

# Raemy Md. Zein

Date of birth : 24<sup>th</sup> August 1973



## Contact

Tel : +6019 601 1072

e-mail : raemymdzein@gmail.com

## Address

No. 20, Jalan Seri Putra 3Q, Bandar Seri Putra, Bangi, 43000 Kajang, Selangor

## Areas of Specialty

**Primary** Ergonomics (Risk Assessment, Environmental ergonomics, Productivity analysis), Physiology (total wellness and health program, anthropometric measurements, workload analysis)

**Secondary** OSH Auditing, Risk Assessment, Human Factor Analysis and Classifications

## Competency Acquired

2017	AESP & AGTES
2016	WISE Competent Trainer
2015	CSPS Competent Trainer
2013	Training Management for Business (Advance TTT) Module 2 of 2 Lead Auditor Program
2011	Module 1 of 2 Lead Auditor Program
2008	Working at Height Auditor
2005	ISO 9001, 17025 & 18001 Internal Auditor
2002	Safehandling of Forklift Truck Assessor
2001	Training Methodologies For Trainers

## Education

1994 to 1998 **Bachelor of Science**  
Life Sciences Faculty, Universiti Kebangsaan Malaysia

## Work Experience

**National Institute of Occupational Safety and Health**  
**Designation : Technical Expert (Ergonomics Specialist)**

**Ergonomics Excellence Centre**  
**2018 – now**

- ✓ Consultancy
  - Lead consultancy team
  - Provide Consultancy
  - Report Preparation And Presentation
- ✓ Management Duties
  - Project Administration
- ✓ Training
  - Facilitator
  - Module Developer
  - Examiner And Assessor
- ✓ Research
  - Identify Research Needs & Funds
  - Develop Research Activities
  - Conduct Research Activities
  - Report Preparation And Publication
- ✓ Technical Committees Involvement
  - Internal Committees

**National Institute of Occupational Safety and Health**  
**Designation : Head/Principal Consultant**

External Committees  
**Ergonomics Excellence Centre**  
**2013 – 2018**

- ✓ Consultancy
  - Identify Consultancy Needs
  - Develop Consultancy Services
  - Market/Sales Consultancy Services
  - Provide Consultancy
  - Report Preparation And Presentation
  - Report Endorsement
- ✓ Management Duties
  - Division Administration
  - Project Administration
- ✓ Training
  - Facilitator
  - Module Developer
  - Examiner And Assessor
- ✓ Research
  - Identify Research Needs & Funds
  - Develop Research Activities
  - Conduct Research Activities
  - Report Preparation And Publication
- ✓ Technical Committees Involvement
  - Internal Committees
  - External Committees

**National Institute of Occupational Safety and Health**

**Designation : Manager**

**Ergonomics Division**

**2008 – 2013**

- ✓ Consultancy
  - Identify Consultancy Needs
  - Develop Consultancy Services
  - Market/Sales Consultancy Services
  - Provide Consultancy
  - Report Preparation And Presentation
  - Report Endorsement
- ✓ Management Duties
  - Division Administration
  - Project Administration
- ✓ Training
  - Facilitator
  - Module Developer
  - Examiner And Assessor
- ✓ Research
  - Identify Research Needs & Funds
  - Develop Research Activities
  - Conduct Research Activities
  - Report Preparation And Publication
- ✓ Technical Committees Involvement
  - Internal Committees
  - External Committees

**National Institute of Occupational Safety and Health**

**Designation : Assistant Manager**

**Ergonomics Division**

**2000 - 2008**

- ✓ Consultancy
  - Develop Consultancy Services
  - Market/Sales Consultancy Services
  - Provide Consultancy
  - Report Preparation And Presentation
- ✓ Project Management
  - Identify Resources
  - Project Costing
  - Liason
  - Report Endorsement
- ✓ Training
  - Facilitator
  - Module Developer
  - Examiner And Assessor
- ✓ Research
  - Develop Research Activities
  - Conduct Research Activities
  - Report Preparation And Publication

**National Sports Institute, National Sports Council of Malaysia**  
**Exercise Physiologist**

**Exercise Physiology Division**

**1997 - 2000**

- ✓ Consultancy activities
  - Conculancy needs assessment
  - Prepare And Operate Equipment
  - Data Collection, Entry And Analysis
  - Report Preparation And Presentation

