
BIOGRAPHICAL SKETCH

NAME Ashish D. Nimbarte	POSITION TITLE Professor
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EDUCATION

Institute and location	Degree	Year conferred	Field of study
Nagpur University, Maharashtra, India	B.E.	2000	Production Engineering
Louisiana State University, Baton Rouge, LA	M.S.	2005	Industrial Engineering
Louisiana State University, Baton Rouge, LA	Ph.D.	2009	Engineering Science (Major: Industrial Engineering)

A. Personal Statement

I joined the Industrial and Management Systems Engineering (IMSE) department at West Virginia University (WVU) in August 2009. I was promoted to the rank of Associate Professor with tenure in August 2015. I have also been serving as the Graduate Program Coordinator for the Industrial Engineering program since 2015.

Over the last few years, while maintaining my main research thrust in Ergonomics, I have broadened my research expertise to the areas of energy efficiency, pollution prevention, lean implementations, and waste management to develop research projects that apply a holistic approach based on modern Industrial Engineering methods and principles. These projects involve close collaboration with regional manufacturing businesses and are aimed at productivity improvement through a synergistic integration of various production-related entities. My funded research activities over the last few years fit within the Statler College of Engineering's research focus area of "sustainable resource utilization and development" and it also helps advance WVU's Strategic Goal 2 on "economic development throughout the state".

A few highlights of my accomplishments are listed below:

- Published 52 peer-reviewed journal papers (22 since 2015 and six papers under review)
- Funded research of \$9 million as a Principal Investigator (PI) and Co-PI with my share of \$3.5 million (\$7 million since 2015 with my share of nearly \$3 million)
- Graduated 31 students – 7 with the Ph.D. degree and 24 with M.S. degree
- Awarded Excellence in Research award in 2020 by Statler College of Engineering at WVU
- Served on the editorial boards of five (5) top tier Ergonomics peer-reviewed scientific journals
- Served as the president of the International Society for Occupational Ergonomics and Safety (ISOES) (2017-18) and Institute of Industrial and Systems Engineers (IISE) – Construction Division (2016-17)

B. Positions and Honors

Academic Positions

August 2021 – Present	Professor with tenure, Interim Chair, Graduate Program Coordinator, Department of Industrial & Management Systems Engineering, West Virginia University.
May 2021 – Present	Professor with tenure, Graduate Program Coordinator, Department of Industrial & Management Systems Engineering, West Virginia University.
May 2015 – Present	Associate Professor with tenure, Graduate Program Coordinator, Department of Industrial & Management Systems Engineering, West Virginia University.
Aug 2009 – May 2015	Assistant Professor, Department of Industrial & Management Systems Engineering, West Virginia University.
Aug 2006 – Jun 2009	Graduate Research Assistant, Human Factors Engineering and Biomechanics Lab, Department of Construction Management & Industrial Engineering, Louisiana State University.
Aug 2005 – Aug 2006	Research Assistant, Hand Research Lab, Department of Orthopedic Surgery and Bioengineering, University of Pittsburgh.
Aug 2004 – May 2005	Graduate Research Assistant, Motor Behavior Lab, Department of Kinesiology, Louisiana State University.
Aug 2001 – May 2004	Graduate Assistant, Occupational Biomechanics Lab, Department of Industrial & Manufacturing Systems Engineering, Louisiana State University.

Honors

2021	Educator of the Year award, Benjamin M. Statler College of Engineering and Mineral Resources, West Virginia University
2020	Outstanding Researcher award, Benjamin M. Statler College of Engineering and Mineral Resources, West Virginia University
2014	Outstanding Teacher Award, Benjamin M. Statler College of Engineering and Mineral Resources, West Virginia University
2008	Best Paper Award: Institute of Industrial Engineers Annual Conference, for the conference paper “Evaluation of neck disorders among the construction workers: a laboratory study using electromyography” (Presented at 2008 Conference, May 17-21, Vancouver, Canada).
Aug 2008 – May 2009	Graduate Dissertation Fellowship: 2008-2009, by Louisiana State University Graduate School.

2008 Watumull Foundation Scholar: Award by Watumull Foundation and International Services Office, Louisiana State University.

Other Professional Experience

Sept 2020 – Present Senior Editor, Ergonomics in Design

Jan 2019 – Aug 2020 Associate Editor, Ergonomics in Design

Jan 2016 – Present Contractor, Protective Technology Branch, Division of Safety Research, NIOSH, Morgantown

Jun 2017 – Jun 2018 President, International Society for Occupational Ergonomics & Safety (ISOES)

Jun 2016 – Jun 2017 President, Institute of Industrial and Systems Engineers (IISE) – Construction Division

Dec 2015 – Present Editorial Board Member, Applied Ergonomics

April 2015 – Present Editorial Board Member, International Journal of Industrial Ergonomics

Jan 2015 – Present Editorial Board Member, IISE Transactions on Occupational Ergonomics and Human Factors

Jan 2015– Present Editor, Journal of Industrial and Systems Engineering Review

Jan 2015 – 2018 Editorial Board Member, WORK: A Journal of Prevention, Assessment & Rehabilitation

