Date: 27.05.2019

NAME: Kailas Sekhar Banerjee **DATE OF BIRTH:** 21st November, 1982

DEPARTMENT/UNIT/SECTION: Civil and Environmental Engineering

FACULTY/DIVISION: Engineering

POSITION: Lecturer

GENERAL AREA OF ACADEMIC SPECIALIZATION: Engineering Geology, Natural Hazards and Environmental Earth Sciences

QUALIFICATION AND GRANTING INSTITUTION:

Degree	University	Date
Certificate in University Teaching and Learning	University of West Indies, St. Augustine Campus, Trinidad and Tobago	2014
Ph.D.	Indian Institute of Technology Kharagpur, India	2011
M.Sc.	The University of Burdwan, India	2005
B. Sc.	The University of Burdwan, India	2003

TRAINING:

- **2018 -** Certificate on **Quality Co-evaluator Training** by Quality Assurance Unit, University of West Indies
- **2014 - Expert Judgment Course** on Evidence Science: an emerging Discipline, Natural Hazards and Probabilistic Hazard Assessment, Quantitative Risk Analysis, Elicitation of Expert Scientific Expert Judgments for Decision Support by *Seismic Research Unit, University of West Indies, St. Augustine, Trinidad and Tobago*.
- Attended Several workshops organized by *Center of Excellence in Teaching and Learning, University of West Indies* on academic and professional developments
- **Attended two intensive** training programs on Environmental Monitoring and Assessment organized by *Bhabha Atomic Research Center, Mumbai, India*.

EXPERIENCE

Post	Where Held	Dates
Lecturer	Department of Civil and Environmental Engineering, University of West Indies, St. Augustine Campus, Trinidad and Tobago	2012-
Exploration Geologist	Salva Resources India Pvt. Ltd., India	2011-2012

CURRENT DUTIES
Teaching and related experiences:

Course	Role	Semester	% of lectures
Undergraduate courses			
CVNG 1011 (Geology)	Lecturer and First Examiner	II	100
CVNG 1001 (Mechanics of Fluids-I)	Lecturer	II	20
ENGR 3001 (Natural Hazards & Disaster Management in the Caribbean)	Lecturer and Fist Examiner	II	100
GEOG 3118 (Quaternary Environments)	Lecturer	I	100
CVNG 2011 (Engineering Hydrology)	Lecturer and Second Examiner	II	50
CVNG 3015 (Special Investigation Project)	Supervisor and Second Examiner	Year long	
CVNG 3014 (Civil Engineering Design Project)	Supervisor and Second Examiner	Year long	
Graduate courses			
COEM 6016 (Natural Hazards Management)	Lecturer and Second Examiner.	I	100

Contributions to department:

- Level Coordinator - Level 2
- Coordinator – Departmental Quality Assurance
- Entrance Committee Member – Department of Civil and Environmental Engineering
- Member – Departmental Curriculum Development Committee
- Library Liaison - Department of Civil and Environmental Engineering
- Coordinator – Geology Laboratory, Department of Civil and Environmental Engineering

PUBLICATION:
REFEREED PUBLICATIONS

- **Journal Manuscripts**

1. **Banerjee K.S**., Jittan L., and Ramkalawan, S. (2019). Spatial variational characteristics analysis of heavy metals pollution in the water of the Caroni River System: Case Study from a Tropical river, **Water Supply** https://doi.org/10.2166/ws.2019.110

2. Farley M., **Banerjee K.S**., and Cooper V. (2019), Perception of Middle and Low Income Communities on Separation of Household Waste in the Caribbean Region: A Case Study from Trinidad, **Journal of Environmental Management**, V. 233, 63-68. (**Impact Factor: 4.005; Number of Citation: 0**).

3. **Banerjee K.S.**, and Baijoo A. (2019), *Measurement of terrestrial radiation level in a neotectonic fault system in Trinidad,* ***Journal of Environmental Radioactivity***, V.197, 48-54. (**Impact Factor: 2.263; Number Citation: 1**).

