Ejaz Hussain

Professor

Institute of Geographical Information Systems

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LinkedIn:

About

Dr. Ejaz Hussain is working as Professor in the Institute of Geographical Information Systems. Dr. Ejaz Hussain has a PhD in Remote Sensing and GIS. Dr. Ejaz Hussain has published 54 research articles & conference papers having a citation count of 439, carried out 6 projects and filed 1 intellectual property.

Qualifications

PhD in Remote Sensing and GIS 2007 - 2010
Purdue University , United States

MS in Remote Sensing and GIS 1998 - 2002
Purdue University Calumet , United States

BE in Civil 1986 - 1990
Military College Of Engineering Risalpur , Pakistan

Experience

Professor 2023- Present
Institute of Geographical Information Systems

Associate Professor 2018 - 2023
Institute of Geographical Information Systems

Defence Faculty 2011 - 2018
NUST Institute of Civil Engineering.

Assoc Professor 2018 - 2022
IGIS SCEE , H-12 NUST

FM 2011 - 2018
IGIS SCEE , NUST H-12

Instructor 1998 - 2000
MCE , MCE Risalpur

Professional Memberships

PEC

Research Projects

National Projects

Research-based Habitat Planning for a Resilient Ishkoman Valley through Modelling and Assessment of Remote Sensing and In-valley Hazards and Glacial Water Variability under Climate Change 2022

Funding Agency: Agha Khan Planning and Building Service Pakistan (AKPBS,P)
Amount: PKR 7,100,000.00
Status: Approved_inprocess

Implications of Climate Change on Snow Cover Dynamics and Hydrological Behaviour in HK-Karakorum-Himalayan Ranges 2017

Funding Agency: HEC
Amount: PKR 459,400.00
Status: Completed

QUATIFICATION OF NITROGEN DYNAMICS AND FLOWS AND MITIGATION OF ITS LOSSES IN AGRICULTURAL SYSYTEMS IN THE INDUS BASIN, PAKISTAN 2015

Funding Agency: ICARDA
Amount: PKR 1,337,449.00
Status: Completed

vulnerability of Climate Change on water resources and its consequences on agriculture water management in Pakistan 2017

Funding Agency: HEC
Amount: PKR 5,410,000.00
Status: Completed

International Projects

Modeling of Parthenium Spread through Water Flows 2019

Funding Agency: CAB International Central and West Asia, Pakistan
Amount: PKR 500,000.00
Status: Completed

Industry Projects

National Projects

A study of the IWT and implications of its violations 2020

Client: NIL
Amount: PKR 1,000,000.00
Status: Approved_inprocess

International Projects

Research Articles

Public Adoption of Smart Transportation: A Technology Acceptance Model 2025

Aqsa Mehmood Muhammad Ali Tahir Salman Atif Ejaz Hussain Hafiz Syed Hamid Arshad Farrukh Baig
Journal of Urban Planning and Development, Volume 151, Issue 3, Article Number 04025022
Impact Factor: 1.7000 | **Quartile:** 2
DOI: https://doi.org/10.1061/JUPDDM.UPENG-5319

An integrated geographic information system (GIS) and analytical hierarchy process (AHP)-based approach for drone-optimized large-scale flood imaging 2025

Muhammad Farhan Nazir Salman Atif Ejaz Hussain
Drone Systems and Applications , Volume 13, Pages 1-18
Impact Factor: 1.9 | **Quartile:** 3
DOI: https://doi.org/10.1139/dsa-2024-0039

MangiSpectra: A Multivariate Phenological Analysis Framework Leveraging UAV Imagery and LSTM for Tree Health and Yield Estimation in Mango Orchards 2025

Muhammad Munir Afsar Ejaz Hussain Javed Iqbal Muhammad Shahid Iqbal Asim Dilawar Bakhshi
Remote Sensing, Volume 17(4), Article Number 703
Impact Factor: 4.200 | **Quartile:** 1 | **Citations:** 1
DOI: https://doi.org/10.3390/rs17040703

Deep neural network for crop classification using multitemporal data: A case study of Sialkot, Pakistan 2024

Shoaib Akhtar Muhammad Ali Tahir Salman Atif Ejaz Hussain Muhammad Umair Muhammad Shahzad Qudsia Gulzar

