

PRABIR MUKHOPADHYAY

Associate Professor, Design Discipline,

Indian Institute of Information Technology Design and Manufacturing Jabalpur

Dumna Airport Road, Jabalpur-482005.Madhya Pradesh, INDIA. Phone (0761)-279 4311.

email: prabirdr@gmail.com, prabirat@gmail.com

Education

University of Limerick, Ireland (2002-2004)

PhD in Industrial Ergonomics from the Department of Manufacturing and Operations Engineering (now Department of Design and Manufacturing Technology).

Recipient of the European Union MIRTH Scholarship

University of Calcutta, India (1991-1993)

MSc in Physiology with specialization in Ergonomics and Work Physiology

University of Calcutta, India (1988-1991)

BSc (Honors) in Physiology

Professional experience

Associate Professor, Indian Institute of Information Technology Design & Manufacturing (IIITDM), Jabalpur, India (July 2013 - Present)

- Teach Ergonomics to Undergraduate and Postgraduate Design Students
- Guide Bachelor, Masters and PhD students in design towards their thesis
- Conduct research projects
- Consultancy Project management
- *Administrative responsibility as Head Design Discipline from September 2015 till 23rd January 2025.*

Assistant Professor, Indian Institute of Information Technology Design & Manufacturing (IIITDM), Jabalpur, India (May 2010 - July 2013)

- Teach Ergonomics to Undergraduate and Postgraduate Design Students
- Guide Bachelor and Masters students in design towards their thesis
- Consultancy Project management

Associate Senior Faculty, National Institute of Design (NID), Postgraduate campus, Gandhinagar, India (Nov. 2004 - April 2010)

- Teach Ergonomics to Undergraduate and Postgraduate Design Students
- Guide Bachelor and Masters students in design towards their short and long-term projects
- *Administrative responsibility as Head of Software and User Interface Design, Discipline (2006-2009)*

Research Assistant, University of Limerick (UL), Ireland (Jan. 2002 - Dec.2004)

- Taught laboratory and tutorials in work-study and operations management to second-year Production Management and Manufacturing Systems students.
- Taught occupational ergonomics to 4th year Manufacturing Engineering and taught postgraduate students of Safety and Ergonomics.
- Pursue my Doctoral Research

Adjunct Faculty, National Institute of Design (NID), Ahmedabad, India (Jan. 2000 - Dec. 2001)

- Teach Ergonomics to Undergraduate and Postgraduate Design Students
- Guide Bachelor and Masters students in design towards their short and long-term projects
- Consultancy Project management

Delivered expert lectures on Ergonomics at:

- National Institute of Design (NID), Ahmedabad, Gandhinagar, Kurukshetra and Amravati, India
- National Institute of Fashion Technology (NIFT), Jodhpur, New Delhi, India
- Delhi Technological University, India
- School of Planning and Architecture (SPA), Bhopal, India
- National Institute of Fashion Technology (NIFT), Delhi, India

Research Supervision:

- Supervised more than twenty-five Master of Design students towards their Master's Thesis till date
- Supervised more than forty Bachelor of Design students towards their final year Bachelors Thesis and in house Design Projects
- PhD Supervision: One student has completed his PhD. Three PhD students are pursuing their thesis.

Consultancy Project Management (at National Institute of Design and at Indian Institute of Information Technology Design and Manufacturing Jabalpur).

IIT KANPUR (2021)

Consultant on the SEG on Rural Craft and Artisans Development & Rural Industrialization and Entrepreneurship Development operating under the larger umbrella of Unnat Bharat Abhiyan. Developed a craft manual for the artisans on ergonomic issues in the craft sector.

INDIAN NAVY (2015)

Classified project for the Indian Navy

SELF-EMPLOYED WOMEN'S ASSOCIATION (SEWA), AHMEDABAD, INDIA (2001)

Worked as Ergonomist and Project Head in a consultancy research project on "Ergonomic Study for the Improvement of Working Efficiency of the Agarbatti (incense sticks) Workers".

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO) (2000)

Provided Ergonomics consultancy on a project on "Ergonomic Study on the Hand Block Printers of Jaipur".

INDIAN RAILWAYS (1999)

Provided ergonomics consultancy (as one of the team members) in a project on "Ergonomic and Architectural Design Improvements of Light Machine Shop Floor" of the Diesel Locomotive Works, Varanasi.

