



CURRICULUM VITAE

NAME: DR. SHEK MOHAMMED RAUF IQBAL

DESIGNATION: Associate Professor

ORGANIZATION: National Institute of Industrial Engineering (NITIE), Mumbai, INDIA

DATE OF BIRTH: 1st August 1968

FIELD OF SPECIALIZATION: Ergonomics and Human Factors Engineering

AREAS OF RESEARCH INTEREST:

- Ergonomics and Human Factors Engineering
- Work System Design
- System Safety and Human Factors
- Human dimensions and workplace design
- Biomechanics of human modelling

EDUCATIONAL QUALIFICATIONS:

Exam passed	Year of passing	Period of Study		Class / % of marks	University / Board	Subject of specialization
		From	To			
Ph.D.	2001	1997	2001	Awarded	Vidyasagar University, West Bengal, India	Ergonomics and work Physiology
MSc	1991	1989	1990	62.6	Calcutta University	Ergonomics and Work Physiology
BSc. (Hons)	1988	1986	1988	54.4	Calcutta University	Human Physiology
HSE (12 th Standard)	1985	1983	1885	54.7	WBCHSE	Physics, Chemistry, math and Bio Science
Madhyamik (10 th Standard)	1983	1978	1984	65.9	WBBSE	Physics, Math, Life Sc, Geo, Hist, English, Bengali

PROFESSIONAL EXPERIENCE (As on Nov 2019): 20 years+

AWARDS AND RECOGNITION:

- Prof. S. R. Maitra Memorial Gold Medal and Certificate on M.Sc result (Topper in Ergonomics) of University

RESEARCH EXPERIENCE:

PhD/Doctoral level Thesis guidance completed:

Sr. No	Name of the student	Thesis title	Year of completion
1	Mr. Ishant Gupta	Ergonomic study of backpack carriage by school children	2018
2	Ms. Arundhati Guha Thakurta	Impact of Load Carriage on Lower Extremity Biomechanics of Construction Workers Engaged in Manual Handling of Loads	2017
3	Mr. N Girish	Lifting capacity among Manual Material Handlers using Progressive Isoinertial Lifting Evaluation	2017
4	Ms. Shreya Maulik	A Study on Work-Related Musculoskeletal Problems among Medical Laboratory Technicians	2017
5	Ms. Shweta S. Phadke	Occupational Health Profile of Traffic police – Ergonomic Perspective	2016
6	Ms. Wricha Mishra	A Study on Occupational Disorders (Playing Related Musculoskeletal Disorders) of Indian Percussionists (Tabla Players)	2015
7	Ms. Sanchita Ghosh	A study on Cardio-respiratory Fitness status and Body Composition Profile of Indian sedentary adult males working in service and manufacturing sectors.	2012

PhD students at present:

- Presently 5 PhD students are working under me.

Guide of Post Graduate students

- Guiding post graduate students of NITIE and other Institutes/ Universities in the area of Ergonomics and Human factors Engineering, Work systems Design

PhD Thesis examiner:

1. “The incidence of Musculoskeletal Disorders and the influence of Stakeholders on the perception of Physical Disability in the Nigerian Quarry Mining Context”.by VICTOR AFAMEFUNA EGWUONWU, Rhodes University, South Africa.

2. “A study on Design-Ergonomics with special reference to Motorcycles used for commuting”, by Shri V Sai Praveen, IIT Bombay, India
3. “Design and fabrication of Hospital Bed to Reduce Pressure Ulcer” by Shri Sachin S Shinde, COE Pune, India.
4. “Writing Skills of children with Dysgraphia” by Ms. Roma Ganghi, SNTD Women’s University, Mumbai
5. “Physiological evaluation of manual handling of low loads at high frequency”, by Shri Rajesh Kumar, Punjab Engineering College University, Chandigarh, India.
6. “Study of Hand arm vibration exposure of Indian Male workers”, by Shri Siddhartha Saha, Punjab Engineering College University, Chandigarh, India.
7. “Study of Trunk Muscle Fatigue during Dynamic Lifting and Lowering” by Shri Arvind Kumar, Punjab Engineering College University, Chandigarh, India.
8. “Evaluation of Cognitive skills and motor abilities of Primary School Children” by Shri Sourav Manna, Vidyasagar University, West Bengal, India

Funded Projects / surveys completed:

1. Current research project: “Study on workstation and work tools of Terracotta Handicraft Industry and design intervention”, funded by Mind to Market Lab, NITIE.

Deliverables: Improved design/redesign of tools /workstations

2. “Redesigning the palanquin system for use in Mata Vaishno Devi Shrine”, funded by the office of the Principal Scientific Advisor to Govt. of India, New Delhi. 2015-2017.

Deliverables: i) Newly designed palanquin and ii) Porter’s Kit for Shri Mata Vaishno Devi site

3. “Occupational Safety and Health of the Young Workers in different Trades: Workshops to review Fact Sheets” – funded by ILO Geneva through ILO New Delhi, 2008-2009.

Deliverables: Fact sheets on OSH and work practice for each trade.

4. “Ergonomics assessment of office operations in a software industry in Mumbai”, funded by TIFAC-CORE NITIE.

Deliverables: Individual report containing guidelines with do’s and don’ts for computer operation and office activities.

5. “Assessment of Health and Fitness levels of NITIE Employees” funded by TIFAC-CORE NITIE.

Deliverables: One to one counseling and monitoring regarding their current health and fitness level and scope for improvement.