Aug 2014 – May 2015 Co-chair, Institute of Industrial Engineers Construction Division's Research track

May 2014 – Dec 2014 Technical Editor, International Journal of Occupational Safety and Health

Aug 2012 – 2018 Executive Committee Member, International Society for Occupational Ergonomics & Safety

Aug 2012 – 2016 Newsletter Editor, International Society for Occupational Ergonomics & Safety

Aug 2011 – 2018 Member, Residency Advisory Committee, Institute of Occupational & Environmental Health, School of Medicine, West Virginia University

Aug 2007 – Present Member, Alpha Pi Mu (Industrial Engineering Honor Society)

C. Publications

Refereed Journal Publications

(*student author)

- [1] Simeonov,P., Hsiao,H., **Nimbarte, A.**, Current,R., Ammons,D., Choi, H., Rahman,M., Weaver, D. (2021) “Evaluation of advanced curve speed warning system for fire trucks” Applied Ergonomics: In press
- [2] **Nimbarte, A. D.**, Smith*, N., Gopalakrishnan, B. (2021) “Human factors evaluation of energy visualization dashboards” Ergonomics in Design: In press
- [3] Botts*, A., Gopalakrishnan, B., **Nimbarte, A.**, Currie, K.R., Karki*, V. (2021) “Energy efficiency of blower heater non-purge compressed air dryers” Int. J. Energy Technology and Policy, 17 (3), 239-262.
- [4] Motabar*, H., **Nimbarte, A. D.** (2021) “Sex differences in rotator cuff muscle responses to various work-related factors” IISE Transactions on Occupational Ergonomics and Human Factors: In press <https://doi.org/10.1080/24725838.2021.1931562>
- [5] Motabar*, H., **Nimbarte, A. D.** (2021) “The effect of task rotation on activation and fatigue response of rotator cuff muscles during overhead work” Applied Ergonomics: In press
- [6] Alessa*, F., **Nimbarte, A. D.**, Sosa, E. (2020) “Incidences and severity of wrist, hand, and finger injuries in the U.S. mining industry.” Safety Science 129 (2020): 104792. <https://doi.org/10.1016/j.ssci.2020.104792>
- [7] Mandlem*, K., Gopalakrishnan, B., **Nimbarte, A.**, Mostafa, R., Das, R. (2020) “Energy efficiency effectiveness of smart thermostat based bems.” Energy Engineering 117(4): 165–183.
- [8] Botts*, A., Gopalakrishnan, B., **Nimbarte, A.**, Currie, K.R., Karki, V. (2020) “Energy efficiency of blower heater non-purge compressed air dryers.” International Journal of EnergyTechnology and Policy: In press
- [9] Alasim*, H. N., and **Nimbarte, A. D.** (2019) “Variability of electromyographic spectral measures in non-fatigued shoulder muscles and implications for assessing muscle fatigue.” IISE Transactions on Occupational Ergonomics and Human Factors 7(2): 119-131. <https://doi.org/10.1080/24725838.2019.1636898>
- [10] Smith*, N., **Nimbarte, A. D.**, Gopalakrishnan, B., Wuest, T. (2019) “Real-time energy visualization system for light commercial businesses.” Sustainable Energy Technologies and Assessments 34: 68-76. <https://doi.org/10.1016/j.seta.2019.04.005>
- [11] Motabar*, H., **Nimbarte, A. D.**, Raub*, E. (2019) “Strength, endurance and fatigue response of rotator cuff muscles during isometric exertions.” International Journal of Industrial Ergonomics 71: 128-135. <https://doi.org/10.1016/j.ergon.2019.03.001>
- [12] Zhu*, J., He, X., Bergman, M. S., Guffey, S., **Nimbarte, A. D.**, Zhuang, Z. (2019) “A pilot study

of minimum operational flow for loose-fitting powered air-purifying respirators used in healthcare cleaning services." Journal of occupational and environmental hygiene **16**(7): 440-445. <https://doi.org/10.1080/15459624.2019.1605241>