Research Projects

Indian Institute of Information Technology Design and Manufacturing (IIITDM), Jabalpur, India (August 2020- continuing)

- Principal Investigator in the project titled "Ergonomic Intervention in the classroom" Environment for Enhanced Learning, Sponsored by National Council of Educational Research and Training, Government of India.

**National Institute of Design (NID), Post Graduate Campus, Gandhinagar, Gujarat
(January 2008- December 2009)**

- Project Head in the project titled: Ergonomic analysis of some craft sectors of Jaipur. Sponsored by Ford Foundation-NID research grant.

**Ergonomics Laboratory, Department of Physiology, Calcutta University
(August 1994- December 1997)**

- Junior Project Fellow on the project titled "Assessment of impact of Hot Hazardous Working environment on Industrial and Agricultural Workers and Development of Ergonomically designed Personal Protective Devices". Sponsored By the Ministry of Environment and Forests, Government of India.
- Researcher in the project "A Pilot Study on Ergonomic Evaluation on a Newly Designed regenerative Break Developed for the Cycle Rickshaw" in collaboration with Mechanical Engineering Department, Indian Institute of Technology (IIT) Kanpur, India.

Selected Publications

BOOKS

1. Mukhopadhyay, P. (2019). Ergonomics for the Layman: Applications in Design. CRC Press. ISBN 9780367334994.
2. Mukhopadhyay, P. (2022). Ergonomics Principles in Design: An Illustrated Fundamental Approach. CRC Press. ISBN 9781003302933
3. Mukhopadhyay, P. (2022). Ergonomics in Fashion Design: A Laypersons Approach. Springer Nature, Singapore. ISBN 978-981-19-4533-5
4. Mukhopadhyay, P. (2022). Visual Ergonomics for Communication Design: A Laypersons Approach. CRC Press. ISBN 9781032436876
5. Mukhopadhyay, P. (2023). Application of Ergonomics in Handicraft: A Laypersons Approach. Springer Nature. ISBN 978-981-99-1062-5.
6. Mukhopadhyay, P. (2023). Human Factors in Tourism: A Laypersons Approach. Springer Nature. ISBN 978-981-99-7065-0.
7. Mukhopadhyay, P. (2024). Human Factors in Performing Arts: A Layperson's Approach. CRC Press. ISBN-10 : 1032826916

BOOK CHAPTER

1. Mukhopadhyay, P., & Vinzuda, V. (2019). Ergonomic Design of a Driver Training `Simulator for Rural India. In *Advanced Methodologies and Technologies in Artificial Intelligence, Computer Simulation, and Human-Computer Interaction* (pp. 293-311). IGI Global.
2. Mukhopadhyay, P. (2017). Investigation of Ergonomic Risk Factors in Snacks Manufacturing in Central India: Ergonomics in Unorganized Sector. In *Handbook of Research on Human Factors in Contemporary Workforce Development* (pp. 425-449). IGI Global.

JOURNALS

1. Gaurav Patel & Prabir Mukhopadhyay (2023) Effect of color on the comprehensibility of pesticide pictograms by the agricultural workers in Central India, *Human and Ecological Risk Assessment: An International Journal*, 29:7-8, 1152-1162.
2. Patel, G., & Mukhopadhyay, P. (2023). Farmers Interpretation of Pesticides Pictograms and Their Adherence to Different Ergonomic Principles for Different Sizes. *Journal of Agromedicine*, 28(4), 647-655.
3. Patel, G., & Mukhopadhyay, P. (2022). Comprehensibility evaluation and redesign of safety/warning pictograms used on pesticide packaging in Central India. *Human and Ecological Risk Assessment: An International Journal*, 28(1), 22-42.
4. Patel, G., & Mukhopadhyay, P. (2021). Ergonomic analysis and design intervention in symbols used in hospitals in central India. *Applied Ergonomics*, 94, 103410.
5. Prabir Mukhopadhyay & Durwesh Jhodkar (2020) Tire Tread Removing Units in Central India: Risk Factors and Potential Interventions, *IISE Transactions on Occupational Ergonomics and Human Factors*, 8:4, 204-208.
6. Prabir, Mukhopadhyay, Vinzuda Vipul, Govekar Krishnakumar, And S. Nirmay. "Ergonomic Evaluation And Re-Design Of A Camel-Drawn Public Transport System." *Journal Of Human Ergology* 46, No. 2 (2017): 47-58.
7. Mukhopadhyay P, Vinzuda V, Dombale S, Deshmukh B. Ergonomic Analysis and Design of the Console Panel of a Bus Rapid Transit System in a Developing Country. *The Design Journal*. 2016 Jul 3;19(4):565-83.
8. Mukhopadhyay, P., Khan, A, 2015, The evaluation of ergonomic risk factors among meat cutters working in Jabalpur, *International Journal of Occupational and environmental Health*, 21, 192-198.
9. Mukhopadhyay, P., Jhodkar, D., Kumar, P., Ergonomic Risk Factors at Bicycle Repairing Units at Jabalpur,2015, *WORK: A Journal of Prevention, Assessment, and Rehabilitation*. 51, 245-254.