6. “Occupational Safety and Health (OSH) of child labours in Hazardous Sectors” – funded by ILO, New Delhi, 2007.

Deliverables: Film on the Occupational Safety and Health problems of the child labours in India, design of postures and Do’s and Don’ts for creating awareness.

7. “Occupational Health profile of VDT Operators and Ergonomic Intervention” - funded by Directorate General Factory Advice Service and Labour Institutes, Govt. of India, Ministry of Labour and Employment, 2004.
Deliverables: Ergonomic workstation for computer operation has been designed and fabricated.
8. “A National Study on Beedi workers – an Ergonomic Approach” - funded by Directorate General Factory Advice Service and Labour Institutes, Govt. of India, Ministry of Labour and Employment, 2004.
Deliverables: Work station and various tools for beedi workers have been designed and fabricated.
9. “A National Project on Anthropometry: Study on Sedentary population” - funded by Directorate General Factory Advice Service and Labour Institutes, Govt. of India, Ministry of Labour and Employment, 2001.
Deliverables: Data pack on Human body dimensions of Indian Industrial populations.

Students’ project with TIFAC CORE NITIE fund

10. “Effect of prosthetic feet on the gait and loading of the sound and amputated limbs in trans-tibial and trans-femoral amputees”.
Deliverables: Recommendation on suitability of existing prosthesis used by the amputees.
11. “Study on lumbar kinematics and the risk of low back disorder while using shoes of different heel heights”.
Deliverables: A report highlighting chances of LBD with wearers height and heel height.
12. “Evaluation of Cross-legged sitting posture; an ergonomic assessment for Jewellery workers”.
Deliverables: A report containing fatigue level monitored before, during and after the work. This will be helpful to design the work rest cycle.

JOURNAL PUBLICATION

1. Reenu Singh, Ashok K Pundir and **Rauf Iqbal**: Occupational Physical Stress faced by Construction Workers & Painters and Improvement of their Work Activity; a Literature Review. Scientific Journal of Musculoskeletal Disorders, Vol 3, Issue 1, pp1-10, 2019.
2. **Rauf Iqbal** and Arundhati Guha Thakurta: Influence of Select Modes of Load Carriage on Movement Biomechanics of Industrial Workers. Springer, S. Bagnara et al. (Eds.): IEA 2018
3. N. Girish, **Iqbal Rauf** and Khanzode Vivek: Influence of age on lifting capacity among manual materials handlers. Work 60, 163–168, 2018.
4. Ishant Gupta, Parveen Kalra & **Rauf Iqbal**: Physiological and Biomechanical Responses in Male School going Children using frameless and internal frame backpack. Journal of Medical and Biological Engineering, Springer, Vol 4, pp 1-8, 2018.

5. Girish N, **Rauf Iqbal** and Vivek Khanzode: Lifting capacity among Indian Manual Materials Handlers using progressive isoinertial lifting evaluation. *Journal of Musculoskeletal Research*, Vol. 20, No. 1, 2017.
6. Ishant Gupta, Parveen Kalra and **Rauf Iqbal**: Physiological Effects of Backpack Packing, Wearing and Carrying on School Going Children. *Research into Design for communities, Smart Innovation, Systems and Technologies*, Springer Nature Singapore Pte Ltd. Volume 1, Pp 813 - 822, 2017.
7. **Rauf Iqbal**, Arundhati Guha Thakurta: Influence of different modes of load carriage on lower limb biomechanics of industrial workers. *The Japanese Journal of Ergonomics*, p 366-370, 2017.
8. Reenu Singh, **Rauf Iqbal** and A.K. Pundir: Jugaad: A conventional formula to solve problems of people living in rural India, *The Japanese Journal of Ergonomics*, p 474-477, 2017
9. Arundhati Guha Thakurta, **Rauf Iqbal** and Amitabha De: The Influence of three different load carrying methods on gait parameters of Indian Construction Workers. *MOJ Anatomy & Physiology*, *MOJ Anat & Physiol* 3(4), 2017.
10. Ishant Gupta, Parveen Kalra and **Rauf Iqbal**: Gait parameters in school going children using a marker-less approach. *CURRENT SCIENCE*, VOL. 111, NO. 10, 25 November 2016.
- 10 Girish Nandakumar, **Rauf Iqbal** and Vivek Khanzode: Adapted Progressive Isoinertial Lifting Evaluation for determining Lifting capacity. *International Journal of Safety and Industrial Ergonomics*, Vol. 1(1), pp. 010-014, August, 2016.
11. Shweta Satish Devare Phadke, **Rauf Iqbal**: Work place Design reforms for Traffic Police. Accepted in *International Journal of Current Research*, ISSN: 0975-833X, 2016.
12. Arundhati Guha Thakurta, **Rauf Iqbal**, Bhasin HV, Amitabha De, Shreya Maulik: Human gait with reference to age, gender and impact of Load: a review. *Advances in Applied Physiology*, 2016; 1(2): 24-30, January, 2016.
13. Shweta SDP, **R Iqbal**: Work Place Design Reforms for Traffic Police. *International Journal of Current Research*. Vol. 8, Issue, 01, pp.25493-25495, January, 2016.
14. Arundhati Guha Thakurta, **Rauf Iqbal**, Bhasin HV, Amitabha De, Vivek Khanzode and Shreya Maulik: Characteristics of gait variability among healthy Indian construction workers during different load carrying modes. In: *Ergonomics in caring for people. Proceedings of the International Conference on Humanizing Work and Work Environment 2015*. Springer Nature. Pp 9-15.
15. Devika Vipin Vaidya, **Rauf Iqbal** and Bhatnagar A: Impact of footwear on gait parameter. In: *Ergonomics in caring for people. Proceedings of the International Conference on Humanizing Work and Work Environment 2015*. Springer Nature. Pp3-8
16. Mishra W, Amitabha De, **Rauf Iqbal**, Vivek Khanzode Gangopadhyay S and Chandra AM: A study on Agony of Indian Percussionists. In: *Ergonomics in caring for people. Proceedings of the International Conference on Humanizing Work and Work Environment 2015*. Springer Nature. Pp 19-25.
17. Patel P, **Rauf Iqbal**, Bhasin HV , Bhatnagar A and Chauhan MK: General Health related physical fitness levels of college going girls from Maharashtra. In: *Ergonomics in caring for people. Proceedings of the International Conference on Humanizing Work and Work Environment 2015*. Springer Nature. Pp 19-25.
18. Girish N, **Rauf Iqbal**, Vivek Khanzode and De A: Manual material handling and occupational low back disorders: a narrative literature review emphasising maximum acceptable weight of load. *Int. J. Human Factors and Ergonomics*, Vol. 3, Nos. 3/4, 2015