Journal of Pure and Applied Agriculture, Volume 9(2), Pages 95-108

Impact Factor: N/A

DOI: https://ojs.aiou.edu.pk/index.php/jpaa/article/view/2765

High-Precision Mango Orchard Mapping Using a Deep Learning Pipeline Leveraging Object Detection and Segmentation 2024

Asim Dilawar Bakhshi Muhammad Shahid Iqbal Ejaz Hussain Javed Iqbal Muhammad Munir Afsar

Remote Sensing , Volume 16(17), Article Number 3207

Impact Factor: 4.200 | **Quartile:** 1 | **Citations:** 3

DOI: https://doi.org/10.3390/rs16173207

Applying the Land Administration Domain Model (LADM) for Integrated, Standardized, and Sustainable Development of Cadastre Country Profile for Pakistan 2024

Muhammad Sheraz Ahsan Ejaz Hussain Christiaan Lemmen Malumbo Chaka Chipofya Jaap Zevenbergen Salman Atif Javier Morales Mila Koeva Zahir Ali

Land , Volume 13(6), Article Number 883

Impact Factor: 3.200 | **Quartile:** 2 | **Citations:** 3

DOI: https://doi.org/10.3390/land13060883

A deep learning-based framework for object recognition in ecological environments with dense focal loss and occlusion 2024

Muhammad Munir Afsar Asim Dilawar Bakhshi Ejaz Hussain Javed Iqbal

Neural Computing and Applications, Volume 36, Issue 16, Pages 9591-9604

Impact Factor: 4.500 | **Quartile:** 2 | **Citations:** 2

DOI: https://doi.org/10.1007/s00521-024-09582-5

Deriving requirements for integrated and standardised cadastre profile from the legacy Board of Revenue and the contemporary land administration systems 2024

Ejaz Hussain Christiaan Lemmen Jaap Zevenbergen Salman Atif Malumbo Chipofya Zahir Ali Javier Morales Mila Koeva Muhammad Sheraz Ahsan

Survey Review, Pages:21

Impact Factor: 1.2 | **Quartile:** 3 | **Citations:** 1

DOI: 10.1080/00396265.2024.2351624

Performance evaluation of individual tree detection and segmentation algorithms using ALS data in Chir Pine (Pinus roxburghii) forest 2024

Tahir Saeed Ejaz Hussain Sami Ullah Javed Iqbal Salman Atif Mohsin Yousaf

Remote Sensing Applications: Society and Environment, Volume 34, Article Number 101178

Impact Factor: 4.7 | **Citations:** 3

DOI: https://doi.org/10.1016/j.rsase.2024.101178

Assessing the Status and Challenges of Urban Land Administration Systems Using Framework for Effective Land Administration (FELA): A Case Study in Pakistan 2023

Muhammad Sheraz Ahsan Ejaz Hussain Zahir Ali Jaap Zevenbergen Salman Atif Mila Koeva Abdul Waheed

Land , Volume 12(8), Article Number 1560

Impact Factor: 3.9 | **Quartile:** 2 | **Citations:** 3

DOI: https://doi.org/10.3390/land12081560

Remote Sensing-Based Prediction of Temporal Changes in Land Surface Temperature and Land Use-Land Cover (LULC) in Urban Environments 2022

Mohsin Ramzan Ejaz Hussain Junaid Aziz Khan Abid Nazir Muhammad Yousif Dasti Saqib Ali Nabeel Khan Niazi Zulfiqar Ahmed Saqib

Land , Volume 11, Issue 9, Article Number 1610

Impact Factor: 3.905 | **Quartile:** 2 | **Citations:** 25

DOI: https://doi.org/10.3390/land11091610

Spatiotemporal Investigation of Soil Salinity Using Geospatial Techniques: A Case Study of Tehsil Toba Tek Singh 2022

Shahid Karim Ejaz Hussain Junaid Aziz Khan Abdul Hameed Jamal Hassan Ougahi Farhan Iqbal

Communications in Soil Science and Plant Analysis, Pages 1-19

Impact Factor: 1.327 | **Quartile:** 3 | **Citations:** 5

DOI: https://doi.org/10.1080/00103624.2022.2070189

Spatio-temporal analysis of crop water requirements in Lower Chenab Canal (LCC) Irrigation System for the better management of water resources 2021