**Selected Seminar/Conference/Course**

2009	Invited Speaker; 3 <sup>rd</sup> Conference of Asian OSH Research Institute; “Overview, Legislation, Standards & Implementation in Malaysia”; Beijing, China
2008	Participant; Ergonomics Masterclass on Managing Ergonomics in the Office Environments, Kuala Lumpur Malaysia
2007	Invited Speaker; National Conference of Occupational Safety & Health, Kuala Lumpur, Malaysia
2006	Plenary Speaker; 2 <sup>nd</sup> Annual Behavioral Safety Forum; “Improving workforce safety behaviour by making the workplace ergonomically friendly”; Manama, Bahrain
2004	Counterpart Trainee; Ergonomics in The Workplace; JICA Osaka, Japan
2000	Participant; 4th APCHI /6th SEAES-ASEAN Ergonomics 2000, Singapore

**Selected Consultation Projects**

<b>Office Ergonomics Assessment</b>	<ul style="list-style-type: none"> <li>✓ KL Convention Centre.</li> <li>✓ Lafarge Asia Sdn. Bhd.</li> <li>✓ Halliburton Manufacturing &amp; Technology (M) Sdn. Bhd.</li> <li>✓ Technip Geoproduction Sdn. Bhd</li> <li>✓ Technip Asiaflex (M) Sdn. Bhd</li> <li>✓ MEASAT</li> <li>✓ Perak State Health Department</li> </ul>
<b>Ergonomics Risk Assessment</b>	<ul style="list-style-type: none"> <li>✓ Perusahaan Otomobil Nasional.</li> <li>✓ NS Cement Industries</li> <li>✓ Nestle</li> <li>✓ Tenaga Nasional Research &amp; Development</li> </ul>
<b>Indoor Environmental Quality</b>	<ul style="list-style-type: none"> <li>✓ Halliburton (M) Sdn. Bhd.</li> <li>✓ Dumex Malaysia.</li> <li>✓ Proton Casting Sdn. Bhd.</li> <li>✓ Talisman</li> </ul>
<b>Medical Surveillance and Fitness Assessment</b>	<ul style="list-style-type: none"> <li>✓ Petronas Dagangan Berhad</li> <li>✓ UMW Corporation</li> <li>✓ Tenaga Nasional Berhad</li> </ul>
<b>Ergonomics Management Programme Development</b>	<ul style="list-style-type: none"> <li>✓ Samsung Electronics Malaysia Sdn. Bhd.</li> <li>✓ UMW Toyota Motors (Malaysia) Sdn. Bhd.</li> <li>✓ GE Engine Service Sdn. Bhd.</li> <li>✓ Ingress Technology Sdn. Bhd.</li> <li>✓ Pharmaniaga</li> </ul>
<b>Total Wellness &amp; Health Promotion Programme</b>	<ul style="list-style-type: none"> <li>✓ Petronas Dagangan Berhad</li> <li>✓ Maybank Berhad.</li> <li>✓ Malaysian Armed Forces</li> <li>✓ Institut Penilaian Negara Malaysia</li> <li>✓ International Islamic University Malaysia</li> </ul>
<b>OSH Audit</b>	<ul style="list-style-type: none"> <li>✓ Pusat Latihan Khidmat Negara (Lead Auditor)</li> <li>✓ Newfield Peninsular Malaysia</li> <li>✓ Jabatan Meterorologi Malaysia</li> </ul>
<b>Product Evaluation &amp; Verification</b>	<ul style="list-style-type: none"> <li>✓ Universiti Teknologi MARA</li> </ul>

## Modules Developed

<b>Ergonomics &amp; Manual Handling</b>	Chairman & Module Developer
<b>Ergonomics in The Office</b>	Chairman & Module Developer
<b>Back Protection Programme</b>	Chairman & Module Developer
<b>OSH in the Office</b>	Chairman & Module Developer
<b>Ergonomics Sub Committee</b>	Chairman & Module Developer
<b>Safe Handling of Forklift Truck</b>	Module developer and member of Review Board
<b>Safety &amp; Health Officer</b>	Module developer and member of Review Board
<b>Executive Diploma in Safety &amp; Health, OUM</b>	Module developer and member of Review Board
<b>Diploma in Industrial Hygiene, UiTM</b>	Module developer and member of Review Board
<b>Bachelor in Industrial Hygiene, UiTM</b>	Module developer and member of Review Board