19. Shweta SDP, Drashan S, **R Iqbal**: Health Promotion at Work Site for Traffic Police. International Journal of Innovative Research in Science, Engineering and Technology, Vol. 4, Issue 5, 3117-20, 2015
20. Shweta SDP, Revati R, and **Rauf Iqbal**: Work Related Musculoskeletal Symptoms among Traffic Police: Cross Sectional Survey Using Nordic Musculoskeletal questionnaire. International Journal of Recent Research in Interdisciplinary Sciences (IJRRIS), Vol. 2, Issue 2, pp: (26-29), 2015
21. S Unnikrishnan, **R Iqbal**, A Singh, IM Nimkar. Safety Management Practices in Small and Medium sized Enterprises in India. Safety and Health at work. Elsevier Publication. Vol 6, Pp 46-55, 2015.
22. Shreya Maulik and **Iqbal R**, De A and Chandra AM. Evaluation of the Working Posture and Prevalence of Musculoskeletal Symptoms among Medical Laboratory Technicians. Journal of Back and Musculoskeletal Rehabilitation. 27, 453-461, 2014.
23. Shweta Satish Devare Phadke, Anurag Gupta and **Rauf Iqbal**: Application of WHOQOL- BREF in measuring Quality of Life in Traffic Police. IJSR, 3 (6), 1580-1583, 2014.
24. Shweta Satish Devare Phadke, Priyanka Patra and **Rauf Iqbal**. Psychosocial Problems in Traffic Police: Cross Sectional Survey Using COPSOQ. Sch. J. App. Med. Sci., 2(6G):3380-3382, 2014
25. Sanchita Ghosh, **Rauf Iqbal**, Amitabha De and Debamalya Banerjee. Relationship of Heart Rate with Oxygen Consumption of adult male workers from Service and Manufacturing Sectors. International Journal of Physical Education, Fitness and Sports, Vol.3, No.3, 2014. ISSN: 2277: 5447
26. Phadke Shweta, Sumaiya A. Khan, **Rauf Iqbal**, Ramakrishnan.K.S: Assessment of endurance, power, and flexibility of Navi Mumbai traffic police. International Journal of Medical and Pharmaceutical Sciences, Vol 4 (11), 20-25, 2014.
27. Phadke Shweta, Sandhu Hasmeet, **Iqbal R** and Yardi Sujata. Prevalence of Obesity in Navi Mumbai Traffic Police and Associated Change in Lumbar Curvature angle. Journal of International Academic Research for Multidisciplinary, Vol 2, Issue 3, April 2014.
28. Maulik S and **Iqbal R**. Occupational health and musculoskeletal symptoms among Indian Medical Laboratory technicians. *JOHE, Summer, 2(3), 82-92, 2013*
29. Shreya Maulik, **Iqbal R** and De Amitabha. Work related musculoskeletal disorders among medical laboratory technicians, IEEE, 2012.
30. Amitabha De, **Iqbal R**, Mishra W, Chandra AM, Dhar U, Virkar T, Altekar C, Parmar V and Mutakekar M. A Study of Subjective Visual Disturbances in Jewellery Manufacturing. Work, vol 41, pp 3404-3411, 2012.
31. **Iqbal R**, Amitabha De, Mishra W, Maulik S and Chandra AM. Study on lumbar kinematics and the risk of low back disorder in female university students by using shoes of different heel heights. Work, vol 41, pp 2521-2526, 2012.
32. Wricha Mishra, De Amitabha, **Iqbal R**, Gangopadhyay S and Chandra AM. An integrative approach for evaluating work related musculo-skeletal disorders, Work, vol 43, pp 437-446, 2012.
33. Ghosh S, **Iqbal R**, Banerjee D and De A: Relationship of waist girth with body fat percentage of adult male workers in service and manufacturing sector. Indian Journal of Physiology and Allied Sciences, Vol LXV, No 1, Page 1 -9, 2011.
34. Ghosh S, De A, **Iqbal R**, Banerjee D and Mukhopadhyay S: Relationship of body mass index with somatotype of adult male workers from service and manufacturing sectors. International Journal of fitness, Vol 7, No 2, pp 47 – 52, 2011.

