

## BIOGRAPHICAL SKETCH

Name: DR. AMLAN DAS

Designation: Professor

Address (office): Department of Civil Engineering  
National Institute of Technology  
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Date of birth: October 26, 1960

Place of birth: Fenua, Addabazar, Comilla, Bangladesh

Date of migration to India: March 23, 1964

Citizenship: Permanent citizen of India

Family: Single earning member of the family. A school teacher's second son.  
Two brothers and one sister. Four members in the family with wife,  
two daughters, and self.

Hobby: To take up new research studies and try to see the end of the research in the form  
of a journal paper in a reputed journal.

Aim of life: To become a good human being, a good researcher, and a good teacher.

Education:

Degree/Diploma	Institution	University	Year
Bachelor of Engineering in Civil Engineering	Jalpaiguri Government Engineering College, Jalpaiguri, West Bengal, India	North Bengal University	1983
Master of Science by Research in Civil Engineering	Indian Institute of Technology Madras, Madras – 600036 Tamil Nadu, India	Indian Institute of Technology Madras	1987
Post Graduate diploma in Operations Research in Industry and Business Management	Regional Engineering College Durgapur, (recently, National Institute of Technology, Durgapur, Durgapur – 713209	Burdwan University	1987
Doctor of Philosophy in Civil Engineering	Indian Institute of Technology Kanpur, Kanpur – 208016 Uttar Pradesh, India	Indian Institute of Technology Kanpur	1997

M.S. Thesis: “A study on spatially varied flow over broad crested side weir” (Thesis Supervisor: Dr. B. S. Thandaveswara).

Ph.D. Thesis: “Development of nonlinear optimization based single and multiple objective management models for transient 3-D density dependent seawater intrusion in coastal aquifers” (Thesis Supervisor: Dr. Bithin Datta).

Professional career:

Sl. No.	Name of the organization / department	Position	Year of joining
1.	Department of Civil Engineering, National Institute of Technology Durgapur (formerly, Regional Engineering College Durgapur)	Lecturer	1986
2.	Department of Civil Engineering, National Institute of Technology Durgapur	Senior Grade Lecturer	1992
3.	Department of Civil Engineering, National Institute of Technology Durgapur	Assistant Professor	1998
4.	Department of Civil Engineering, National Institute of Technology Durgapur	Professor	2006

Department: It offers B. Tech course in Civil Engineering and M. Tech course in Structural Engineering.

Subjects taught : Systems Engineering (M.Tech. Structural Engineering)  
 Hydrology and Irrigation Engineering (B.Tech. C.E.)  
 Water Resources Engineering (B.Tech. C.E.)  
 Open Channel Flows (B.Tech. C.E.)  
 Hydraulic Structures (B.Tech. C.E.)  
 Computer Methods in Civil Engineering (B.Tech. C.E.)  
 Systems approach to Civil Engineering (B.Tech. C.E.)  
 Construction Planning and Management (B.Tech. C.E.)  
 Estimating and Valuation (B.Tech. C.E.)  
 Building Materials and Construction (B.Tech. C.E.)  
 Surveying – I (B.Tech. C.E.)  
 Fluid Transients (B.Tech. M.E. and Ch.E.)  
 Elementary Civil Engineering (B.Tech. M.E.)  
 Civil Engineering Drawing (B.Tech. C.E.)  
 Surveying Practical (B.Tech. C.E.)  
 Surveying Project (B.Tech. C.E.)  
 Civil Engineering Laboratory – I (Concrete) (B.Tech. C.E.)  
 Project and Thesis (B.Tech. C.E.)

M.Tech Thesis supervised:

Sl. No.	Candidate	Thesis Title	University	Year
1.	Mr. Santanu Mitra	"Development of nonlinear programming based optimization model for minimum weight elastic design of portal frame with built-up I-section"	University of Burdwan	1999
2.	Mr. Subhasish Das	"Development of nonlinear optimization based model for elastic design of built-up I-section steel column"	University of Burdwan	2000
3.	Mr. Sujay Datta	"Minimum cost design of some elementary reinforced cement"	University of Burdwan	2001

		concrete structural cross sections"		
4.	Mr. Nabin Chandra Das	"Development of chance constrained optimization based model for minimum weight elastic design of portal frame by using built-up I-section in steel"	National Institute of Technology, Durgapur	2006

Administrative experience: Completed two years tenure as Head (Chair) of Civil Engineering Department in August 2007.

Contribution to the Institute: Developed a versatile fixed bed open channel flow set up.

Service to Nation: Subject Expert for accreditation by National Board of Accreditation for various Civil Engineering Education Programs of Indian Technical Educational Institutes. Consultancy services free of cost.