10. Mukhopadhyay P, Vinzuda V, Naik S, Karthikeyan V, Kumar P. Ergonomic Analysis Of A Horse-Drawn Carriage Used For A Joy Ride In India. *Journal of Human Ergology*. 2014;43(1):29-39.
11. Mukhopadhyay, P., Kaur, J., Kaur, L., Anupriya, A., Kajabaje, M., Jyoti, M., Vallerie, V., Gopal, A., Akshan, I., Pochont, R., Chajkravarty, S ,2013, Ergonomic design analysis of some road signs in India, , *Information Design Journal*, 20, 220-227, John Benjamins Publishing Company.
12. Mukhopadhyay, P., Sajjan, S., 2013, Ergonomic design intervention at an Interactive Voice Response (IVR) system in a developing country, *Information Design Journal* 20,148–160. John Benjamins Publishing Company.
13. Mukhopadhyay, P., Kaur, J. , Kaur, L.,2013, Ergonomic Design Issues In Icons Used in Digital Cameras in India, *International Journal of Art, Culture and Design Technologies*, 3,51-62. IGI Global.
14. Mukhopadhyay, P., Vinzuda, V., Sriram, R., Doiphode, A., 2012, Ergonomic analysis of a traditional vehicle plying in rural and semi-urban areas in western India, *Journal of Human Ergology*, 41, 83-94.Ergonomics Society Japan.
15. Mukhopadhyay, P., Srivastava, S., 2010, Ergonomic risk factors in stone carving units of Jaipur, *WORK: A Journal of Prevention, Assessment, & Rehabilitation*, 35, 87-99, IOS Press, The Netherlands.
16. Mukhopadhyay, P., Srivastava, S.,2010, Ergonomic design issues in some craft sectors of Jaipur, 13,99-124,*The Design Journal*, Berg Publishers, UK.
17. Mukhopadhyay, P., Srivastava, S.,2010, Ergonomic risk factors in some craft sectors of Jaipur, *Ergonomics Australia*, 24 ,04-14, Ergonomics Society of Australia.
18. Mukhopadhyay, P., O' Sullivan, L.W., Gallwey, T., 2009, Upper limb discomfort profile due to intermittent isometric pronation torque at different postural combinations of the shoulder arm system. *Ergonomics*, 52,584-600. Taylor and Francis, UK.
19. Mukhopadhyay, P., 2009, Ergonomic design of head gears for use by rural youths in summer, *WORK: A Journal of Prevention, Assessment, & Rehabilitation*, 34,431-438, IOS Press, The Netherlands.
20. Mukhopadhyay, P., Ghosal, S., 2008, Ergonomic design intervention in manual incense sticks manufacturing, *The Design Journal*, 11, 65-80. Berg Publisher, UK.
21. Mukhopadhyay, P., 2008, Risk factors in manual brick manufacturing in India, *Ergonomics Australia*, 22, 16-25. Ergonomics Society of Australia.
22. Mukhopadhyay, P., 2008, Time of day effect on performance at a user interface, *Multi: Journal of Diversity and Plurality in Design*, 1, 36-44. Rochester Institute of Technology, USA.
23. Mukhopadhyay, P., O' Sullivan, L.W., Gallwey, T., 2007, Estimating upper limb discomfort level due to intermittent isometric pronation torque with various combinations of elbow angles, forearm rotation

angles, force and frequency with upper arm at 90 degree abduction, International Journal of Industrial Ergonomics, 37, 313-325. Elsevier, UK.