35. AM Chandra and **Iqbal R**: Effect of Exercise and Heat-Load on Reaction Time of University Students. *International Journal of Occupational Safety and Ergonomics (JOSE)*, vol. 16, No. 4, 497 – 505, 2010.
36. Prabir K Sarkar and **Iqbal R**: Comparative analysis of lung function amongst the workers in a chemical industry, *Indian Journal of Physiology and Allied Sciences*, Vol 63, No.2,37-43, 2009.
37. Chandra AM, Ghosh S, **Iqbal R** and Sadhu N: A comparative assessment of the Impact of Different Occupations on Workers' Static Musculoskeletal Fitness. *International Journal of Occupational Safety and Ergonomics (JOSE)*, Vol.13, No.3, 271-278, 2007.
38. Chandra AM, Ghosh GN, Barman S, **Iqbal R** and Sadhu N: Effect of thermal load on work efficiency of female university students. *Journal of Physiology and Allied Sciences*, Vol. LX, No. 2, April 2006.
39. Ghosh PC, Markar VM, Sathe S and **Iqbal R**: Physiological cost of kitchen operation in an Industrial canteen in Mumbai. *Indian Journal of Physiology and Pharmacology*, 2001.
40. **Iqbal R**, Soni VK, Sharma N, Mukhopadhyay S and Ghosh AK : Heart Rate and blood lactate response in limited over Cricket match. *SAI Scientific Journal*, Vol 23, No 1, 12-22, 2000.
41. **Iqbal R** and Ghosh AK: Validation of Cooper's 12 minute run test for estimation of aerobic capacity (VO_2 max), *Indian Journal of Physiology and Allied Sciences*, Vol 53, No 4, 164-171, 1999.
42. **Iqbal R** and Ghosh AK : Queen's College Test Revisited for estimation of Aerobic Capacity (VO_2 max), *Indian Journal of Sports Traumatology and Allied Sciences*, vol 1, no 1, 12-18, 1999.
43. Laroia A, **Iqbal R**, Mukhopadhyay S, Jain M and Ghosh AK: The aerobic capacity and anaerobic threshold level of Indian senior and junior female hockey players, *Indian Journal of Physiology and Allied Sciences*, vol52, no.2, 76-82,1998.

BOOK/BOOK CHAPTER:

1. '*Ergonomics in Caring for People*', by Gaur G Ray, **Rauf Iqbal**, Anindya K. Ganguli and Vivek Khanzode. Springer Publication, 2017
2. '*Yoga - solution for health hazards of Law Enforcement agency personnel*', by Shweta Satish Devare Phadke and **Rauf Iqbal**. Lambert Academic Publishing, 2017.
3. '*Body Composition- Terms and Techniques*' in the book- Methodologies for Fitness Assessment published by Ane Books Pvt Ltd., New Delhi in 2011.

CONFERENCE PAPER PRESENTATION / PUBLICATION IN PROCEEDINGS:

1. **Rauf Iqbal** and Shreya Maulik: Task Analysis of Histotechnicians Work Pattern In ndian Medical Laboratories and Ergonomics Intervention. 16th International Conference on Humanizing Work and Work Environment (HWWE 2018), College of Engineering Trivandrum, Kerala, 14-16 December 2018.
2. Debasis Haldar, Mukesh Kumar Kanti, Bhawana Rathore and **Rauf Iqbal**: A cognitive study on duration of work. 16th International Conference on

- Humanizing Work and Work Environment (HWWE 2018), College of Engineering Trivandrum, Kerala, 14-16 December 2018.
3. Reenu Singh, Ashok K. Pundir and **Rauf Iqbal**: Ergonomic issues faced by construction workers in manual wall finishing job. 16th International Conference on Humanizing Work and Work Environment (HWWE 2018), College of Engineering Trivandrum, Kerala, 14-16 December 2018.
 4. Mukesh Kumar Kanti, Nikhil Ghag, **Rauf Iqbal** and Karuna Jain: Occupational health profile of workers in Terracotta Handicraft industry. 16th International Conference on Humanizing Work and Work Environment (HWWE 2018), College of Engineering Trivandrum, Kerala, 14-16 December 2018.
 5. Bhawana Rathore, Ashok K. Pundir and **Rauf Iqbal**: Working conditions of Indian Glass Artware workers and association with musculoskeletal symptoms. 16th International Conference on Humanizing Work and Work Environment (HWWE 2018), College of Engineering Trivandrum, Kerala, 14-16 December 2018.
 6. **Rauf Iqbal** and Arundhati Guha Thakurta: Influence of Select Modes of Load Carriage on Movement Biomechanics of Industrial Workers. 20th Congress of International Ergonomics Association, 26-30 Aug 2018, Florence, Italy.
 7. **Rauf Iqbal**, Preethi BR, Choudhury N, Raja M and Chandra JP: Study on Smart Phone uses & Its Impact on Individual. 15th International Conference on Humanizing Work and Work Environment (HWWE 2017), Aligarh Muslim University, Aligarh, UP, 8- 10 December, 2017.
 8. Reenu Singh, **Rauf Iqbal**, A.K. Pundir: Product Design interventions to solve issues faced in the use of a hand-held blender in domestic use. 15th International Conference on Humanizing Work and Work Environment (HWWE 2017), Aligarh Muslim University, Aligarh, UP, 8- 10 December, 2017.
 9. Bhawana Rathore, **Rauf Iqbal** and Ashok K Pundir: Optimization of Noise Control by Taguchi. 15th International Conference on Humanizing Work and Work Environment (HWWE 2017), Aligarh Muslim University, Aligarh, UP, 8- 10 December, 2017.
 10. Debasis Haldar, **Rauf Iqbal**, Asif Mahammadsayed Qureshi and Vivek Khanzode Ergonomic Study on Foundry Worker. 15th International Conference on Humanizing Work and Work Environment (HWWE 2017), Aligarh Muslim University, Aligarh, UP, 8- 10 December, 2017.
 11. **Rauf Iqbal** and Arundhati Guha Thakurta: Influence of different modes of load carriage on lower limb biomechanics of industrial workers. 2nd Asian Conference on Ergonomics and Design (ACED) 2017, Nihon University, Chiba, Japan, 1-4 June 2017.
 12. Renu Singh, **Rauf Iqbal** and Pundir. A.K: Jugaad: A conventional formula to solve problems of people living in rural India. 2nd Asian Conference on Ergonomics and Design (ACED) 2017, Nihon University, Chiba, Japan, 1-4 June 2017.
 13. **Rauf Iqbal** and Hiren Shah: Perception ability of symbolic indicators on educational and social background of users. 14th International Conference on Humanizing Work and Work Environment (HWWE 2016), National Institute of Technology, Jalandhar, 8- 11 December, 2016.
 14. Ishant Gupta , Parveen Kalra and **Rauf Iqbal**: Comparison of gait parameters between school children studying in day school and boarding school by using Kinect v2. 14th International Conference on Humanizing Work and Work Environment (HWWE 2016), National Institute of Technology, Jalandhar, 8-

