appraisal Application in Sub-Urban Areas Using AHP: An Integration of Theoretical

and Practical Approaches, Sustainability 2019, 11, 3731, MDPI; https://doi:10.3390/su11133731

- Supaporn Manajitprasert, **Nitin K. Tripathi** and Sanit Arunplod. 2019. Three-Dimensional (3D) Modeling of Cultural Heritage Site Using UAV Imagery: A Case Study of the Pagodas in Wat Maha That, Thailand, Appl. Sci. 2019, 9, 3640; doi:10.3390/app9183640
- Siriruk Pimmasarn, **Nitin Kumar Tripathi**, Sarawut Ninsawat, Nophea Sasaki, 2020. Applying LiDAR to quantify the plant area index along a successional gradient in a tropical forest of Thailand, Forests, 11, 520; MDPI, doi:10.3390/f11050520
- Nidhi Jha, **Nitin Kumar Tripathi**, Wirong Chanthorn, Warren Brockelman, Anuttara Nathalang, Raphaël Pélissier, Siriruk Pimmasarn, Pierre Ploton, Nophea Sasaki, Salvatore GP Virdis, Maxime Réjou-Méchain, 2020. Forest aboveground biomass stock and resilience in a tropical landscape of Thailand, Biogeosciences Discussions, Vol. 17, 121-134.
- Apiruk Puckdeevongs**, N. K. Tripathi**, Apichon Witayangkurn, and Poompat Saengudomlert. 2020. "Classroom Attendance Systems Based on Bluetooth Low Energy Indoor Positioning Technology for Smart Campus", Information 2020, 11, 329; doi:10.3390/info11060329 www.mdpi.com/journal/information

ONGOING AND COMPLETED PROJECTS

- Real-time Spatial Data Logging Device for OpenGIS (2003-2005) Sponsor: RTG Budget-Joint Research Project
- Development of marine and coastal resources database of Thailand Sponsor: UNEP
- Water Storage Development Planning for Flood Water Retention for Dry Season Requirements in Chi River Basin - Sponsor: RTG (2006-9)
- Business Logistics Management using Integrated RFID and InternetGIS (2007-2008), Sponsor: CaraCAD Services Co., Ltd., Thailand and RTG
- South-East Asia Centre on European GNSS for International Cooperation and Local Development (SEAGAL) (2009-2010) Sponsor: Galileo Space Advisory, European Commission
- Research of Ionospheric Scintillation in Asia (RISA) (2011-2014) Sponsor: AOARD of US Govt.
- Local Ionospheric Scintillation in Asia (LISA) (2015-2017) AOARD of US Govt.
- GeoS4S – Geospatial Science for Services (2015-2019), Sponsor: European Union
- Developing New Methods to Monitor Forest Carbon in Asian Tropical Forests, (2016-2019) Sponsor: French Ministry of Foreign Affairs-France

AWARDS AND HONORS

DAE Young Scientist Award – 1994 (By The Dept. of Atomic Energy, India)
AICTE Career Award for Young Teacher – 1996 (All India Council for Technical Education)
Best Paper Award, 3rd Map Asia 2004, Beijing, China
Best Paper Award, 25th Asian Conf. on Remote Sensing 2004, Chiang Mai, Thailand
OCU Distinguished Scientist Award, 2007 By Osaka City University
Best Paper Award, 2009-Int. Conference on GIT4NDM, Bangkok, Thailand, 2009
Best Paper Award- 2009, Int. Conference on HealthGIS 2009, Hyderabad, India, 2009
Best Student Paper Award, 2010. Int. Conference on GIT4NDM 2010, Chiangmai, Thailand,

Best Student Paper Award, 2012. Asian Conference on Remote Sensing 2012, Pattaya, Thailand,
Distinguished Alumni Award, 2016. National Institute of Technology Warangal, India

PROFESSIONAL AFFILIATIONS

Editor-in-Chief, International Journal of Geoinformatics
Life Member, Association for Geoinformation Technology
Life Member, Indian Society of Remote Sensing
Life Member, Indian Society of Geomatics
Life Member, Indian Society of Technical Education

RESEARCH KEYWORDS

Remote Sensing and GIS for environment, coastal, agriculture, disaster and health, Internet GIS, Machine Learning applications in GIS.