1. **Banerjee K.S.,** and Sengupta D. (2015), "Importance of radon studies in rural areas and

correlation of indoor radon level with radon inventory", ***Int. J. Low Radiation***, V. 10, 48-60. **(Impact Factor:** Not available**; Number of Citation: 0).**

2. **Banerjee, K.S.** and Melville, R.S. (2015), "Preliminary Investigation of Geotechnical Properties of the Rock Aggregates Commonly Used for Civil Engineering Construction in Trinidad and Tobago", ***West Indian Journal of Engineering***, V.38, No.1, July, pp.15-21. **(Impact Factor:** Not available**; Number of Citation: 0)**.

3. **Banerjee K.S**., Guin R., Gutierrez-Villanueva J.L., Charro M.E. and Sengupta D., (2012). "Variation in U-238 and Th-232 enrichment in U-mineralized zone and geological controls on their spatial distribution, Singhbhum Shear Zone of India" ***Environmental Earth Sciences***, V. 65, 2103-2110. **(Impact Factor: 1.435; Number of Citation: 4).**

4. **Banerjee K.S**., Basu A., Guin R. and Sengupta D. (2011). Radon (^{222}Rn) level variations on a regional scale from the Singhbhum Shear Zone, India: A comparative evaluation between influence of basement U-activity and porosity. ***Radiation Physics and Chemistry,*** V. 80, p. 614-619. **(Impact Factor: 1.435; Number of Citation: 7)**.

5. Sahoo B.K., Mayya Y.S., Sapra B.K., Gaware J.J., **Banerjee K.S.** and Kushwaha H.S. (2010). Radon exhalation studies in an Indian uranium tailings pile. ***Radiation Measurements,*** V. 45, p. 237-241. **(Impact Factor: 1.369; Number of Citation: 37)**.

6. **Banerjee K.S**., Sharma S.P., Sarangi A.K. and Sengupta D. (2011). Delineation of subsurface structures around an Indian U-tailings pond, Jharkhand, India using an integrated Resistivity, VLF and radiometric survey and its hydrogeological implication. ***Physics and Chemistry of the Earth***, V. 36, p. 1345-352. **(Impact Factor: 1.923; Number of Citation: 5).**

7. **Banerjee K.S**. and Sengupta D. (2010). Distribution pattern of the in situ terrestrial gamma radiation in uranium mineralised Singhbhum Shear Zone, Jharkhand, India and its correlation with local geology. ***Current Science***, V. 98, p. 76-81. **(Impact Factor: 0.883; Number of Citation: 3)**.

8. **Banerjee K.S.** and Sengupta D. (2008). The role of geological parameters on the ambient gamma radiation and radon flus from rock formation near Singhbhum Shear Zone, near Jaduguda, Eastern India. ***Radiation Protection and Environment***, V. 31, 358-61. **(Impact Factor:** Not available**; Citation: 0).**

- **Conference Proceedings**

1. **Banerjee K.S**., Guin R. and Sengupta D. (2010). Radon emanation and its geological control from selected rock samples, around Jaduguda, India. ***Proc. 2nd International Conference on Application of Radiotracers in Chemical, Environmental and Biological Sciences***, SINP, Kolkata, India, V. 3, 214-216.

2. Bose, T., Misra, S., **Banerjee**, **K. S.,** Chakroborty, S., Newsom H. and Reddy K. (2010). Gamma (γ) – Ray Mapping of Ejecta around Lonar Asteroid Impact Crater, India. **In 41st**

Lunar and Planetary Science Conference, the Woodlands, Texas. LPI Contribution No. 1533, p.1549.