- 11 December, 2016.
15. Mohd. Juned and **Rauf Iqbal**: Layout Design and Performance Improvement of Material Handling in Warehouse Using Application of Ergonomics Factors. 14th International Conference on Humanizing Work and Work Environment (HWWE 2016), National Institute of Technology, Jalandhar, 8- 11 December, 2016.
 16. Girish N, **Rauf Iqbal** and Vivek Khanzode: Comparison of lifting capacity between novice and conditioned manual lifting. 14th International Conference on Humanizing Work and Work Environment (HWWE 2016), National Institute of Technology, Jalandhar, 8- 11 December, 2016.
 17. Reenu Singh, **Rauf Iqbal** and A.K.Pundir: Physiological and Psychological discomfort faced by workers in their prolonged work routine. 14th International Conference on Humanizing Work and Work Environment (HWWE 2016), National Institute of Technology, Jalandhar, 8- 11 December, 2016.
 18. **Rauf Iqbal**, Arundhati Guha Thakurta and Shreya Maulik: Biomechanics and Energy Expenditure Index of walking with different modes of load carriage among industrial workers. 6th International Ergonomics Conference- ERGONOMICS 2016 – Focus on Synergy, Zadar, Croatia, June 15-18, 2016.
 19. Arundhati Guha Thakurta, **Rauf Iqbal**, HV Bhasin, Amitabha De, Shreya Maulik: Study on gait pattern of Indian adults with respect to age. . 6th International Ergonomics Conference- ERGONOMICS 2016 – Focus on Synergy, Zadar, Croatia, June 15-18, 2016.
 20. Mishra W, De. A, **Iqbal R**, Khanzode V, Gangopadhyay S, Chandra A.M: A study on Agony of Indian Percussionists. International Ergonomics Conference - Humanizing Work and Work Environment (HWWE 2015), Indian Institute of Technology Bombay, Mumbai, 7- 9 December, 2015.
 21. Devika Bipin Vaidya, **Rauf Iqbal** and Archana Bhatnagar: Impact of Footwear on Gait Parameter. International Ergonomics Conference - Humanizing Work and Work Environment (HWWE 2015), Indian Institute of Technology Bombay, Mumbai, 7 – 9 December, 2015.
 22. **Rauf Iqbal**, Arundhati Guha Thakurta, Shreya Maulik and HV Bhasin: Changes in Gait Kinematics of Healthy Indian Males with Age. International Ergonomics Conference - Humanizing Work and Work Environment (HWWE 2014), Indian Institute of Technology, Guwahati, Asam, 3 – 5 December, 2014.
 23. Devika Vaidya, Arundhati Guha Thakurta, and **Rauf Iqbal**: Biomechanical study on modes of Load Carriage on University males and females. International Ergonomics Conference - Humanizing Work and Work Environment (HWWE 2014), Indian Institute of Technology, Guwahati, Asam, 3 – 5 December, 2014.
 24. Shreya Maulik, **Rauf Iqbal**, Arundhati Guha Thakurta, and De Amitabha: Effect of work exposure on static muscular strength in medical laboratory technicians in comparison to Industrial workers. International Ergonomics Conference - Humanizing Work and Work Environment (HWWE 2014), Indian Institute of Technology, Guwahati, Asam, 3 – 5 December, 2014.
 25. Arundhati Guha Thakurta, **Rauf Iqbal**, Shreya Maulik and HV Bhasin: A study on the prevalence of musculo-skeletal disorders among young and elderly construction workers in India. International Ergonomics Conference - Humanizing Work and Work Environment (HWWE 2014), Indian Institute of Technology, Guwahati, Asam, 3 – 5 December, 2014.
 26. **Iqbal R**. Symbolic indicators and user perception performance in Indian industries and public places, Asian Conference on Ergonomics and Design