- [13] Alasim*, H., **Nimbarte A. D.**, Jaridi M. (2019) "Impact of pulling direction and magnitude of force exertion on the activation of shoulder muscles." International Journal of Industrial Ergonomics **69** (2019):14-22. <https://doi.org/10.1016/j.ergon.2018.09.008>
- [14] Chowdhury* S. K., **Nimbarte A. D.**, Hsiao H., Gopalakrishnan B., Jaridi M. (2018) "A biomechanical shoulder strain index based on stabilizing demand of shoulder joint." Ergonomics **61**(12):1657-1670. <https://doi.org/10.1080/00140139.2018.1499967>
- [15] Kannegantia*, H., Gopalakrishnan, B., Crowe, E., Al-Shebeeb*, O., Yelamanchi*, T., **Nimbarte, A.**, Currie, K., Abolhassani*, A. (2017) "Specification of energy assessment methodologies to satisfy ISO 50001 energy management standard." Sustainable Energy Technologies and Assessments **23** (2017):121-135. <https://doi.org/10.1016/j.seta.2017.09.003>
- [16] Sun*, Y., **Nimbarte, A. D.**, Motabar*, H. (2017) "Physical risk factors associated with the work-related neck/cervical musculoskeletal disorders: a review." Industrial and Systems Engineering Review **5**(1): 44-60.
- [17] Chowdhury*, S. K. and **Nimbarte, A. D.** (2017) "The effects of exertions, fatigue and window size on the stationarity of the surface electromyography signal." International Journal of Industrial Ergonomics **61**(2017): 120-125. <https://doi.org/10.1016/j.ergon.2017.05.004>
- [18] Kaiser*, J.J., **Nimbarte, A.D.**, Davari*, D, Gopalakrishnan, B., He, X. (2017) "Study of skin conductance and perceived discomfort of the hand/finger system under controlled atmospheric conditions." Theoretical Issues in Ergonomics Science **18**(5): 442-454. <https://doi.org/10.1080/1463922X.2016.1274453>
- [19] Latif* H. H., Gopalakrishnan, B., **Nimbarte, A.D.**, Currie, K. (2017) "Sustainability index development for manufacturing Industry." Sustainable Energy Technology and Assessments Journal **24** (2017): 82-95. <https://doi.org/10.1016/j.seta.2017.01.010>
- [20] Rohit*, F., Kulathumani, V., Kavi*, R., Elwarfalli*, I., Kecojevic, V., **Nimbarte, A.** (2017) "Real-time drowsiness detection using wearable, lightweight brain sensing headbands." IET Intelligent Transport Systems **11**(5), 255-263. <https://doi.org/10.1049/iet-its.2016.0183>
- [21] Eddy*, M., Moore*, C., **Nimbarte, A.D.** (2016) "Evaluation of shoulder strain during multi-directional forceful arm exertions." Occupational Ergonomics **13**(3-4): 131-138. <https://doi.org/10.3233/OER-170248>
- [22] Cutlip*, K., and **Nimbarte, A. D.** (2016) "Multi-direction strength and perceived discomfort of shoulder complex." Occupational Ergonomics **13**(2): 91-99. <https://doi.org/10.3233/OER-160243>
- [23] Kavuri*, A., Prakash*, B., Sabniveesu*, V., **Nimbarte, A.**, Kulathumani, V., Kecojevic, V. (2016) "An adaptive, run-time navigation system for haul trucks in surface mines." International Journal of Mining, Reclamation and Environment **31**(5): 364-374. <https://doi.org/10.1080/17480930.2016.1148566>

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- [24] Sabniveesu*, V., Kavuri*, A., Kavi*, R., Kulathumani, V., Kecojevic, V., **Nimbarte, A.** (2015) "Use of wireless, ad-hoc networks for proximity warning and collision avoidance in surface mines." International Journal of Mining, Reclamation and Environment **29**(5): 331-346. <https://doi.org/10.1080/17480930.2015.1086550>
- [25] Sivak-Callcott, J. A., Mancinelli, C.A., **Nimbarte, A. D.** (2015) "Cervical occupational hazards in ophthalmic plastic surgery: What do we know? What can we do?" Current Opinion in Ophthalmology **26**(5): 392–398. <https://doi.org/10.1097/ICU.0000000000000182>
- [26] Ning, X., Huang*, Y., Hu*, B., **Nimbarte, A. D.** (2015) "Neck kinematics and muscle activity during mobile device operations." International Journal of Industrial Ergonomics **48**:(2015), 10-15. <https://doi.org/10.1016/j.ergon.2015.03.003>
- [27] Cutlip*, K., **Nimbarte, A. D.**, Chowdhury*, S. K., Jaridi, M. (2015) "Evaluation of shoulder stability during forceful arm exertions." Industrial and Systems Engineering Review **3**(1): 49-58
- [28] Chowdhury*, S. K., Moore, C. W., **Nimbarte, A. D.** (2015) "Effects of lift-assist device on trunk and shoulder kinematics." International Journal of Occupational Safety and Health **5**(1):1-6. <https://doi.org/10.3126/ijosh.v5i1.16632>
- [29] Chowdhury*, S. K. and **Nimbarte, A. D.** (2015) "Comparison of Fourier and Wavelet analysis for fatigue assessment during repetitive dynamic exertion." Journal of Electromyography & Kinesiology **25** (2): 205–213. <https://doi.org/10.1016/j.jelekin.2014.11.005>
- [30] **Nimbarte, A. D.**, Zreiqat*, M. Ning, X. (2014) "Impact of shoulder position and fatigue on the flexion-relaxation response in cervical spine." Clinical Biomechanics **29**(3): 277-282. <https://doi.org/10.1016/j.clinbiomech.2013.12.003>
- [31] Moore*, C. W., **Nimbarte, A. D.**, Rajulu, S. (2014) "Kinematic compatibility between the body and a mock spacesuit during basic upper body motions." International Journal of Industrial Ergonomics **44**(5): 739-746. <https://doi.org/10.1016/j.ergon.2014.06.003>
- [32] **Nimbarte, A. D.** (2014) "Risk of neck musculoskeletal disorders among males and females in lifting exertions." International Journal of Industrial Ergonomics **44**(2): 253-259. <https://doi.org/10.1016/j.ergon.2013.01.007>
- [33] **Nimbarte, A. D.**, Zreiqat*, M. Chowdhury*, S. K. (2014) "Cervical flexion relaxation response to neck muscle fatigue in males and females." Journal of Electromyography and Kinesiology **24**(6): 965-971. <https://doi.org/10.1016/j.jelekin.2014.09.002>
- [34] Zhou*, J., Ning, X., **Nimbarte, A. D.**, Dai, F. (2014) "The assessment of material handling strategies in dealing with sudden loading: The effect of uneven ground surface on trunk biomechanical responses." Ergonomics **58** (2): 259-267. <https://doi.org/10.1080/00140139.2014.965229>
- [35] Moore*, C. W., **Nimbarte, A. D.**, Rajulu, S., Ning, X., Guffey, S. (2014) "Effect of seat orientation on ingress/egress joint kinematics and reach envelope." Occupational Ergonomics: **11**(4), 137-151. <https://doi.org/10.3233/OER-140213>