Ph.D. Examinership: Acted as external examiner for a Ph.D. thesis submitted in Civil Engineering of Shivaji University, Kolhapur in 2002-2003.

Peer reviewership: Jl. of Irrigation and Drainage Engineering, ASCE,  
 Jl. of Hydraulic Engineering, ASCE,  
 Jl. of Hydrologic Engineering, ASCE,  
 Jl. of Hydrology, Elsevier  
 Jl. of Hydraulic Research, IAHR,  
 Jl. of Hydraulic Engineering, ISH,  
 Jl. Water Resources Management, Springer,  
 Water Management  
 Advances in Water Resources, Elsevier,  
 Advances in Engineering Software, Elsevier Science Ltd.,  
 Hydrological Processes, Wiley  
 Scientia Iranica, Sharif University of Technology, Iran  
 Water Management Journal, Proc. Of Instt. Of Civil Engineers,  
 Thomas Telford Ltd., London

Book reviewership: Concrete Technology by M. L. Gambhir, TMH, New Delhi  
 Prestressed Concrete by Krishna Raju, TMH, New Delhi

Research and Development Projects:

Sl.	Title of the Project	Funding	Year of funding	sanctioned
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No.		Agency		amount
1.	"Optimal control of seawater intrusion in coastal aquifers",	Ministry of Human Resource Development, Govt. of India.	2000	Rs 3,00,000=00
2.	DST-FIST Project – 2006	Ministry of Science and Technology, Govt. of India	2007	Rs 55,00,000=00

Awards: Union Ministry of Water Resources: Department of Irrigation Medal for the year 2000-2001 for publication of the paper - Das, A., Gaur, Y.K., Chaubey, A., Veena, (Ms) S.N., and Khati, J.S. (2001), "Parabolic channel design", Jl. of the Institution of Engineers (India), 81 (CV4), 174-181.

“Best Reviewer 2012”, Journal of Irrigation and drainage Engineering, ASCE

Who's Who: Marquis Who's Who in Science and Engineering  
Marquis Who's Who in the World  
Marquis Who's Who in the Asia

Ongoing research : Development of simulation models for density dependent seawater intrusion in coastal aquifers, Development of methodologies for linking simulation models in management models for density dependent seawater intrusion in coastal aquifers.

Areas of Interest: Simulation and management of density dependent seawater intrusion in coastal aquifers, Simulation and management of variably saturated flow through porous media, Muskingum models in channel flow routing, Open channel flows, Nonlinear optimization, solution of polynomial equation, parameter estimation, chance constrained optimal design.

Publications in Journals:

1.	Das, A. (1997), “Spatially varied flow over an embankment side weir”, Jl. of Irrigation and Drainage Engineering, ASCE, 123(4), 314-317.
2.	Das, A. and Datta,B. (1999), “Development of multiobjective management models for coastal aquifers”, Jl. of Water Resources Planning and Management, ASCE, 125(2), 76-87.
3.	Das, A. and Datta,B. (1999), “Development of management models for

	sustainable use of coastal aquifers”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 125(3), 112-121.
4.	Das, A. and Datta,B. (2000), “Optimization based solution of density dependent seawater intrusion in coastal aquifers”, <i>Jl. of Hydrologic Engineering</i> , ASCE, 5(1), 82-89.
5.	Das, A. (2000), “Optimal channel cross section with composite roughness”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 126(1), 68-72.
6.	Das, A. (2000), “Optimization-based simulation and design of tile drainage systems”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 126(6), 381-388.
7.	Das, A. (2004), “Parameter estimation for Muskingum models”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 130(2), 140-147.
8.	Das, A. (2004), “Parameter estimation for flow in open-channel networks”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 130(2) 160-165.
9.	Das, A. (2007), “Flooding probability constrained optimal design of trapezoidal channels”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 133(1) 53-60.
10.	Das, A. (2007), “Optimal design of channel having horizontal bottom and parabolic sides”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 133(2) 192-197.
11.	Das, A. (2007), “Solution of specific energy and specific force equations”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 133(4), 407-410.
12.	Das, A. (2007), “Chance constrained optimization based parameter estimation for Muskingum models”, <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 133(5), 487-494.
13.	Das, A. (2008), “Chance constrained optimal design of trapezoidal channels”, <i>Jl. of Water Resources Planning and Management</i> , ASCE, 134(3), 310-313.
14.	Das, A. (2008), Closure on discussion of solution of specific energy and specific force equations by Amlan Das, August 2007, Vol. 133, No. 4, pp. 407-410, by Vatankhah, A.R., and Kouchakzadeh, S., <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 134(6), 880-882.
15.	Das, A. (2009), Closure on discussion of flooding probability constrained optimal design of trapezoidal channels by Amlan Das, January/February 2007, vol 133, No. 1, pp.53-60, by Bhattacharjya R.K. and Satish M.G., <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 135(1), 129-131.
16.	Das, A. (2010), ‘Discussion of “Applying Particle Swarm Optimization to Parameter Estimation of the Nonlinear Muskingum Model” by H.-J. Chu and L.-C. Chang, <i>Jl. of Hydrologic Engineering</i> , ASCE, 15(11),946-949.
17.	Das, A. (2011), “Critical channel dimensions for open channel transition design” <i>Jl. of Irrigation and Drainage Engineering</i> , ASCE, 137(11), 735-742.
18.	Das, A. (2010), “Cost and flooding probability minimization based design of HBPS channel”, <i>Water Resource Management</i> , Springer, 24:193-238, DOI 10.1007/s11269-009-9444-z.
19.	Das, A. and Datta,B. (2001), “Application of optimization techniques in groundwater quantity and quality management”, <i>Sadhana</i> , <i>Jl of the Indian Academy of Sciences Bangalore</i> , 26(4) 293-316.