Muhammad Usman Ejaz Hussain Umair Rabbani Shahid Ghazi Syed M. Irteza Shamaila Gull

Arabian Journal of Geosciences, Volume 14, Article Number: 424

Impact Factor: N/A | **Citations:** 1
DOI: https://doi.org/10.1007/s12517-021-06758-4

Geospatial analysis and simulation of glacial avalanche hazard in hunza river basin 2021

Naseem Gilany Javed Iqbal Ejaz Hussain

International Journal of Environmental Science and Development, Volume 12, Issue 2, Pages 51-57

Impact Factor: N/A | **Citations:** 1
DOI: 10.18178/ijesd.2021.12.2.1317

Towards sustainable wastewater management: A spatial multi-criteria framework to site the Land-FILTER system in a complex urban environment 2020

Shamsa Kanwal Hamza Farooq Gabriel Ejaz Hussain Muhammad Sajjad

Journal of Cleaner Production, Volume 266, Article Number 121987

Impact Factor: 9.297 | **Quartile:** 1 | **Citations:** 14
DOI: https://doi.org/10.1016/j.jclepro.2020.121987

Shaping up the Future Spatial Plans for Urban Areas in Pakistan 2020

Muhammad Qadeer ul Hussnain Abdul Waheed Khydija Wakil Christopher James Pettit Ejaz Hussain Malik Asghar Naeem Ghulam Abbas Anjum

Sustainability , Volume 12, Issue 10, Article Number 4216

Impact Factor: 3.251 | **Quartile:** 2 | **Citations:** 11
DOI: https://doi.org/10.3390/su12104216

Surface urban heat islands in the mega city of Karachi, their spatial distribution and health emergency response infrastructure 2020

Ejaz Hussain Junaid Aziz Khan Salman Atif

Journal of The Pakistan Medical Association, Volume 70(4), Pages 705-712

Impact Factor: 0.781 | **Quartile:** 4 | **Citations:** 1
DOI: DOI: 10.5455/JPMA.5478

A Framework to Bridge Digital Planning Tools' Utilization Gap in Peri-Urban Spatial Planning; Lessons from Pakistan 2020

Muhammad Qadeer ul Hussnain Abdul Waheed Ejaz Hussain Ghulam Abbas Anjum Malik Asghar Naeem Khydija Wakil Christopher James Pettit

Computers Environment and Urban Systems, Volume 80, Article Number 101451

Impact Factor: 5.324 | **Quartile:** 1 | **Citations:** 18
DOI: https://doi.org/10.1016/j.compenvurbsys.2019.101451

Climatic and hydrological projections to changing climate under CORDEX-South Asia experiments over the Karakoram-Hindukush-Himalayan water towers 2020

Muhammad Azmat Abdul Waheed Aasia Wahab Christian Hugge Muhammad Uzair Qamar Ejaz Hussain Shakil Ahmad

Science of the Total Environment, Volume 703, Article Number 135010

Impact Factor: 7.963 | **Quartile:** 1 | **Citations:** 29
DOI: https://doi.org/10.1016/j.scitotenv.2019.135010

Future climate and cryosphere impacts on the hydrology of a scarcely gauged catchment on the Jhelum river basin, Northern Pakistan 2018

Muhammad Azmat Muhammad Uzair Qamar Christian Huggel Ejaz Hussain

Science of The Total Environment, Volume 639, Pages 961-976

Impact Factor: 5.589 | **Quartile:** 1 | **Citations:** 69
DOI: 10.1016/j.scitotenv.2018.05.206

Ensembling Downscaling Techniques and Multiple GCMs to Improve Climate Change Predictions in Cryosphere Scarcely-Gauged Catchment 2018

Muhammad Azmat Muhammad Uzair Qamar Shakil Ahmad Muhammad Adnan Shahid Ejaz Hussain Sajjad Ahmad Rao Arsalan Khushnood

Water Resources Management, Volume 32, Pages 3155–3174

Impact Factor: 2.987 | **Quartile:** 1 | **Citations:** 13
DOI: 10.1007/s11269-018-1982-9

Application of HEC-HMS for the event and continuous simulation in highaltitude 2017