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- [36] Chowdhury*, S. K., **Nimbarte, A. D.**, Jaridi, M., Creese, R. C. (2013) "Discrete wavelet transform analysis of surface electromyography for the fatigue assessment of neck and shoulder muscles." Journal of Electromyography and Kinesiology **23**(5): 995-1003. <https://doi.org/10.1016/j.jelekin.2013.05.001>
- [37] Hu*, B., Ning, X., **Nimbarte, A. D.** (2013) "The changes of lumbar muscle flexion-relaxation response due to laterally slanted ground surfaces." Ergonomics **56**(8): 1295-1303. <https://doi.org/10.1080/00140139.2013.803161>
- [38] Moore*, C., **Nimbarte, A. D.**, Sun*, Y. (2013) "Kinematics of cart pushing and pulling under different load weights and surface gradient conditions." Occupational Ergonomics **11**(2-3): 75-84. <https://doi.org/10.3233/OER-130208>
- [39] **Nimbarte, A. D.**, Alabdulmohsen*, R. T., Guffey, S. E., Etherton, J. (2013) "The impact of dual-screen monitor use on neck muscle activity and 3D head/neck posture." IIE Transactions on Occupational Ergonomics and Human Factors **1**(1): 38-49. <https://doi.org/10.1080/21577323.2012.667051>
- [40] **Nimbarte, A. D.**, Chowdhury*, S. K., Cartwright, D. (2013) "Empirical evaluation of neck muscle fatigue generated by healthcare related exertions." Safety Science **57**: 100-107. <https://doi.org/10.1016/j.ssci.2013.01.019>
- [41] **Nimbarte, A. D.**, Sivak-Callcott, J. A., Zreiqat*, M., Chapman*, M. (2013) "Neck postures and cervical spine loading among microsurgeons operating with loupes and headlamp." IIE Transactions on Occupational Ergonomics and Human Factors **1**(4): 215-223. <https://doi.org/10.1080/21577323.2013.840342>
- [42] **Nimbarte, A. D.**, Sun*, Y., Jaridi, M., Hsiao, H. (2013) "Biomechanical loading of the shoulder complex and lumbosacral joints during dynamic cart pushing task." Applied Ergonomics **44**(5): 841-849. <https://doi.org/10.1016/j.apergo.2013.02.008>
- [43] Moore*, C., **Nimbarte, A. D.**, Rajulu, S., Aghazadeh, F. (2012) "A study of the kinematics of ingress and egress of upright and recumbent seats." WORK: A Journal of Prevention, Assessment, and Rehabilitation **41**(1): 1316-1322. <https://doi.org/10.3233/WOR-2012-0317-1316>
- [44] Nabatilan, L. B., Aghazadeh, F., **Nimbarte, A. D.**, Harvey, C. M., Chowdhury*, S. K. (2012) "Effect of driving experience on visual behavior and driving performance under different driving conditions." Cognition, Technology & Work **14**(4): 355-363.
- [45] **Nimbarte, A. D.**, Aghazadeh, F., Ikuma, L. H., Sun*, Y. (2012) "Evaluation of overhead pushing and pulling exertions on the loading of neck and shoulder musculature." Human Factors and Ergonomics in Manufacturing & Service Industries **22**(4): 317-327. <https://doi.org/10.1002/hfm.20283>
- [46] **Nimbarte, A. D.**, Al Hassan*, M. J., Guffey, S. E., Myers, W. R. (2012) "Influence of psychosocial stress and personality type on the biomechanical loading of neck and shoulder muscles." International Journal of Industrial Ergonomics **42**(5): 397-405. <https://doi.org/10.1016/j.ergon.2012.05.001>