20.	Das, A. and Datta, B. (2001), "Simulation of seawater intrusion in coastal aquifers: some typical responses", Sadhana, Jl of the Indian Academy of Sciences Bangalore, 26(4) 317-352.
21.	Das, A. (2009), "Reverse stream flow routing by using Muskingum models", Sadhana, Jl of the Indian Academy of Sciences Bangalore, Springer, 34(3) 483-500.
22.	Das, A. and Datta, B. (2000), "Simulation of transient seawater intrusion in coastal aquifers using optimization technique", Jl. of the Institution of Engineers (India), 81 (CV2, August), 45-52.
23.	Das, A., Gaur, Y.K., Chaubey, A., Veena, (Ms) S.N., and Khati, J.S. (2001), "Parabolic channel design", Jl. of the Institution of Engineers (India), 81 (CV4, February), 174-181.
24.	Das, A. and Mitra, S. (2003), "Minimum weight elastic design of rigid portal frames", Jl. of the Institution of Engineers (India), 84 (CV2, August), 130-135.
25.	Das, A., and Das, N.C. (2009), "Chance constrained bi-objective optimal design of portal frames", Jl. of the Institution of Engineers (India), 90 (November), 47-56.

Publications in Conferences:

1.	Das, A. and Datta, B. (1995), "Simulation of density dependent 2-D seawater intrusion in coastal aquifers using nonlinear optimization algorithm", Proc., American Water Resources Association, Annual Summer Symposium on Water Resources and Environmental Hazards: Emphasis on Hydrologic and Cultural Insight in the Pacific Rim, American Water Resources Association, Herndon, Va., 277-286.
2.	Das, A. and Datta, B. (1997), "Development of multiple objective nonlinear optimization models for management of transient density dependent seawater intrusion in three dimensional coastal aquifers", XIth congress of the APD-IAHR, Yogyakarta, Indonesia, Sept. 8-10, Faculty of Engineering, Gadjah Mada University, Jl. Grafika 2, Yogyakarta.
3.	Das, A. (2000), "Optimal design of open channels in closed-loop type networks", XIIth congress of the APD-IAHR, Water Engineering and Management Program, School of Civil Engineering, Asian Institute of Technology, P.O. Box 4, Klong Luang 12120, Pathumthani, Thailand.
4.	Das, A. (2000), "Solution of inverse problem for open channel in closed loop type network", HYDRO-2000, National Conference, REC-Kurukshetra, October, 6-8.
5.	Das, A. (2004), "Parameter estimation for reverse hydrologic routing of streamflow", ICON-HERP-2004, Int. Conf. on Hydraulic Engineering: Research and Practice, Deptt. of Civil Engineering, Indian Institute of Technology Roorkee, Roorkee, India, October 26-28, 389-400.
6.	Das, A. (2005), "NRBCG algorithm based solution of density dependent seawater intrusion in coastal aquifers", National Conference on "Advances in Water Engineering For Sustainable Development (NCAWESD-2005), Coordinator - Prof. S. Mohan and Prof. B. S. Murty, Environmental and Water Resources