Muhammad Azmat M.U. Qamar S. Ahmed Ejaz Hussain M. Umair

European Water, Vol.57, Pages 77-84

Impact Factor: -
DOI: NA

Integrated geospatial evaluation of manual cadastral mapping: a case study of Pakistan 2017

Ejaz Hussain M. S. Ahsan Z. Ali

SURVEY REVIEW, Volume: 49 Issue: 356 Pages: 355-369

Impact Factor: 1.163 | **Quartile:** 3 | **Citations:** 5

DOI: 10.1080/00396265.2016.1180755

Object-based urban land cover classification using rule inheritance over very high-resolution multisensor and multitemporal data 2016

Ejaz Hussain Jie Shan

GIScience & Remote Sensing, Volume 53, Issue 2, Pages 164-182

Impact Factor: 3.049 | **Quartile:** 2 | **Citations:** 30

DOI: 10.1080/15481603.2015.1122923

Species distribution modelling of Aedes aegypti in two dengue-endemic regions of Pakistan 2016

Ejaz Hussain Syeda Hira Fatima Salman Atif Syed Basit Rasheed Farrah Zaidi

Tropical Medicine and International Health , Volume 21, Issue 3, Pages 427-436

Impact Factor: 2.85 | **Quartile:** 1 | **Citations:** 55

DOI: 10.1111/tmi.12664

Urban building extraction through object-based image classification assisted by digital surface model and zoning map 2016

Ejaz Hussain Jie Shan

International Journal of Image and Data Fusion, Volume 7, Issue 1, Pages 63-82

Impact Factor: - | **Citations:** 15

DOI: doi:10.1080/19479832.2015.1119206

3-Dimensional Indoor Positioning System based on WI-FI Received Signal Strength using Greedy Algorithm and Parallel Resilient Propagation 2015

Shuaib Alam Salman Atif Saddam Hussain Ejaz Hussain

International Journal of Computer Applications , Volume 116, No.18, Pages 32-38

Impact Factor: 0

DOI: 10.5120/20439-2780

Development of new indices for extraction of built-up area & bare soil from Landsat data 2012

Mirza Muhammad Waqar Johum Fatimah Mirza Rafia Mumtaz Ejaz Hussain

Scientific Reports , Volume 1, Issue 1, Article Number 136

Impact Factor: 2.927 | **Quartile:** 1

DOI: 10.4172/scientificreports.136,2012

Building population mapping with aerial imagery and GIS data 2011

Ejaz Hussain Serkan Ural Jie Shan

International Journal of Applied Earth Observation and Geoinformation, Volume 13, Issue 6, Pages 841-852

Impact Factor: 1.744 | **Quartile:** 1 | **Citations:** 103

DOI: 10.1016/j.jag.2011.06.004

Building Extraction and Rubble Mapping for City Port-au-Prince Post-2010 Earthquake with GeoEye-1 Imagery and Lidar Data 2011

EJAZ HUSSAIN Serkan Ural KyoHyouk Kim Jie Shan Chiung-Shiuan Fu

Photogrammetric Engineering and Remote Sensing, PHOTOGRAMMETRIC ENGINEERING AND REMOTE SENSING Volume: 77 Issue: 10 Pages: 1011-1023

Impact Factor: 1.048 | **Quartile:** 2

DOI: http://www.ingentaconnect.com/content/asprs/pers/2011/00000077/00000010/art00002

Flood Mapping with Satellite Images and its Web Service 2010

Ejaz Hussain Jie Shan KyoHyouk Kim Larry Biehl

Photogrammetric Engineering and Remote Sensing, Volume 76, Issue 2, Pages 102-105, Special Issue SI

Impact Factor: 0.931 | **Quartile:** 2

DOI: -

Study on Accuracy of 1-Degree DEM versus Topographic Complexity Using GIS Zonal Analysis 2003

Ejaz Hussain Jie Shan Muhammad Zaheer

Journal of Surveying Engineering, Volume: 129 Issue: 2 Pages: 85-89

Impact Factor: 0.2 | **Quartile:** 4 | **Citations:** 12

DOI: 10.1061/(ASCE)0733-9453(2003)129:2(85)

Conference Proceedings

Assessing Urban Land Administration Capacity to Achieve 2030 Agenda for Sustainable Development in Pakistan 2024