24. Mukhopadhyay, P., O' Sullivan, L.W., Gallwey, T., 2007, Effect of upper arm articulations on shoulder arm discomfort profile in a pronation task, Occupational Ergonomics, 7,169-181. IOS Press, The Netherlands.
25. Mukhopadhyay, P., 2007, Heat stress in industry: A problem in India, Asian-Pacific Newsletter on Occupational Health and Safety, 14, 12-13. Finish Institute of Occupational Health.
26. Mukhopadhyay, P., 2006, Beyond the horizon, Ergonomics in Design, 14, 4-5. Human Factors Ergonomics Society, USA.
27. Mukhopadhyay, P., 2006, User study: Some problems in India, Ergonomics Australia, 20, 14-17. Ergonomics Society of Australia.

PAPER PRESENTED AT CONFERENCES

1. Mukhopadhyay, P., Vinzuda, V., Suvarnam, T., Lakhtar, N.,2018.Use of Low Cost Tools in Ergonomic Research of Mobile Restaurants in Western India. Paper presented at the VIII European Congress of Methodology, University of Jena, Germany, 25-27 July, 2018.p 206.
2. Mukhopadhyay, P., Nigam, S.2016, Humanizing the digital sphygmomanometer interface for rural India. Paper presented at the 2nd International Conference on Control Science and Systems Engineering (ICCSSE), Nanyang Technological University, Singapore, 27-29.July.
3. Mukhopadhyay, P.2015, User-study some problems in India, Paper presented at the VI Conference of the European Survey Research Association (ESRA), University of Iceland, Reykjavik, ICELAND.
4. Mukhopadhyay, P.,2014, Challenges of collecting data from human subjects in India, Paper presented at the VI European Association of Methodology (EAM) Congress, University of Utrecht, The Netherlands,156.
5. Mukhopadhyay, P., Vinzuda, V., Gohil, S., Sonavaria, M., 2012, Systems Ergonomic analysis of a women's special bus in India, Paper presented at the European Meeting of Cybernetics and Systems Research, University of Vienna. 226-227
6. Mukhopadhyay, P., Das, S.,2005, Pilot ergonomic study on fabric washing in textile hand block printing unit in Jaipur, Paper presented at the International Conference on Humanizing Work and Work Environment(HWWE2005), Indian Institute of Technology Guwahati. 698-703.
7. Mukhopadhyay, P., 2005, Postural issues in hand block printing, Proceedings of the seminar, " Indian craft, future in a globalizing world", held at National Institute of Design, Paldi, Ahmedabad, p36.Abstract only.

8. Mukhopadhyay, P., Das, S., 2005, Pilot ergonomic study on fabric washing in textile hand block printing unit in Jaipur, in Proceedings of the International Conference on Humanizing Work and Work Environment(HWWE2005), held at Indian Institute of Technology, Guwahati, 698-703.
9. Mukhopadhyay, P., Gallwey, T., and O'Sullivan, L.W., 2003, Effect of grip force and shoulder abduction angles in repetitive clockwise forearm pronation/supination movements, in Proceedings of the International Annual Occupational Ergonomics and Safety Conference, 7th - 9th May, Munich, 81-88.
10. Mukhopadhyay, P., Gallwey, T., and O'Sullivan, L.W., 2003, Effect of combined grip force and forearm supination torque on discomfort for abduction at prone/supine angles, in Proceedings of Irish Ergonomics Review, 12 June, NUI Galway, Ireland, 7-12.
11. Sen, R.N., Das, S., Mukhopadhyay, P., Sen, A., 1995, A new Ergonomic Head Gear for the Agricultural workers to protect against solar radiations and rains. Proceedings of the First Congress of Federation of Indian Physiological Societies (FIPS), held at CGO complex, New Delhi, 1-3 March, p59. Abstract only.
12. Sen, R.N., Das, K., Basu, K., Mukhopadhyay, P., 1996, ergonomically designed anti-mosquito clothing for agricultural workers. Proceeding of the Second International Symposium on Ergonomics, Occupational Health, Safety and Environment, (2nd ISE-OH-SE) held at CGO Complex, New Delhi, 25-28 Nov, P6 (4). Abstract only.

Professional associations

Member, Advisory Board, Centre for Creative Cognition, SR University, Warangal