3. Sahoo, B.K., Eappen, K.P., **Banerjee**, **K.S.**, Ramachandran, T.V., Sengupta D. and Mayya Y.S. (2008). Radon flux from a uranium tailings pond- A comparative study between measured and estimated values, **Proceedings of Sixteenth National Symposium on Environment, Hissar, India**, p. 251-256. **(Impact Factor: Not available; Number of Citation: 1).**

PUBLICATIONS IN NONPRINT/MULTIMEDIA

1. **Banerjee K.S.** and Sengupta D. (2008). Measurement of ambient Radioactivity and Radon dispersion around Uranium Tailings Ponds, Jaduguda, Jharkhand, Eastern India. ***In Indo-Korean Joint International Symposium on Geo-Science and Technology: Utilization of Geo-Space as Solution for Energy and Environment***, IIT Kharagpur, India and Korean Institute of Geoscience & Mineral Resources (KIGAM) 30 Gajeong-dong, Yuseong-gu, Daejeon 305-350.

2. **Banerjee K.S**. and Jittan L. (2015). The Distribution of Heavy Metals in Sediments of the Caroni River – A Preliminary Investigation. ***20th Caribbean Geological Conference***, Port of Spain, Trinidad and Tobago.

WORK NOT YET PUBLISHED:

In Preparation

1. Geotechnical Properties of the Rock Aggregates Commonly Used for Civil Engineering Construction in the Caribbean Region.
2. Use of GIS in Landslide Hazard Mitigation with its possibility to implement in Trinidad – An Assessment.

DISTINCTIONS, HONOURS, SCHOLARSHIPS:

- **UWI- NGC Award 2016** as Co-investigator for **"Most Impactful Research Project"** by University of West Indies; Project Title -The Impact of the Contaminants Produced by the Guanapo Landfill on Surrounding Environment, Trinidad and Tobago.
- **UWI- NGC Award 2016** as Co-investigator for **"Best Research Team – Encouraging Multi-disciplinary Research"** by University of West Indies; Project Title -The Impact of the Contaminants Produced by the Guanapo Landfill on Surrounding Environment, Trinidad and Tobago.
- **National Doctoral Fellowship** - by All India Council for Technical Education, India in 2008-2009.
- **NET (National Eligibility Test)** - by the Council of Scientific and Industrial Research and University Grant Commission, India in 2005.

PAPERS PRESENTED:

Papers Presented at Academic conferences and seminars

1. **Banerjee K.S**., Guin R. and Sengupta D. (2010). Radon emanation and its geological control from selected rock samples, around Jaduguda, India. ***Proc. 2nd International Conference on Application of Radiotracers in Chemical, Environmental and Biological Sciences***, SINP, Kolkata, India, V. 3, 214-216.
2. **Banerjee K. S.** and Sengupta D, 2008. The role of geological parameters on the ambient gamma radiation and radon flux from the rock formation near Singhbhum shear Zone, near Jaduguda, Eastern India, ***Proc.28th National Conference on Management of Nuclear and Radiological Emergencies (IARPNC – 2008)***, Jodhpur, India V. 31, No. 1-4, p. 358-361.
3. **Banerjee K.S.** and Sengupta D. (2008). Measurement of ambient Radioactivity and Radon dispersion around Uranium Tailings Ponds, Jaduguda, Jharkhand, Eastern India. ***In Indo-Korean Joint International Symposium on Geo-Science and Technology: Utilization of Geo-Space as Solution for Energy and Environment***, IIT Kharagpur, India and Korean Institute of Geoscience & Mineral Resources (KIGAM) 30 Gajeong-dong, Yuseong-gu, Daejeon 305-350.
4. **Banerjee K.S**. and Jittan L. (2015). The Distribution of Heavy Metals in Sediments of the Caroni River – A Preliminary Investigation. ***20th Caribbean Geological Conference***, Port of Spain, Trinidad and Tobago.