## Publication

- Videos** Minimizing Musculoskeletal Disorders in The Workplace; NIOSH, 2002.
- Journals** Norashikin M., Dianna T. K., Raemy M.Z. & Siti Nurani, H. (2015). The effects of office ergonomic training on musculoskeletal complaints, sickness absence, and psychological well-being: a cluster randomized control trial, *Asia Pacific Journal of Public Health* 27 (2), NP1652-NP1668
- RM Zein, I Halim, NA Azis, A Saptari, SR Kamat. (2015). A survey on working postures among Malaysian industrial workers. *Procedia Manufacturing* 2, 450-459
- R Nawawi, BM Deros, DDI Daruis, A Ramli, RM Zein, LH Joseph (2015). Effects of payment method on work control, work risk and work-related musculoskeletal health among sewing machine operators. *Journal of Mechanical Engineering and Sciences* 9 (unknown), 1705-1713
- Norashikin M., Dianna T. K., Raemy M.Z. & Siti Nurani, H. (2011). Ergonomic Training Reduces Musculoskeletal Disorders among Office Workers: Results from the 6-Month Follow-Up, *Malaysian Journal of Medical Sciences School of Medical Sciences, Universiti Sains Malaysia* Vol. 18, Num. 2, 2011, pp. 16-26
- Roshada Daud, Setsuo Maeda, Nur Nazmin Mustafa Kameel, Muhamad Yunus Ripin, Norazman Bakrun, Raemy Md Zein (2004). A pilot study of reference vibrotactile perception thresholds on the fingertip obtained with Malaysian healthy

people using ISO 13091-1 equipment. Industrial Health Volume: 42, Issue: 2, Pages: 189-195

**Proceedings** Raemy Md. Zein (2010); Ergonomics – Overview, Legislation, Standards & Implementation in Malaysia; Proceedings of 3<sup>rd</sup> Conference of Asian OSH Research Institutes; Beijing, China.

Raemy Md. Zein (2009); Inculcating preventive workplace culture : Eliminating the hazards at design stage; Proceeding of 12<sup>th</sup> National Conference of Occupational Safety and Health, NIOSH Malaysia

Isa Halim, Abdul Rahman Omar, Raemy Md Zein (2006). Ergonomic Workstation Design of Metal Stamping Process to Improve Occupational Health in Malaysian Small and Medium Industries (SMLs). Proceeding of International Symposium on Past, Present and Future Ergonomics, Occupational Safety and Health, Bali, Indonesia.

Isa Halim, Abdul Rahman Omar, Raemy Md Zein (2006). Ergonomic Intervention for Metal Stamping Process to Improve Occupational Health in Malaysian Small and Medium Industries (SMLs). Proceeding of International Conference on Technology and Operations Management 2006, Institut Teknologi Bandung, Indonesia

Raemy Md. Zein (2002); Ergonomics Management in Construction Sectors; Proceeding of OSH in the Construction Industries Conference; NIOSH Bangi.

Raemy Md. Zein (2001); Fitness Assessment and Medical Examination for Workers; Proceeding of Malaysian Ergonomics Conference 2001; Intel Malaysia

**Books** Safehandling of Forklift Truck; NIOSH Malaysia (2000)

Physical Fitness Enhancement Guidebook; NIOSH Malaysia (2011)

## Technical Committees

**External** DOSH Ergonomics Guidelines Development Committee  
Involved in the development of the following guidelines

Guidelines for Manual Handling at the workplace (2018) – Members of Drafting Committee & Chairman of Technical Committee  
Guidelines on Ergonomics Risk Assessment at the Workplace (2017) – Members of Drafting Committee and Technical Committee

Human Factors & Ergonomics Society of Malaysia  
Executive Committee Members & Chair of Industrial Linkage Working Group

TC 159 : Technical Committee on Ergonomics, SIRIM (Committee Members)  
Involved in the development of the following standards:

MS 2326:2010 - Ergonomics Of The Thermal Environment - Methods For The Assessment Of Human Responses To Contact With Surfaces At Moderate Temperature  
MS 2327:2010 -Ergonomics Of The Thermal Environment - Application Of Malaysian Standards To People With Special Requirements  
MS 2328-1:2010 -Ergonomics Of The Thermal Environment - Evaluation Of Thermal Environments In Vehicles - Part 1: Principles And Methods For Assessment Of Thermal Stress