Muhammad Sheraz Ahsan Salman Atif Christiaan Lemmen Ejaz Hussain Mila Koeva Jaap Zevenbergen Zahir Ali Abdul Waheed

9th FIG Regional Conference 2024, res.country(167,)

Citations: N/A

DOI: Nil

A Framework Towards Digital and Improved Urban Land and Real Estate Management in Pakistan 2024

Muhammad Sheraz Ahsan Ejaz Hussain Salman Atif Jaap Zevenbergen Christiaan Lemmen Zahir Ali Mila Koeva Abdul Waheed

4th International Conference on Bussiness, Management and Social Sciences, res.country(177,)

Citations: N/A

DOI: Nil

An Evaluation of Existing Models of Smart Cities Development Around the World 2023

Aqsa Mehmood Muhammad Ali Tahir Hafiz Syed Hamid Arshad Salman Atif Ejaz Hussain Gavin Mcardle Michela Bertolotto

Conference Proceedings, Cape Town South Africa November 06-07, 2023, res.country(247,)

Citations: N/A

DOI: Nil

Efficient mapping of flood hazards, using drones and aerial imaging techniques: State of the art and shortcomings 2023

Muhammad Farhan Nazir Salman Atif Muhammad Zeeshan Ejaz Hussain

3rd Flagship International Conference on Water, Energy, and Environment for Sustainability (IC-WEES 2023), res.country(177,)

Citations: N/A

DOI: 10.3389/978-2-8325-1237-1

Application of the Online WhatIf? Planning Support System in Peri-urban Spatial Planning; Case study of Muzaffargarh, Pakistan 2019

Qadeer ul Hussnain Abdul Waheed Abbas Anjum Malik Asghar Naeem Khydija Wakil Ali Tahir Christopher Pettit Ejaz Hussain

CORP 2019 , res.country(57,)

Citations: N/A

DOI: https://isocarp.org/events/35236/

Application of HEC-HMS for the event and continuous simulation in highaltitude scarcely-gauged catchment under changing climate 2017

Muhammad Azmat M.U. Qamar Shakil Ahmad Ejaz Hussain Muhmmad Umair

10th World Congress of EWRA, res.country(88,)

Citations: N/A

DOI: Nil

Application of HEC-HMS for the event and continuous simulation in high-altitude scarcely-gauged catchment under changing climate 2017

M. Azmat M.U. Qamar S. Ahmed E. Hussain M. Umair

10th World Congress of EWRA 'Panta Rhei', res.country(88,)

Citations: N/A

DOI: N/A

Landsat-8 Operational Land Imager Change Detection Analysis 2017

Ejaz Hussain W. Pervez S. A. Khan Faisal Amir M.A. Maud

The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, res.country(57,)

Citations: N/A

DOI: 10.5194/isprs-archives-XLII-1-W1-607-2017

EVALUATE THE CAPABILITY OF LANDSAT8 OPERATIONAL LAND IMAGER FOR SHORELINE CHANGE DETECTION /INLAND WATER STUDIES 2017

Ejaz Hussain W. Pervez S. A. Khan Faisal Amir M.A. Maud

The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, res.country(109,)

Citations: N/A

DOI: 10.5194/isprs-archives-XLII-5-W1-145-2017

Satellite based seasonal land use classification and change detection analysis of landsat-8 operational land imager 2017

Ejaz Hussain Wasim Pervez Shoab Ahmad Khan Faisal Amir

International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17), res.country(2,)

Citations: N/A
DOI: 10.1051/matecconf/201712009004

Satellite based Comparative Analysis of Landsat-8 Operational Land Imager, Advanced Land Imager and Hyperion Data for Mapping Applications 2017

Ejaz Hussain Shoab Ahmad Khan Wasim Pervez Faisal Amir Junaid Aziz Khan

3rd Internatinal Congress on Technology engineering and Science, res.country(157,)

Citations: N/A
DOI: N/A

Mapping and Monitoring Planned Development of Vegetation Cover in Desert Area using Temporal Remote Sensing Data 2013

Muhammad Usman Ejaz Hussain Serkan Ural Jie Shan

Conference: American Society for Photogrammetry and Remote Sensing (ASPRS) Annual Conference, res.country(233,)