	Engineering, Department of Civil Engineering, Indian Institute of Technology Madras, Chennai - 600036, India, May 16-17, 2005, 177-184.
7.	Das, A. (2005), "Alternate, initial and sequent depth computation", Proc. of the National Conference of Indian Society for Hydraulics HYDRO-2005, Hydraulics and Water Resources, Editor - Dr. T. Gangadharaiah and Dr. K. P. Shivananda, Department of Civil Engineering, Siddaganga Institute of Technology, Tumkur-572103, India, December 8-9,2005, 413-420.
8.	Das, A. and Das, S. (2005), "Optimum elastic design of built-up I-section steel column", Proceedings of the Structural Engineering Convention SEC-2005, Editors - J. M. Chandra Kishen and D. Roy, Department of Civil Engineering, Indian Institute of Science, Bangalore - 560012, December 14-16, 2005, India.
9.	Das, A. and Datta, S. (2005), "Optimum design of doubly reinforced cross sections", Proceedings of the Structural Engineering Convention SEC-2005, Editors - J. M. Chandra Kishen and D. Roy, Department of Civil Engineering, Indian Institute of Science, Bangalore - 560012, December 14-16, 2005, India.
10.	Das,A. (2007), "Alternate depths for parabolic channels", Proceedings of the International Conference on Civil Engineering in the New Millennium: Opportunities and Challenges, CENeM-2007, January 11-14, Deaprtment of Civil Engineering, Bengal Engineering and Science University, Shibpur, Howrah – 711103, West Bengal, India.
11.	Das,A. (2007), "Easy computation of critical and normal depths for trapezoidal channels", Proceedings of the International Conference on Civil Engineering in the New Millennium: Opportunities and Challenges, CENeM-2007, January 11-14, Deaprtment of Civil Engineering, Bengal Engineering and Science University, Shibpur, Howrah - 711103, West Bengal, India.
12.	Das, A. (2007), "Parameter estimation for Muskingum models", Proc. of the National Conference of Indian Society for Hydraulics HYDRO-2007, Hydraulics and Water Resources, Editors - Dr. P. L. Patel, Dr. B. K. Samtani, Dr. A. D. Ghare, and Dr. J. N. Patel, Department of Civil Engineering, Sardar Vallabhbbhai National Institute of Technology, Surat, Gujarat, India, December 21-22, 2007, 69-77.

Short Term Courses attended:

Sl. No.	Course Title	Organized By	Duration	Year
1.	Hydrology of urban areas	Deptt. of Civil Engg. IIT Madras	May 22 to June 04	1989
2.	Analysis, computation and management of floods	Deptt. of Civil Engg. IIT Madras	Dec. 03 to Dec. 16	1990
3.	Computational Hydraulics	Deptt. of Civil Engg. University of	June 17 to July 02	1991



		Roorkee		
4.	Systems techniques and computer applications in water resources	Deptt. of Civil Engg. IIT Kharagpur	June 30 to July 11	1997
5.	Optimization: theory and applications in engineering	Deptt. of Civil Engg. IISc Bangalore	Sept. 22 to Sept. 27	1997
6.	Expert system and artificial neural network applications in civil engineering	Deptt. of Civil Engg. IIT Kanpur	May 18 to May 22	1998
7.	Educational utilization of standards program on standardization, product certification and quality systems	BIS New Delhi and REC Durgapur at REC Durgapur	Feb. 09 to Feb. 10	2002
8.	Unsteady flow in open channels	Deptt. of Civil Engg. IIT Kanpur	Oct. 24 to Oct. 29	2005
9.	Erosion and sedimentation of river beds	Deptt. of Civil Engg. IIT Kharagpur	Nov. 21 to Nov. 26	2005
10.	Soft computing in civil engineering	Deptt. of Civil Engg. IIT Bombay	Jan. 02 to Jan. 06	2006
11.	The application of Geo-Information in national disaster management	Deptt. Of Civil Engg. And Deptt. Of Geology, NIT Durgapur	Mar.24.	2008
12.	Hydrologic impact of climate change and sustainable development	Deptt. Of Civil Engg., IIT Bombay	July 04 to July 05	2008
13.	Recent trends	Deptt. Of	July 21 to July	2008

	in earthquake structural dynamics and design	Mathematics, NIT Durgapur	23	
14.	Probability, Statistics and Optimization methods with applications	Deptt. Of Mathematics, NIT Durgapur	Jan. 19 to Jan. 30	2009

Workshop/Research and Development Session/Symposium attended:

Sl. No.	Course Title	Organized By	Duration	Year
1.	Water resources futures: next two decades	Deptt. of Civil Engg. IIT Kharagpur	Feb. 17 to Feb. 21	1987
2.	Lift irrigation	CBIP New Delhi	Apr. 23 to Apr. 25	1997
3.	4 <sup>th</sup> R and D Session of INCH	WALAMTARI, Himayat Sagar, Hyderabad	Jan. 17 to Jan. 18	2005
4.	High performance cement and fiber reinforced composites	Deptt. of Civil Engg. IISc Bangalore	Dec. 13	2005
5.	Design of foundations in seismic areas: Principles and some applications	Deptt. of Civil Engg. BESU Shibpur	Jan. 10	2007
6.	6 <sup>th</sup> R and D Session of INCH	WALAMTARI, Himayat Sagar, Hyderabad	Mar. 28 to Mar. 29	2007