- (ACED) 2014, Jeju, South Korea, 21-24 may 2014.
27. Arundhati Guha Thakurta, **Iqbal R** and Bhasin HV. Relationship of Human Gait speed with selected anthropometric variables among Indian adults. National Conference on Biomechanical Sciences, SOA University, Bhubaneswar, 7-7 March 2014.
 28. Shreya Maulik, **Iqbal R**, De Amitabha and Bhasin HV. A Study on Working Posture and Musculoskeletal Issues of Indian Medical Laboratory Technicians. National Conference on Biomechanical Sciences, SOA University, Bhubaneswar, 7-7 March 2014.
 29. **Iqbal R** and De Amitabha. Study of the gait pattern with the use of prosthesis on amputated limbs in trans-femoral amputees. National Conference on Biomechanical Sciences, SOA University, Bhubaneswar, 7-7 March 2014.
 30. Arundhati Guha Thakurta, **Iqbal R** and De Amitabha. The influence of load carrying modes on gait variables of Healthy Indian Women. Humanizing Work and Work Environment (HWWE 2013), Vidyasagar University, West Bengal, 4 – 6 December, 2013.
 31. Arundhati Guha Thakurta, **Iqbal R**, De Amitabha and Mukherjee Shankarashish. Assessment of work-station and work-environment in an Engineering industry and ergonomic interventions. Indian Science Congress Association, Kolkata, 3-7 Jan 2013.
 32. Arundhati GShreya Maulik, **Iqbal R** and De Amitabha. Work related musculoskeletal disorders among medical laboratory technicians, SEANES, Malaysia, 9-12 July 2012.
 33. Amitabha De, **Iqbal R**, Mishra W, Chandra AM, Dhar U, Virkar T, Altekar C, Parmar V and Mutakekar M. A Study of Subjective Visual Disturbances in Jewellery Manufacturing. 18th World Congress of International Ergonomics Association, 12-16 Feb 2012 (IEA 2012) at Recife Brazil.
 34. **Iqbal R**, Amitabha De, Mishra W, Maulik S and Chandra AM. Study on lumbar kinematics and the risk of low back disorder in female university students by using shoes of different heel heights. 18th World Congress of International Ergonomics Association, 12-16 Feb 2012 (IEA 2012) at Recife Brazil.
 35. Amitabha De, **Iqbal R**, Bendale K., Ghosh S., Mishra W., Parmar V. and Chandra A.M. 'Health and fitness status of Indian white collar employees', paper presented and published in book of abstracts in 98th Indian Science Congress, SRM University, Chennai, 3-7 January, 2011.
 36. Chakrabarty De and **Iqbal R**: 'Assessment of Illumination and Noise level in a Chemical Industry and Ergonomics Intervention' paper presented and published in book of abstracts in 98th Indian Science Congress, SRM University, Chennai, 3-7 January, 2011.
 37. **Iqbal R** and Chakrabarty D : 'Assessment of Physical working environment in a Chemical Industry and Ergonomics Intervention' paper presented and published in book of abstracts in 98th Indian Science Congress, SRM University, Chennai, 3-7 January, 2011.
 38. **Iqbal R** and Amitabha De: 'Study on musculoskeletal stress and working posture of VDT users and ergonomics intervention'. Joint International Conference of APCHI (Asia Pacific Computer Human Interaction) 2010 and Ergofuture 2010 at Bali, Indonesia, 2 – 6 August, 2010.
 39. Amitabha De and **Iqbal R**: 'Ergonomic evaluation of modern office system in an IT enabled organization in India', Joint International Conference of APCHI (Asia Pacific Computer Human Interaction) 2010 and Ergofuture 2010 at Bali, Indonesia, 2 – 6 August, 2010.

40. **Iqbal R** and De Amitabha. Study of the gait pattern with the use of prosthesis on amputated limbs in trans-tibial amputees. Humanizing Work and Work Environment (HWWE 2013), Vidyasagar University, West Bengal, 4 – 6 December, 2013.
41. Amitabha De and **Iqbal R**: ‘Ergonomic evaluation of modern office system in an IT enabled organization in India’, Joint International Conference of APCHI (Asia Pacific Computer Human Interaction) 2010 and Ergofuture 2010 at Bali, Indonesia, 2 – 6 August, 2010.
42. Sanchita Ghosh, **Iqbal R**, Debamalya Banerjee and Amitabha De: Indirect Estimation of Body Fat Percentage from BMI of the workers in Service Sectors. Ergonomics Conference, - Humanizing Work and Work Environment (HWWE) 2009, Kolkata, 17 – 19 December 2009.
43. Amitabha De, **Iqbal R**, Dhar U, Mishra W, Parmer V and Chandra AM: A Study of the Effect of Extended Working Hours on Fatigue, Health and Well Being. Ergonomics Conference, - Humanizing Work and Work Environment (HWWE) 2009, Kolkata, 17 – 19 December 2009.
44. Mishra W, Amitabha De, **Iqbal R**, Gangopadhyay S and Chandra AM: An Integrative Approach for Evaluating Work related Musculo-skeletal Disorder. Ergonomics Conference, - Humanizing Work and Work Environment (HWWE) 2009, Kolkata, 17 – 19 December 2009.
45. Nagarajan Periyar and **Iqbal R**: Addressing Ergonomic Concepts through Safety Legislation – A Gap Analysis. Ergonomics Conference, - Humanizing Work and Work Environment (HWWE) 2009, Kolkata, 17 – 19 December 2009.
46. **Iqbal R**: Evaluation of VDT Workstation - An Ergonomic Approach. Ergonomics Conference, - Humanizing Work and Work Environment (HWWE) 2009, Kolkata, 17 – 19 December 2009.
47. **Iqbal R**, Anumeha Srivastava and Sneha Gupta: Designing of the backrest of a computer chair: An Ergonomic approach. International Conference on Integrative Physiology: Modern Perspective & Platinum Jubilee Celebration of the Physiological Society of India, Kolkata, 12 – 14 November 2009.
48. Amitabha De, **Iqbal R**, and Madhuri Kamble: Effect of Prosthetic feet on the Gait and Loading of the Sound and Amputated Limbs in Trans-Femoral Amputees. Joint 4th Asia Pacific Conference on Exercise and Sports Science and 8th International Sports Science Conference, University Sains Malaysia, Kota Bharu Malaysia, 15 – 17 July 2009.
49. **Iqbal R**, Amitabha De and Minakshi Sharma: Effect of Prosthetic feet on the Gait and Loading of the Sound and Amputated Limbs in Trans-Tibial Amputees. Joint 4th Asia Pacific Conference on Exercise and Sports Science and 8th International Sports Science Conference, University Sains Malaysia, Kota Bharu Malaysia, 15 – 17 July 2009.
50. **Iqbal R** and Prabir K Sarkar: Ergonomic Ergonomic Evaluation of Workstation and Work at Visual Display Terminals in a Chemical Plant’. 96th session of Indian Science Congress, North Eastern Hill University (NEHU), Shillong, Meghalaya, 03 – 07 January, 2009.
51. Mukhopadhyay Suman, **Iqbal R**, Amitabha De, Chakraborty Tania and Pandey Vasundhara. A Sustainable Model for Assessment of Corporate Health and Fitness. Ergonomics Conference, - Humanizing Work and Work Environment (HWWE) 2008, VIT Pune, 22 – 24 December, 2008.
52. Sanchita Ghosh, Debamalya Banerjee, **Iqbal R** and Amitabha De. Relationship with BMI with other Body Composition Profiles of Sedentary Adult Male in