Citations: N/A
DOI: Nil

Post Flood Drinking Water quality Assessment of Charsadda District Using GIT's 2012

Hena Shahzada Ejaz Hussain Javed Iqbal

International Conference on Earth Sciences Pakistan 2012, res.country(177,)

Citations: N/A
DOI: http://nceg.uop.edu.pk/GeologicalBulletin/Vol-45(2)-2012/Vol-45(2)-2012-Abstract-119.pdf

Comparison of Pixel-Based and Object-Based Classification for Glacier Change Detection 2012

Ibad Ur Rehman Syed Saqib Kami Syed Saad Ali Ejaz Hussain

2nd International Workshop on Earth Observation and Remote Sensing Applications, res.country(48,)

Citations: N/A
DOI: 10.1109/EORSA.2012.6261178

Soil Salinity Assessment in Toba Tek Singh using Remote Sensing and GIS 2012

Ejaz Hussain SHAHID KARIM

International Conference of GIS Users TAZA GIS-Days, res.country(136,)

Citations: N/A
DOI: https://www.researchgate.net/publication/334192581_Soil_salinity_assessment_in_Toba_Tek_Singh_using_remote_sensing_and_GIS

Maping Pakistan 2010 Floods Using Remote Sensing Data 2011

Ejaz Hussain Serkan Ural Abrar Malik Jie Shan

American Society for Photogrammetry and Remote Sensing Annual Conference, res.country(233,)

Citations: N/A
DOI: https://pdfs.semanticscholar.org/e459/8d1b62dac9bc5095ac074c4fd7ba77713f48.pdf

Very High Resolution Remote Sensing Data: Processing Capabilities and Limitations in Urban Areas 2010

Ejaz Hussain Jie Shan

IEEE Geoscience and Remote Sensing Symposium, res.country(233,)

Citations: N/A
DOI: https://pdfs.semanticscholar.org/313c/ff4d241335714bd6e095d1772b8ee292a4ff.pdf

MAPPING MAJOR FLOODS WITH OPTICAL AND SAR SATELLITE IMAGES 2010

Ejaz Hussain Jie Shan

IEEE Geoscience and Remote Sensing Symposium, Honolulu, Hawaii, res.country(233,)

Citations: N/A
DOI: https://engineering.purdue.edu/~jshan/publications/2010/IGARSS_flood_formatted_Hussain_Shan.pdf

Rule Inheritance in Objet-based Image classification for Urban Land Cover Mapping 2010

Ejaz Hussain Jie Shan

American Society for Photogrammetry and Remote Sensing Annual Conference, res.country(233,)

Citations: N/A
DOI: https://www.researchgate.net/publication/267370872_Rule_inheritance_in_object-based_image_classification_for_urban_land_cover_mapping?ev=prf_pub

Object-based Image Classification and Web-mapping Techniques for Flood Damage Assessment 2009

Ejaz Hussain KyoHyouk Kim Jie Shan

American Society for Photogrammetry and Remote Sensing Annual Conference, res.country(233,)

Citations: N/A
DOI: https://www.asprs.org/a/publications/proceedings/baltimore09/0039.pdf

Book Chapters

Object-based Data Integration and Classification for High-Resolution Coastal Mapping 2009

Ejaz Hussain Jie Shan

In: *Book on Remote Sensing of Coastal Environments, 1st Edition*, Chapter 10, Pages 210-234 (26 pages)

Citations: N/A

DOI: DOIhttps://doi.org/10.1201/9781420094428

Flood Mapping and Damage Assessment ? a Case Study in the State of Indiana 2009

Ejaz Hussain Jie Shan KyoHyouk Kim Larry Biehl

In: *Geospatial Technology for Earth Observation*, Chapter 18, Pages 473-495

Citations: 16

DOI: https://doi.org/10.1007/978-1-4419-0050-0_18

Editorial Activities

Frontiers in Environmental Science 2024

Reviewed Papers for Journals

Impact Factor: 3.3

Scientific Data 2024

Reviewed Papers for Journals

Impact Factor: 5.8

Remote Sensing Applications-Society and Environment 2023

Reviewed Papers for Journals

Impact Factor: 3.371

Intellectual Property

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Patents

Industrial Designs

IoT connected water throw monitoring sleeve 2019

Status: Granted

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