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- [47] Sun*, Y. and **Nimbarte, A. D.** (2012) "Effect of horizontal pushing and pulling exertions on neck muscle activity." Occupational Ergonomics **10**(4): 155-164. <https://doi.org/10.3233/OER-2012-0199>
- [48] Hatipkarasulu*, G. S., Aghazadeh, F., **Nimbarte, A. D.** (2011) "Loading and recovery behavior of the human lumbar spine under static flexion." WORK: A Journal of Prevention, Assessment, and Rehabilitation **38**(2): 111-122. <https://doi.org/10.3233/WOR-2011-1113>
- [49] Sivak-Callcott, J. A., Diaz, S. R., Ducatman, A., Rosen, C., **Nimbarte, A. D.**, Sedgeman, J. (2011) "A survey study of occupational pain and injury in ophthalmic plastic surgeons." Ophthalmic Plastic and Reconstructive Surgery **27**(1): 28-32. <https://doi.org/10.1097/IOP.0b013e3181e99cc8>
- [50] **Nimbarte, A. D.** and Li, L. (2011) "Effects of added weights on the characteristics of vertical ground reaction force during walk-to-run gait transition." Human Movement **12**(1): 81-87. <https://doi.org/10.2478/v10038-010-0028-9>
- [51] **Nimbarte, A. D.**, Aghazadeh, F., Ikuma, L. H., Harvey, C. M. (2010) "Neck disorders: understanding the physical loads on the cervical spine during static lifting." Industrial Health **48**(2): 145-153. <https://doi.org/10.2486/indhealth.48.145>
- [52] **Nimbarte, A. D.**, Bogolu*, S. R., Aghazadeh, F., Rajulu, S. L. (2009) "Isokinetic strength measurement at different speeds using a multipurpose, multi-axial dynamometer." International Journal of Occupational Safety and Ergonomics **15**(3): 255-263. <https://doi.org/10.1080/10803548.2009.11076806>
- [53] **Nimbarte, A. D.**, Kaz, R., Li, Z. M. (2008) "Finger joint motion generated by individual extrinsic muscles: a cadaveric study." Journal of Orthopedic Surgery and Research **3**(1): 1-7.
- [54] **Nimbarte, A. D.**, Amin*, M. M., Aghazadeh, F. (2008) "Oral temperature circadian rhythm and its influence on the physical and mental performance." Ergonomia IJE&HF **30**(3): 221-229.
- [55] Li, Z. M. and **Nimbarte, A. D.** (2006) "Peripheral median nerve block impairs precision pinch movements." Clinical Neurophysiology **117**(9): 1941-1948.
- [56] **Nimbarte, A. D.**, Aghazadeh, F., Harvey, C. M. (2005) "Comparison of current U.S. and Canadian cigarette pack warnings." International Quarterly of Community Health Education **24**(1): 3-27.
- [57] **Nimbarte, A. D.**, Aghazadeh, F., Harvey, C. M. (2005) "Effect of back belt on posture and inter-joint coordination under self selected manual lifting technique." Occupational Ergonomics **5**(4): 219-233.
- [58] Aghazadeh, F. and **Nimbarte, A. D.** (2004) "Occupational injuries of veterinarians." Journal of Animal and Veterinary Advances **3**(10): 709-718.

Refereed Journal Publications - Under Review

- [59] Alasim*, H. N., and **Nimbarte, A. D.** "A study of localized muscle fatigue and variability of electromyography measures for shoulder muscles." Theoretical Issues in Ergonomics Science
- [60] Jammulamadaka*, H.S., Gopalakrishnan, B., **Nimbarte, A. D.**, Mehta, A.R., "Evaluation of energy efficiency performance of heated windows." Applied Energy

Refereed Conference Proceedings

- [1] Mubarrat*, S.T., Chowdhury, S.K, and **Nimbarte, A.D.** (2020) "Predicting shoulder joint reaction forces from 3d body kinematics: a convolutional neural network approach." Proceedings of the Human Factors and Ergonomics Society's Annual Meeting: October 5-9, Virtual meeting
- [2] Mahareddy*, M.K., Gopalakrishnan, B., Abolhassani*, A., **Nimbarte, A.D.** (2016) "Energy profiling analysis based on energy assessments for small rural businesses in West Virginia." Proceedings of 9th International Conference Improving Energy Efficiency in Commercial Buildings and Smart Communities: March 16-18, Frankfurt, Germany
- [3] Zhou*, J., Ning, X., **Nimbarte, A. D.** and Dai, B. (2014). "The effect of load holding height on trunk biomechanics during sudden loading." Proceedings of the Human Factors and Ergonomics Society' Annual Meeting: October 27-31, Chicago, IL, USA.
- [4] Cutlip*, K., **Nimbarte, A. D.**, Ning, X. and Jaridi, M. (2014). "A biomechanical strain index to evaluate shoulder stress." Proceedings of the Annual Industrial Systems Engineering Research Conference: May 31-June 33, Montreal, Canada.
- [5] Hu*, B., Ning, X. and **Nimbarte, A. D.** (2013). "Changes of lumbar muscle flexion relaxation phenomenon when standing on unilaterally elevated ground." Proceedings of the Human Factors and Ergonomics Society's Annual Meeting: September 30-October 34, San Diego, CA, USA.
- [6] **Nimbarte, A. D.**, Zreiqat*, M., Moore, C. and Ning, X. (2013). "Flexion-relaxation response induced by neck extensor muscle fatigue." Proceedings of the Annual Industrial Systems Engineering Research Conference: May 18-22, San Juan, PR, USA.
- [7] Chowdhury*, S. K., **Nimbarte, A. D.**, Jaridi, M. and Creese, R. C. (2012). "Assessment of neck muscle fatigue using discrete wavelet transforms of electromyography." Proceedings of the Human Factors and Ergonomics Society's Annual Meeting: October 22-26, Boston, MA, USA.
- [8] **Nimbarte, A. D.**, Zreiqat*, M., Chapman, M. and Sivak-Callcott, J. A. (2012). "Physical risk factors for neck pain among oculoplastic surgeons." Proceedings of the Annual Industrial and Systems Engineering Research Conference: May 19-23, Orlando, FL, USA.
- [9] Sun*, Y., **Nimbarte, A. D.**, Jaridi, M. and Hsiao, H. (2012). "Biomechanical loading of shoulder joints during dynamic cart pushing tasks." Proceedings of the Annual Industrial and Systems