MS 2406:2011 -Ergonomics Of Human-System Interaction - Specification For The Process Assessment Of Humansystem Issues

MS ISO 10551:2009 -Ergonomics Of The Thermal Environment - Assessment Of The Influence Of The Thermal Environment Using Subjective Judgement Scales (ISO 10551:1995, ldt)

MS ISO 11079:2008 -Ergonomics Of The Thermal Environment - Determination And Interpretation Of Cold Stress When Using Required Clothing Insulation (Ireq) And Local Cooling Effects (ISO 11079:2007, ldt)

MS ISO 11226:2003 -Ergonomic – Evaluation Of Static Working Postures

MS ISO 11399:2010 -Ergonomics Of The Thermal Environment - Principles And Application Of Relevant International Standards (ISO 11399:1995, ldt)

MS ISO 11428:2009 -Ergonomics - Visual Danger Signals - General Requirements, Design And Testing (ISO 11428:1996, ldt)

MS ISO 11429:2010 -Ergonomics - System Of Auditory And Visual Danger And Information Signals (ISO 11429:1996, ldt)

MS ISO 13688 : 2004 -Protective Clothing – General Requirements

MS ISO 13731:2010 -Ergonomics Of The Thermal Environment - Vocabulary And Symbols (ISO 13731:2001, ldt)

MS ISO 13732-1:2010 -Ergonomics Of The Thermal Environment - Methods For The Assessment Of Human Responses To Contact With Surfaces - Part 1: Hot Surfaces (ISO 13732-1:2006, ldt)

MS ISO 13732-3:2010 -Ergonomics Of The Thermal Environment - Methods For The Assessment Of Human Responses To Contact With Surfaces - Part 3: Cold Surfaces (ISO 13732-3:2005, ldt)

MS ISO 14505-2:2008 -Ergonomics Of The Thermal Environment - Evaluation Of Thermal Environments In Vehicles - Part 2: Determination Of Equivalent Temperature (ISO 14505-2:2006, ldt)

MS ISO 14505-3:2008 -Ergonomics Of The Thermal Environment - Evaluation Of Thermal Environments In Vehicles - Part 3: Evaluation Of Thermal Comfort Using Human Subjects (ISO 14505-3:2006, ldt)

MS ISO 14915-1:2007 -Software Ergonomics For Multimedia User Interfaces - Part 1: Design Principles And Framework

MS ISO 14915-2:2007 -Software Ergonomics For Multimedia User Interfaces - Part 2: Multimedia Navigation And Control (ISO 14915-2:2003, ldt)

MS ISO 14915-3:2007 -Software Ergonomics For Multimedia User Interfaces - Part 3: Media Selection And Combination

MS ISO 15265:2008 -Ergonomics Of The Thermal Environment - Risk Assessment Strategy For The Prevention Of Stress Or Discomfort In Thermal Working Conditions (ISO 15265:2004, ldt)

MS ISO 15536-1:2007 -Ergonomics - Computer Manikins And Body Templates - Part 1: General Requirements (ISO 15536-1:2005, ldt)

MS ISO 15536-2:2007 -Ergonomics - Computer Manikins And Body Templates - Part 2: Verification Of Functions And Validation Of Dimensions For Computer Manikin Systems (ISO 15536-2:2007, ldt)

MS ISO 15743:2010 -Ergonomics Of The Thermal Environment - Cold Workplaces - Risk Assessment And Management (ISO 15743:2008, ldt)

MS ISO 7726:2009 -Ergonomics Of The Thermal Environment - Instruments For Measuring Physical Quantities (ISO 7726:1998, ldt)

MS ISO 7730:2007 -Ergonomics Of The Thermal Environment - Analytical Determination And Interpretation Of Thermal Comfort Using Calculation Of The Pmv And Ppd Indices And Local Thermal Comfort Criteria (ISO 7730:2005, ldt)

MS ISO 7731:2007 -Ergonomics - Danger Signals For Public And Work Areas - Auditory Danger Signals (ISO 7731:2003, ldt)

MS ISO 7933:2007 -Ergonomics Of The Thermal Environment - Analytical Determination And Interpretation Of Heat Stress Using Calculation Of The Predicted Heat Strain (ISO 7933:2004, ldt)