REPORTS:

1. The Impact of the Contaminants Produced by the Guanapo Landfill on Surrounding Environment, Trinidad and Tobago – for UWI-Trinidad & Tobago Research and Development Impact funded Project as Co-investigator in 2016.
2. Studies on source Term Evaluation and Distribution of Heavy Metals in Surficial Sediments in Caroni River, Trinidad and Tobago – for Campus Research and Publication Fund Project (CRP.3.NOV13.10) as Principal Investigator in 2015.

PUBLIC SERVICE:

Community Services

1. Delivered a 3-day workshop on **Mineral Resource/Reserve Estimation** presented to Engineers and Senior Technicians in Caribbean Regional Training Workshop on Geo-Data Digitization and Mapping of Development Minerals sponsored by the ***ACP-EU Development Minerals Programme Implemented in partnership with UNDP*** *and hosted by* Department of Geomatics Engineering and Land Management, University of West Indies, Trinidad and Tobago, Nov. 6-16, 2017.
2. Member of the advisory board to develop the curriculum for the Associate Degree in Exploration Geology, the University of Guyana (UG) in 2016
3. Advised Catholic Media Services Ltd on Management of e-Waste in Trinidad and Tobago in 2019.

OTHER PROFESSIONAL ACTIVITY AND EXPERIENCE:

Professional Membership

Member of American Geological Society since 2016

Member of Geological Society of Trinidad and Tobago since 2013.

RESEARCH:

1. As **Co-investigator**; **Fund** – RDI, UWI-Trinidad & Tobago; **Project title** - The Impact of the Contaminants Produced by the Guanapo Landfill on Surrounding Environment, Trinidad and Tobago; **Value of the project** – TT$ 1 million appx.; **Duration** - 2013-15.
2. As P**rincipal Investigator**; **Fund** - Campus Research and Publication Fund Project (CRP.3.NOV13.10); **Project title** - Studies on source Term Evaluation and Distribution of Heavy Metals in Surficial Sediments in Caroni River, Trinidad and Tobago; **Value of the Project** – TT$ 23,000; **Duration** – 2014-2015.

POSTGRADUATE RESEARCH AND SUPERVISION:

1. **Title of the work –**Variation in Physical and Chemical Soil Properties of a Municipal Landfill in Guanapo, Trinidad, **Name of the Student** -Najma Hosein; **Name of the Supervisor** – Kailas Banerjee; **Type of dissertation** – M.Sc., **Awarded with distinction** ; **Date** - 2015/16; **Department** – Civil and Environmental Engineering.
2. **Title of the work –** An Evaluation of Dispersion of Certain Heavy Metals in the Caroni River Basin, Trinidad and Tobago, **Name of the Student** - Shabian Ramkalawan; **Name of the Supervisor** – Kailas Banerjee; **Type of dissertation** – M.Sc., **Date** - 2015/16; **Department** – Civil and Environmental Engineering.
3. **Title of the work -** The Investigation of Language as a Communication Barrier Delay as Construction Services for Government Buildings managed locally by an International Contracting Company: Case Studies from the Republic of Trinidad and Tobago, **Name of the Student** - Jeremy Baptiste; **Name of the Supervisor** – Kailas Banerjee; **Type of dissertation** – M.Sc., **Date** - Ongoing; **Department** – Civil and Environmental Engineering.
4. **Title of the work –** An Evaluation of the Adoption of Digital Tools and Technology in the Construction Industry, **Name of the Student** - Rajendranath Seerattan; **Name of the Supervisor** – Kailas Banerjee; **Type of dissertation** – M.Sc., **Date** - Ongoing; **Department** – Civil and Environmental Engineering.

3. LIST OF RESEARCH ACTIVITIES:

(a) Geotechnical Properties of the Rock Aggregates Commonly Used for Civil Engineering Construction in the Caribbean Region (Preliminary part has been covered and published)

(b) Measurement of environmental radioactivity in an active geological fault system in Trinidad (Preliminary part has been covered and presented in a conference)

(c) Management of domestic waste and e-waste in the Tunapuna-Piarco Regional Corporation, Trinidad and Tobago (First phase of the project is submitted for publication