

Md. Motaleb Hossain, PhD

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Department of Mathematics
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Educational Qualifications

- Post doctorate** Laboratory of Molecule & Life Nonlinear Sciences, Research Center of Mathematics for Social Creativity, Research Institute for Electronic Science (RIES), Hokkaido University, Japan (From 2019.07.12 to continue)
- PhD (2015)** Doctor of Philosophy (PhD) in **Physical Hydrology** from Laboratory of Physical Hydrology, Department of Natural History Sciences, Graduate School of Science, Hokkaido University, Japan (December 2015).
Thesis Title: Sediment-Loading Processes in a Forested Catchment Influenced by Slope Failure
- Masters of Science (2002)** Master of Science (MS) in Applied Mathematics, Department of Mathematics, University of Dhaka, Bangladesh (Examination held in 2005, Result Published in 2006)
Thesis Title: Sensitivity Analysis of Physiographic Parameters through Lumped Kinematics Wave Model
Result: First Class, Position: 1st Class 3rd
- Bachelor of Science (2001)** Bachelor of Science (B.Sc. Hon's) in Mathematics, Department of Mathematics, University of Dhaka, Bangladesh. (Examination held in 2003)
Project Title: Dynamic of an Epidemic Model (AIDS)
Result: First Class, Position: 1st Class 2nd
- Higher Secondary Certificate (1997)** Group: Science
Result: First Division with Star Marks
- Secondary School Certificate (1994)** Group: Science
Result: First Division with Star Marks

Publications

12. Udoy S. Basak, Sulimon Sattari, **Md. Motaleb Hossain**, Kazuki Horikawa and Tamiki Komatsuzaki, "An information-theoretic approach to infer the underlying interaction domain among elements from finite length trajectories in a noisy environment", *The Journal of Chemical Physics*, Vol. 154, Issue 3, 2021
11. Khadiza Akter Mitu, **Md. Motaleb Hossain**, Md. Sazzad Hossain, Kazuhisa A. Chikita, "Development of Rainfall-Runoff Model for Northeast Region of Bangladesh", *International Journal of Geology, Agriculture and Environmental Sciences* Vol. 6, Issue 4, pp. 10-16, August, 2018.
10. Takuto Miyamoto, Kazuhisa A. Chikita, Yoshitaka Sakata, Yasunori Ochiai, **Md. Motaleb Hossain**, Hideo, Ohyagi, Isao Kudo, "Loading processes of major ions in a forested catchment: Observations and modelling", *Jour. Jpn. Assoc. Hydrol. Sci.*, Vol. 46, No. 1, pp. 39-57, March, 2016.
9. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Yoshitaka Sakata, Takuto Miyamoto "Fluvial Sediment Transport in a Forested Catchment Influenced by Slope Failure" *International Journal of Geology, Agriculture and Environmental Sciences* Vol. 3, Issue 6, pp. 37-41, December, 2015.
8. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Yoshitaka Sakata, Takuto Miyamoto, Yasuhiro Ochiai "Groundwater Leakage and River Runoff in a Catchment Influenced

- by **Tectonic Movement**”, *Open Journal of Modern Hydrology* Vol. 5, pp. 32-44, April, 2015.
7. Kazuhisa A. Chikita, Hiroyuki Uyehara, Abdullah Al Mamun, Francesca De Pascalis, Georg Umgiesser, Wataru Iwasaka, **Md Motaleb Hossain**, Yoshitaka Sakata “**Water and heat budgets in a coastal lagoon controlled by groundwater outflow to the ocean**”, *Limnology*, Vol. 16, pp. 149–157, April, 2015.
 6. **Md. Motaleb Hossain** “**Analysis of Flood Routing**” *Dhaka Univ. J. Sci.* Vol. 62, No. 2, pp. 69-73, July, 2014.
 5. Kamruzzaman, Mohammad Wahiduzzaman, Mahmud Alam, M. Ferdows, **Md. Motaleb Hossain** & Raushan Ara Quadir “**Numerical Solution of Fluid Flow Through A Rotating Rectangular Straight Duct With Magnetic Field**”, *International Journal of Mechanical Engineering (IJME)* Vol.2, Issue 2, pp. 69-86, May, 2013.
 4. M.A. Samad, Sajid Ahmed, **Md. Motaleb Hossain**, “**MDH Heat and Mass Transfer Forced Convection Flow Along a Stretching Sheet with Heat Generation, Radiation and Dissipation**”, *Dhaka Univ. J. Sci.* Vol. 59, N. 2, pp. 201-208, July, 2011.
 3. **Md. Motaleb Hossain**, “**Analysis of Instantaneous Unit Hydrograph Parameters**”, *Dhaka Univ. J. Sci.* Vol. 59, N. 2, pp. 217-221, July, 2011.
 2. M. Ferdows, **Md. Motaleb Hossain**, S. Sivasankaran and Masahiro OTA, “**Steady heat transfer boundary layer solutions of polar fluid**”, *Int. Review of Mechanical Engineering*, Vol. 4, N. 2, pp. 185-187, 2010.
 1. **Md. Motaleb Hossain**, “**Sensitivity Analysis of Physiographic Parameters**”, *Dhaka Univ. J. Sci.* Vol. 58, No. 1, pp. 79-84, January, 2010