Engineering Research Conference: May 19-23, Orlando, FL, USA.

- [10] Sun*, Y., Moore, C. and **Nimbarte, A. D.** (2011). "Musculoskeletal loading during dynamic two-wheeled cart pushing and pulling." Proceedings of the Institute of Industrial Engineers Annual Conference: May 21-25, Reno, NV, USA.
- [11] **Nimbarte, A. D.**, Aghazadeh, F. and Sun*, Y. (2010). "Understanding the physical risk factors affecting cervical musculoskeletal disorders." Proceedings of Human Factors and Ergonomics Society's Annual Meeting: September 27-October 21, San Francisco, CA, USA.
- [12] **Nimbarte, A. D.**, Unnikrishnan, A. and Aghazadeh, F. (2010). "Loading of cervical spine during isometric overhead exertions." Proceedings of the Institute of Industrial Engineers' Annual Conference: June 5-9, Cancún, Mexico.
- [13] **Nimbarte, A. D.**, Aghazadeh, F. and Ikuma, L. H. (2009). "Evaluation of risk factors for cervical spine disorders due to manual material handling tasks." Proceedings of the International Ergonomics Association's Triennial Congress: August 9-14, Beijing, China.
- [14] **Nimbarte, A. D.** (2008). "Evaluation of neck disorders among the construction workers: a laboratory study using electromyography." Proceedings of the Institute of Industrial Engineers' Annual Conference: May 17-21, Vancouver, Canada.
- [15] **Nimbarte, A. D.**, Kaz, R. and Li, Z. M. (2006). "Index finger joint motion generated by individual extrinsic muscles: a cadaveric study." Proceedings of American Society of Biomechanics' Annual Conference: September 6-9, Blacksburg, VA, USA.
- [16] Aghazadeh, F., **Nimbarte, A. D.**, Bairi, M. and Latham, T. (2003). "Cigarette warning labels: A survey." Proceedings of the International Ergonomics Association's Triennial Congress: August 24-29, Seoul Korea.

Non-refereed (abstract peer-reviewed) Conference Proceedings and Presentations

- [1] Moore*, C., **Nimbarte, A.D.**, (2019) "Muscle recruitment strategy for musculoskeletal modeling of the shoulder." Proceedings of the 8th Annual World Conference of the Society for Industrial and Systems Engineering, Baltimore, Maryland, USA, October 17-18
- [2] Moore*, C., **Nimbarte, A.D.**, (2019) "Development of a predictive equation to estimate strain at the shoulder." Proceedings of the 8th Annual World Conference of the Society for Industrial and Systems Engineering, Baltimore, Maryland, USA, October 17-18
- [3] Eddy*, M., Moore*, C., **Nimbarte, A.** (2018) "Biomechanical Computation of Shoulder Strain During Multi-Directional Forceful Arm Exertions." Proceedings of the XXXth Annual Occupational Ergonomics and Safety Conference, Pittsburgh, Pennsylvania, USA, June 7-8, 2018
- [4] Motabar*, H., Raub*, E., **Nimbarte, A.D.** (2017) "Gender difference in safe loading thresholds for rotator cuff muscles." Proceedings of the XXIXth Annual Occupational Ergonomics and Safety Conference, Seattle, WA, USA June 1-2 2017