MS ISO 8996:2007 -Ergonomics Of The Thermal Environment - Determination Of Metabolic Rate (ISO 8996:2004, ldt)

MS ISO 9241-110:2007 -Ergonomics Of Human-System Interaction - Part 110: Dialogue Principles (ISO 9241-110:2006, ldt)

MS ISO 9241-151:2010 -Ergonomics Of Human-System Interaction - Part 151: Guidance On World Wide Web User Interfaces (ISO 9241-151:2008, ldt)



MS ISO 9241-171:2010 -Ergonomics Of Human-System Interaction - Part 171: Guidance On Software Accessibility (ISO 9241-171:2008, ldt)

MS ISO 9241-20:2010 -Ergonomics Of Human-System Interaction - Part 20: Accessibility Guidelines For Information/Communication Technology (lct) Equipment And Services (ISO 9241-20:2008, ldt)

MS ISO 9241-210:2011 -Ergonomics Of Human - System Interaction - Part 210: Human-Centred Design For Interactive Systems (ISO 9241-210:2010, ldt)

MS ISO 9241-300:2010 -Ergonomics Of Human-System Interaction - Part 300: Introduction To Electronic Visual Display Requirements (ISO 9241-300:2008, ldt)

MS ISO 9241-302:2010 -Ergonomics Of Human-System Interaction - Part 302: Terminology For Electronic Visual Displays (ISO 9241-302:2008, ldt)

MS ISO 9241-303:2010 -Ergonomics Of Human-System Interaction - Part 303: Requirements For Electronic Visual Displays (ISO 9241-303:2008, ldt)

MS ISO 9241-304:2010 -Ergonomics Of Human-System Interaction - Part 304: User Performance Test Methods For Electronic Visual Displays (ISO 9241-304:2008, ldt)

MS ISO 9241-305:2010 -Ergonomics Of Human-System Interaction - Part 305: Optical Laboratory Test Methods For Electronic Visual Displays (ISO 9241-305:2008, ldt)

MS ISO 9241-306:2010 -Ergonomics Of Human-System Interaction - Part 306: Field Assessment Methods For Electronic Visual Displays (ISO 9241-306:2008, ldt)

MS ISO 9241-307:2010 -Ergonomics Of Human-System Interaction - Part 307: Analysis And Compliance Test Methods For Electronic Visual Displays (ISO 9241-307:2008, ldt)

MS ISO 9241-400:2007 -Ergonomics Of Human-System Interaction - Part 400: Principles And Requirements For Physical Input Devices (ISO 9241-400:2007, ldt)

MS ISO 9241-410:2009 -Ergonomics Of Human-System Interaction - Part 410: Design Criteria For Physical Input Devices (ISO 9241-410:2008, ldt)

MS ISO 9241-920:2010 -Ergonomics Of Human-System Interaction - Part 920: Guidance On Tactile And Haptic Interactions (ISO 9241-920:2009, ldt)

MS ISO 9886:2007 -Ergonomics - Evaluation Of Thermal Strain By Physiological Measurements (ISO 9886:2004, ldt)

MS ISO 9920:2009 -Ergonomics Of The Thermal Environment - Estimation Of Thermal Insulation And Water Vapour Resistance Of A Clothing Ensemble (ISO 9920:2007, ldt)

MS ISO 9921:2007 -Ergonomics - Assessment Of Speech Communication (ISO 9921:2003, ldt)

MS ISO/Ts 16071:2007 -Ergonomics Of Human-System Interaction - Guidance On Accessibility For Human-Computer Interfaces (ISO/Ts 16071:2003, ldt)

MS ISO/Ts 20646-1:2007 -Ergonomic Procedures For The Improvement Of Local Muscular Workloads - Part 1: Guidelines For Reducing Local Muscular Workloads (ISO/Ts 20646-1:2004, ldt)

**Internal** Technical committee for Construction Examination, NIOSH (Committee Members)

Organizing Committee for Scientific Conference on Occupational Safety and Health 2014 (Chair, Scientific Committee)

Organizing Committee for Scientific Conference on Occupational Safety and Health 2016 (Organizing Secretariate)

Organizing Committee for Scientific Conference on Occupational Safety and Health 2018 (Member, Scientific Committee)