Book: Chapter 2

1. Kazuhisa A. Chikita, Yoshitaka Sakata, Shingo Mayeda, Yuichi Nishimura and **Md. Motaleb Hossain** “**Coastal Lagoons Hydrologically Controlled by Groundwater Outflow to the Ocean: The Role of Tsunami Deposits**”, In book: *Coastal Lagoons: Geology, Characteristics and Diversity*, Chapter: 2, Publisher: NOVA Science Publishers, Inc., August 2016

Conference

10. Khadiza Akter Mitu, **Md. Motaleb Hossain**, Md. Mubarak Hossain, “**Development of Rainfall-Runoff Model for Northeast Region of Bangladesh**”, 20th International Mathematics Conference, Bangladesh (December 2017) [Poster presentation]
9. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Yoshitaka Sakata and Shingo Mayeda “**Sediment-loading processes in a forested catchment influenced by slope failure: Modelling**” Limnology Conference, Hokkaido, Japan (December 2015)
8. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Yoshitaka Sakata and Shingo Mayeda “**Sediment-loading processes in a forested catchment accompanied by slope failure**” Hydrologic Conference, Akita, Ishikawa (November, 2015)
7. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Wataru Iwasaka and Takuto Miyamoto “**Sediment loading processes in a geologically active and forested catchment**” JpGU Meeting Makuhari Chiba, Japan (May 2015)
6. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Wataru Iwasaka and Takuto Miyamoto “**Sediment loading processes in a tectonic and forested catchment (2)**”, Limnology Conference, Hokkaido, Japan (December 2014)

5. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Wataru Iwasaka and Takuto Miyamoto “**Sediment loading processes in a tectonic and forested catchment**” Hydrologic Conference, Noto, Ishikawa (December, 2014)
4. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Wataru Iwasaka and Takuto Miyamoto “**Sediment loading processes in a tectonic and forested catchment facing a coastal region**” Asia Oceania Geoscience Meeting, Sapporo, Hokkaido, Japan (July 2014)
3. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Wataru Iwasaka and Takuto Miyamoto “**Sediment-loading processes in a tectonic and forested catchment: field observations and modelling**” JpGU Meeting, Yokohama, Japan (April 2014)
2. **Md. Motaleb Hossain**, Kazuhisa A. Chikita, Wataru Iwasaka and Takuto Miyamoto “**Sediment-loading processes in a forested catchment: field observations and modelling**” Limnology Conference, Hokkaido, Japan (December 2013)
1. **Md. Motaleb Hossain**, Kazuhisa Chikita, Abdullah Mamun, Wataru Iwasaka, “**Modeling river sediment load from a coastal forested catchment**”, JpGU 2013 meeting, Makuhari Chiba, Japan (May 2013)[Poster presentation]

Teaching Experience

1. **Associate Professor**
March 22, 2018 to continue
Department of Mathematics
University of Dhaka, Bangladesh
2. **Assistant Professor**
March 31, 2011 to March 21, 2018
Department of Mathematics
University of Dhaka, Bangladesh
3. **Lecturer**
February 11, 2007 to March 30, 2011
Department of Mathematics
University of Dhaka, Bangladesh
4. **Lecturer**
September 3, 2006 to February 10, 2007
School of Business,
Asian University of Bangladesh (AUB).

Computer Programing

FORTRAN, Mathematica, SWAT (Soil Water Assessment Tool) Model

References

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