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- [5] Chowdhury*, S.K., Moore*, C., Nimbarte, A.D., (2017) "Evaluation of a construction block lift-assist device." Presentation at the Institute of Industrial and Systems Engineers Annual Conference, Pittsburgh, Pennsylvania, USA, May 20-23
- [6] Eddy*, M., Moore, C., Nimbarte, A. (2017) "Evaluation of shoulder strain during multi-directional forceful arm exertions." Presentation at the Institute of Industrial and Systems Engineers Annual Conference, Pittsburgh, Pennsylvania, USA, May 20-23
- [7] Zreiqat*, M., **Nimbarte, A.D.** (2017) "Quantify the postfatigue changes and recovery of cervical spine stability." Poster presentation at Applied Ergonomics Annual Conference, Orlando, FL, USA, March 27-30
- [8] Motabar*, H., Raub, E., **Nimbarte, A.D.**, and Nabiyouni, I., (2016) "Loading thresholds for rotator cuff muscles." Proceedings of the XXVIIIth Annual Occupational Ergonomics and Safety Conference, Chicago, Illinois, USA June 9-10, 2016
- [9] Chowdhury*, S. K. and **Nimbarte, A.D.**, (2016) "Electromyography based global muscle fatigue index formulation" Paper presented at the Annual Industrial Systems Engineering Research Conference: May 21-24, Anaheim, CA, USA.
- [10] Kaiser, J., **Nimbarte, A.**, and Davari*, D., (2015) "Hydration study of fingers/hand/nail system to understand mechanism of glove-related injuries." Proceedings of the XXVIIth Annual Occupational Ergonomics and Safety Conference, Nashville, Tennessee, USA May 28-29, 2015
- [11] **Nimbarte, A.D.**, (2015) "Fatigue induced changes in the stability of the cervical spine." Paper presented at the Annual Industrial and Systems Engineering Research Conference , Nashville, Tennessee, USA May 30- June 2
- [12] Zreiqat*, M. and **Nimbarte, A. D.** (2014). "Fatigue induced changes in the cervical spine reflex response." Proceedings of the XXVI Annual International Occupational Ergonomics and Safety Conference: June 5-6, El Paso, TX, USA.
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- [15] Cutlip*, K., **Nimbarte, A. D.** and Moore*, C. (2013). "Stability of the shoulder complex during manual exertions." Proceedings of the XXV Annual International Occupational Ergonomics and Safety Conference: June 6-7, Atlanta, GA, USA.
- [16] Moore*, C., **Nimbarte, A. D.** and Rajulu, S. (2013). "Effect of display position and direction of motion on the ingress/egress kinematics." Proceedings of the XXV Annual International Occupational Ergonomics and Safety Conference: June 6-7, Atlanta, GA, USA.
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- study low back kinematics of working dogs." Proceedings of the XXV Annual International Occupational Ergonomics and Safety Conference: June 6-7, Atlanta, GA, USA.
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- [26] **Nimbarte, A. D.**, Moore*, C., Sun*, Y. and Meador*, J. (2011). "Biomechanical evaluation of concrete block handling tool." Paper presented at the Annual Institute of Industrial Engineers Conference: May 21-25, Reno, NV, USA.
- [27] **Nimbarte, A. D.**, Alabdulmohsen*, R. T., Sun*, Y., Moore*, C. and Alhassan*, A. (2011). "Effect of single/dual monitor use on behavior of neck-shoulder musculature." Paper presented at the Annual Institute of Industrial Engineers Conference: May 21-25, Reno, NV, USA.
- [28] **Nimbarte, A. D.**, Sun*, Y., Sivak-Callcott, J. and Li, J. (2011). "Cervical load due to operating with surgical loupes." Paper presented at the 14th Annual Applied Ergonomics Conference:

March 21- 24, Orlando, FL, USA.

- [29] Sivak-Callcott, J. A., Diaz, S. R., Ducatman, A. M., Rosen, C. L., **Nimbarte, A. D.** and Sedgeman, J. A. (2011). "Occupational pain and injury in ophthalmic plastic surgeons." Paper presented at the American Society of Ophthalmic Plastic Surgeons' Spring Meeting: May 12-15, Amelia Island, FL, USA.
- [30] Sivak-Callcott, J. A., **Nimbarte, A. D.** and Gritsenko, V. (2011). "Quantification of cervical spine load." Paper presented at the American Society of Ophthalmic Plastic Surgeons' Spring Meeting: May 12-15, Amelia Island, FL, USA.
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- [35] Li, Z. M., Tang, J., Chakan, M. C., **Nimbarte, A. D.** and Kaz, R. (2006). "Carpal tunnel expansion by stretching the transverse carpal ligament." Proceedings of the World Congress of Biomechanics: July 29 - August 24, Munich, Germany.
- [36] **Nimbarte, A. D.** and Li, L. (2005). "The ground reaction forces and the gait transitional behavior relationship are influenced by additional weight." Poster presented at the Annual American College of Sports Medicine Conference: June 1 - 4, Nashville, TN, USA.
- [37] **Nimbarte, A. D.** and Aghazadeh, F. (2004). "Postural changes caused by back belt." Proceedings of the XVIII Annual International Occupational Ergonomics and Safety Conference: May 19-22, Houston, TX, USA.

Other Publications

- [1] **Nimbarte, A. D.**, Kaz, R., Yoo, Y. and Li, Z. M. (2006). "Index finger joint motion actuated by individual extrinsic muscles: a cadaveric study." Proceedings of the Pittsburgh Orthopedics Journal.
- [2] **Nimbarte, A. D.** and Li, Z. M. (2006). "Carpal tunnel pressure regulated by wrist position." Proceedings of the Pittsburgh Orthopedics Journal.
- [3] **Nimbarte, A. D.**, Tang, J. and Li, Z. M. (2006). "Carpal tunnel pressure elevated by the

externally applied force." Proceedings of the Pittsburgh Orthopedics Journal.

