Vivek Kumar Mehta

Contact Information	Department of Mechanical Engineering Tezpur University,	Phone: +91 3712 27 5869
	Tezpur, Assam, 784028	e-mail: vkmehta@tezu.ernet.in
Research Interests	Optimization : Classical and Evolutionary Algorithms, Multi-objective Optimization, Multi-modal Optimization Robotics : Parallel Manipulators Science Education	
Teaching Interests	Engineering Optimization, Robotics, Applied Computational Methods, Mechanisms and Machine Theory, Dynamics and Vibration.	
Education	Indian Institute of Technology, Kanpur, UP, India	
	Doctor of Philosophy, Mechanical Engineering	July 2006 – June 2013
	 CP1: 8.00 Dissertation Topic: Generation and Parametric Approximation of the Pareto-Set in Multi-Objective Optimization Advisor: Professor Bhaskar Dasgupta 	
	Master of Technology, Robotics, Mechanical Engineering	July 2003 – June 2005
	 CP1: 7.25 Dissertation Topic: A General Approach for Optimal Kinematic Design of 6-DOF Parallel Manipulators Advisor: Professor Bhaskar Dasgupta 	
	Bhilai Institute of Technology, Durg, CG, India	
	Bachelor of Engineering, Mechanical Engineering	${\bf August \ 1999-July \ 2003}$
	• Overall marks percentage -77% (with honours)	
Important courses taken	 During PhD: Engineering Optimization, Nonlinear Vibration. During M. Tech.: Introduction to Robotics, Applied Mathematical Methods, Computer Aided Design, Finite Element Methods. 	
Other academic distinction	Qualified GATE with 99.36 percentile and AIR 161 in 2003.	
PROFESSIONAL	Tezpur Central University, Assam, India	
EXPERIENCE	 Assistant Professor, September 2016 - Present. Courses Taught: Theory of Mechanisms and Machines, Dynamics and Vibration of Machinery, Applied Mathemaical Methods, Robotics, Optimization in Engineering Design, Engineering Me- chanics 	
	 Eklavya, Bhopal, Madhya Pradesh Fellow, April 2015 - September 2016. Contributing to science related components of Eklavya activities, <i>e.g.</i> Govt. school teacher's training, module development, writing articles, translations etc. 	
	Tezpur Central University, Assam, India	
	 Assistant Professor (Adhoc), August 2013 - June 2014. Courses Taught: Applied Computational Methods, Optimization in Engineering Design, Engineering Mechanics 	

Indian Institute of Technology, Kanpur, India

- Senior Project Associate (September 2005 June 2006)
- Teaching assistant for undergraduate and post graduate courses in mechanical engineering, including optimization, mathematical methods in engineering, introduction to robotics, mechanisms and machines theory, geometric modeling for CAD.
- Organizing member and tutor in several short term courses including scientific computing with MATLAB and mathematical methods in sciences and engineering.

PUBLICATIONS Mehta, V. K., and Dasgupta, B. "A multi-objective optimization method based on neldermead simplex search method". In Advances in Applied Mechanical Engineering. Springer, 2020, pp. 655–668.

Mehta, V.K., "Improved neldermead algorithm in high dimensions with adaptive parameters based on chebyshev spacing points", Engineering Optimization, DOI:10.1080/0305215X.2019.1688315, 2019.

Mehta, V.K. and Dasgupta, B., "Parametric Approximation of the Pareto Set in Multi-Objective Optimization Problems", *Journal of Multi-Criteria Decision Analysis*, Vol. 21(5-6), pp. 335-362, 2014.

Dasgupta, B., Kotha, D., Mehta, V.K. and Deb, K. "RePAMO: Recursive perturbation approach to multi-modal optimization", *Engineering Optimization*, Vol. 45(9), pp. 1073-1090, 2013.

Mehta, V.K. and Dasgupta, B., "A constrained optimization algorithm based on the simplex search method", *Engineering Optimization*, Vol. 44(5), pp. 537-550, 2012.

Mehta, V.K. and Dasgupta, B., "A general approach for optimal kinematic design of 6-DOF parallel manipulators", *Sādhanā, Academy Proceedings in Engineering Sciences*, Vol. 36 (6), pp. 977-994, 2011.

INVITED TALKS "On the Modifications of Nelder-Mead's Simplex Search Method". Department of Mechanical Engineering, IIT Kanpur (June 03, 2019).

POPULAR SCIENCE जेम्स बांड की दौड़ और स्नेल्स लॉ (James Bond's Race and Snell's law), Sandarbh, issue 94, September-WRITINGS October, 2014.

संतुलन या असंतुलन (Balance or imbalance), Sandarbh, issue 97, March-April, 2015.

औसत की अवधारणा (The concept of average), Sandarbh, issue 99, July-August, 2015.

लाईनों का नामकरण (On Naming Lines), Sandarbh, issue 104, May-June, 2016.

गति के ग्राफ और लाईनें - I (Lines and Graphs of Motion - I), Sandarbh, issue 105, July-August, 2016.

गति के ग्राफ और लाईनें - II (Lines and Graphs of Motion - II), Sandarbh, issue 106, September-October, 2016.

कम से कम या ज्यादा से ज्यादा (Minimization and Maximization), Sandarbh, issue 122, May-June, 2019.

TRANSLATEDसममिति में गणितिय क्या है? (What is Mathemaical about Symmetry?), Sandarbh, issue 96, January-
WORKSWORKSFebruary, 2015.

बायोफ़िल्म् : जीवाणुओं का सामुदायिक व्यवहार (Biofilms: Community Behavior by Bacteria), Sandarbh, issue 96, January-February, 2015.

अंतरिक्ष खोजी यान रोजेटा फिले का मिशन (The Rosetta-Philae Comet Mission as Physics Appreciation), Sandarbh, issue 103, March-April, 2016.

मौत से पहले के वो 20 मिनिट (20 Minutes to Death), Sandarbh, issue 104, May-June, 2016.

कैसे बदलती है ऊर्जा पदार्थ में? (How energy becomes matter?), Sandarbh, issue 106, July-August, 2016.

भावनाएँ व आंसूँ - रोजेटा का श्रांत अंत? (Emotion and tears in mission control as Rosetta came to a silent end), Sandarbh, issue 108, January-February, 2017.

नव-उदारवाद के राज में भारतीय कृषि (India's Peasantry Under Neoliberal Rule), RUPE, issue 66-67, October-November, 2017.

एल्गोरिथम यानी कलन-विधियों का दुष्प्रभाव (The Harmful Effects Of Algorithms), Sandarbh, July-August, 2018.

OTHER PUBLISHED चाय बागानों के आस-पास की दुनिया (Life in and around tea gardens), Sandarbh, issue 85, March-April WRITINGS 2013

डोमखाना के बगल में, Sandarbh, issue 95, November-December, 2014 जन्नत के बच्चे (Children of heaven). Chakmak, April, 2009.

General • Date of Birth – April 7, 1981

INFORMATION

Date of Birth – April 7, 198
Marital Status – Married