- the age group of 50 – 60 years. Ergonomics Conference, - Humanizing Work and Work Environment (HWWE) 2008, VIT Pune, 22 – 24 December, 2008.
53. **Iqbal R**, Amitabha De, Mogare T, Saharia J and P.C Ghosh. Ergonomic Evaluation of a Modern Office System. Ergonomics Conference, - Humanizing Work and Work Environment (HWWE) 2008, VIT Pune, 22 – 24 December, 2008.
 54. Chakrabarty D, **Iqbal R** & Ghosh PC: Evaluation of Heat Stress and Ventilation level in a Chemical Factory in West Bengal. International Ergonomics Conference, HWWE2007, Central Institute of Agricultural Engineering, Bhopal, 10-12 December, 2007.
 55. **Iqbal R** and Ghosh PC: Ergonomic Evaluation in the Engine Calibration Section of an Engineering Industry. International Ergonomics Conference, HWWE2007, Central Institute of Agricultural Engineering, Bhopal, 10-12 December, 2007.
 56. **Iqbal R**: Ergonomics in Indian Industries as a Tool for Safety, health and productivity. International conference on Frontier Research in Physiology (ICFRIP) 2007. Deptt. Of Physiology, Calcutta Univ. 8 – 10 Jan, 2007.
 57. **Iqbal R**, Goswami A, Ghosh AK and Gill IS : Suitability of Queen's College Test for Indian Boys, 7th Annual Conference of the Physiological Society of India, Defence Institute of Physiology and Allied Sciences (DIPAS), Delhi, 29 - 31 December, 1995.
 58. **Iqbal R**: Ergonomics and work efficiency. 27th Conference of the Physiological Society of India, M. R. Medical college, Gulbarga, Karnataka, 1 – 3 December, 2005.
 59. **Iqbal R** and Ghosh PC: Occupational health profile of the beedi workers in India and ergonomic intervention. International Ergonomics Conference, HWWE2005, Indian Institute of Technology, Guwahati, 10-12 December, 2005
 60. **Iqbal R**: Prevalence of Occupational Back Pain amongst the VDT users. 26th Conference of the Physiological Society of India, Midnapore, West Bengal, 16 – 18 December, 2004.
 61. **Iqbal R**: Ergonomic evaluation of Occupational Health Profile, Workstation and Work of the VDT users. 1st National Conference on Occupational Safety, Health and Environment, Green Triangle Society, Goa, 21-22 May, 2004.
 62. Patil S, **Iqbal R** & SenRay K: Modification of Physical Work Capacity (PWC 170) method for Sedentary College girls. International Congress on Humanizing Work & Work Environment 2001, IIT Bombay, Mumbai, 11 – 14 December 2001.
 63. **Iqbal R**, Ghosh AK & Dhara P: Suitability of Queen's College Test for Estimation of Aerobic Capacity of Indian Athletes. International Congress on Humanizing Work & Work Environment 2001, IIT Bombay, Mumbai, 11 – 14 December 2001.
 64. **Iqbal R**: Exercise Prescription for Specific Needs. Seminar on Sports Science and Fitness, the Need for Excellence, S.N.D.T Women's University, Mumbai, India, 11 – 12 Jan, 2001
 65. Ghosh PC, Markar VM, Sathe S and **Iqbal R**: Physiological cost of kitchen operation in an Industrial canteen in Mumbai. 3rd congress of the Federation of Physiological Society of India, Science city, Calcutta, 24 - 26 Nov, 2000
 66. Mukhopadhyay S, **Iqbal R**, Ghosh G and Ghosh AK : Physiological capabilities and Energy Expenditure Profiles of Elite female Hockey players of India, , 3rd Annual Sports Science Conference, Sports Authority of India, Patiala, 5 - 6 June, 1998.

67. **Iqbal R** and Ghosh AK : Indirect estimation of Aerobic Capacity Revisited, 3rd Annual Sports Science Conference, Sports Authority of India, Patiala, 5 - 6 June, 1998.
68. **Iqbal R**, Ajita, Mukhopadhyay S, Ghosh AK and Mathur DN: Effect of 4 Weeks Altitude Training on Selected Cardiovascular Responses of Indian Junior National Athletes, 84th Session of the Indian Science Congress Association, Delhi University, Delhi, 3 - 8 January, 1997.
69. Mukhopadhyay S, **Iqbal R** and Goswami A : Comparison of selected Cardio-respiratory functions of Elite and Junior Athletes of India, International Sports Science Congress and Sports Goods Exhibition, Banglore, 23 - 25 January, 1996.
70. **Iqbal R**, Goswami A, Ghosh AK and Mathur DN : Determination of VO₂ max: Direct measurement versus Astrand - Rhyming test, 83rd Session of the Indian Science Congress Association, Punjabi University, Patiala, 3 - 8 January, 1996.

CONFERENCE/SEMINAR/WORKSHOP ORGANIZED:

1. 13th International Ergonomics Conference - Humanizing Work and Work Environment – HWWE 2015, a joint conference of NITIE Mumbai and IIT Bombay, December 2015.
Involvement: Conference Co-Chair
2. Workshop on Industrial Safety & Sustainability in Manufacturing -Challenges and opportunities in March 2014 at NITIE Mumbai.
3. Workshop on ‘Industrial Safety and Human Factors – Challenges and opportunities’ in March 2014 at NITIE Mumbai.
4. Organized 1st International Ergonomics Conference - Humanizing Work and Work Environment – HWWE 2001, a joint conference of NITIE Mumbai and Central Labour Institute, Mumbai, December 2001. Involvement: Secretary, Advertisement Committee.

TEACHING EXPERIENCE

Courses Taught:

1. Human Factors Engineering
2. Industrial Ergonomics
3. Ergonomics of Manufacturing
4. Work systems Design
5. Industrial Safety Management
6. Safety management in Oil and Gas Industry

New Courses Developed:

1. Ergonomics of Manufacturing
2. Safety management in Engineering and Construction Industries
3. Safety Management in Oil and Gas Industries

Management Development Programme (MDP) conducted for Industry:

- Workplace Improvement using Ergonomics tool
- Work study for higher productivity
- Industrial Safety Management

Unit Based Programme (UBP) – Customized training programme conducted for industry (More than 80):

- Workplace Ergonomics
- Vehicular & Transport Ergonomics
- Human Gait-Analysis and Applications
- Ergonomics at Maruti Suzuki India Limited
- Ergonomics at Siemens India Limited
- Ergonomics at Mahindra & Mahindra Ltd
- Risk Analysis, Hazop Study, Disaster Management and Behavior Based Safety
- Productivity / Efficiency improvements and Ergonomics

INDUTRIAL CONSULTANCY CONDUCTED (More than 50):

- Ergonomics evaluation and workplace improvement
- Work-study for higher productivity
- Manpower optimization in industry
- Physical work environment

ACADEMIC /ADNINITRATIVE ACTIVITIES / INVOLVEMENTS:

i. Paper Review

- ‘Ergonomics’, published by Taylor & Francis Group, UK.
- ‘*Journal of Back and Musculoskeletal Rehabilitation*’, published by Roessingh Research and Development, Netherlands.
- ‘*Journal of Sports Sciences*’, published by Taylor and Francis group, UK on behalf of the British Association of Sport and Exercise Sciences.

ii. Academic Administration:

- Centre Coordinator-Centre of Ergonomics and Human Factors Engineering
- Prof. In-Charge- Ergonomics Laboratory
- Prof. In-Charge – Executive Education
- Core Committee Member - Mind to Market Centre
- Chairman, Publication Committee, Udyog Pragati Journal, NITIE
- Chairman/Member screening and selection committee for administrative and medical staff as and when assigned by NITIE

ASSOCIATION WITH ACADEMIC BODY/INDUSTRY

- Executive Council member of BRICS plus network for Human Factors and Ergonomics.
- Member of Asian Council on Ergonomics and Design (ACED)
- Executive Committee member of Indian Society of Ergonomics (ISE)
- Technical Committee Member of Bureau of Indian Standards (BIS) Sectional committee for Ergonomics standards (PGD 15).
- Member of expert committee of NABET, Quality Council of India, New Delhi for development of criteria for the accreditation and assessment agency to be empaneled by University Grants Commission.

- External member of Internal Quality Assurance Cell (IQAC) of SNDT Women's University, Mumbai
- Member and External expert – Research and Recognition Committee for the Board of Studies in Resource Management, SNDT Women's University, Mumbai.
- Member of State Level Advisory Committee (SLAC) of National Institute of Fashion Technology (NIFT), Mumbai.
- Member of Research Progress Committee in the Deptt. of Mechanical Engineering, IIT Bombay, Mumbai
- Member of the “Board of Studies (Industrial & Production Engg.) of P.D.A. College of Engineering, Gulbarga, India for the period from 13/09/2014 to 12/09/2016.
- Project reviewer of SPARC projects under Ministry of HRD, Govt. of India and IIT Kgp for the year 2018-19

iii. National / International collaboration/MoU

- Faculty Coordinator for the Memorandum of Understanding (MoU) between NITIE Mumbai and National Institute of Technology, Jalandhar, India

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