- [4] Li, Z. M. and **Nimbarte, A. D.** (2006). "Peripheral median nerve lesion impairs precision pinch movements." Proceedings of the Pittsburgh Orthopedics Journal.
- [5] Li, Z. M., Tang, J., Chakan, M. C., Kaz, R. and **Nimbarte, A. D.** (2006). "Carpal tunnel expansion by stretching the transverse carpal ligament." Proceedings of the Pittsburgh Orthopedics Journal.

Invited Lectures and Presentations

- [1] **Nimbarte, A. D.** (2013). "Protecting yourself in the operating room." American Academy of Ophthalmology Annual Meeting: New Orleans, LA, November 16-19.
- [2] **Nimbarte, A. D.** (2011). "Biomechanics research methods/tools used in ergonomics." Occupational Medicine Rounds, Institute of Occupational and Environmental Health, West Virginia University: Morgantown, WV, February 14.
- [3] **Nimbarte, A. D.** (2011). "Evaluation of work-related neck disorders using a biomechanical approach." Meeting of Northern WV Chapter of the American Society of Safety Engineers (ASSE): Morgantown, WV, March 17.
- [4] **Nimbarte, A. D.** (2009). "Work related neck/cervical spine disorders." Occupational Medicine Rounds, Institute of Occupational and Environmental Health, West Virginia University: Morgantown, WV, December 8
- [5] **Nimbarte, A. D.** (2009). "Physical risk factors associated with work related cervical spine disorders." Meeting of Northern WV Chapter of the American Society of Safety Engineers (ASSE): Morgantown, WV, October 15.

D. Research Support

Research Grants and Projects Funded from 2015 to present

No.	Short title (funding agency)	Role	Dates	Total Budget	My share
1	P2 for metal manufacturing (EPA)	PI	10/20 to 9/22	\$434,896	\$325,843
2	Benchmarking (DOE & WV office of Energy)	PI	2/19 to 1/22	\$127,989	\$101,964
3	Rural energy audit program (USDA)	PI	7/18 to 7/21	\$135,810	\$89,664
4	P2 for food manufacturing (EPA)	PI	10/18 to 9/21	\$400,000	\$308,799
5	Industrial Assessment Center (DOE)	Co-PI	9/16 to 8/21	\$1,981,746	\$933,019

6	Industries of future (WV office of Energy)	Co-PI	10/15 to 9/20	\$208,500	\$51,350
7	Training grant (NIOSH)	Co-PI	7/15 to 6/20	\$1,958,975	\$462,145
8	P2 through E3 (EPA)	PI	10/16 to 5/19	\$360,000	\$279,944
9	Innovative strategies to increase stakeholder participation (DOE & WV office of Energy)	Co-PI	1/17 to 9/18	\$75,000	\$18,785
10	Rural energy audit program (USDA)	PI	5/16 to 12/18	\$154,217	\$76,467
11	Industrial Assessment Center (DOE)	Co-PI	1/16 to 12/16	\$220,000	\$77,683
12	Firefighter vehicle safety (NIOSH, Morgantown)	PI	8/14 to 5/15	\$47,000	\$47,000
13	Occupational driver safety at intersections (NIOSH, Morgantown)	PI	5/15 to 12/15	\$49,999	\$49,999
14	Surface mining safety system (Alpha Foundation)	Co-PI	11/13 to 10/15	\$743,911	\$167,457
Sub Total				\$6,898,043	\$2,990,119

Research Grants and Projects funded from 2009 to 2015

15	Study of hand hydration (NASA WVSGC)	PI	5/14 to 5/15	\$44,816	\$44,816
16	Training grant (NIOSH)	Co-PI	7/11 to 6/15	\$1,737,039	\$220,362
17	Intersection-traffic-driver interface evaluation (NIOSH, Morgantown)	Co-PI	9/13 to 1/14	\$9,963	\$9,963
18	Sustainable manufacturing through E3 (EPA)	PI	10/12 to 9/14	\$85,943	\$73,165
19	Motion capture protocol for working dog (WVU)	PI	7/12 to 6/13	\$9,483	\$9,483
20	Biomechanics of suited ingress and egress (NASA -WVSGC)	PI	7/12 to 6/13	\$25,000	\$25,000

21	Occupational drivers' decision making (NIOSH, Morgantown)	PI	8/12 to 3/13	\$34,926	\$34,926
22	Cervical spine disorders among the surgeons (WVU)	PI	7/11 to 6/12	\$14,989	\$14,989
23	Musculoskeletal loading during extra-vehicular activities (NASA WVSGC)	PI	5/11 to 5/12	\$42,085	\$42,085
24	E3 West Virginia (WV dept. of Commerce)	Co-PI	3/11 to 9/12	\$15,513	\$9,240
25	Cervical spine loading among the surgeons (WVU Department of Ophthalmology)	Co-PI	7/10 to 6/11	\$9,931	\$9,931
26	Ingress, egress and reaching tasks (NASA-WVSGC)	PI	5/10 to 5/11	\$36,920	\$36,920
27	Cervical spine loading (WVU)	PI	7/10 to 6/11	\$14,922	\$14,922
Sub total				\$2,081,530	\$545,802
Grand total				\$8,979,573	\$3,546,110

Brief Description of Grants

1. P2 for metal manufacturing

Project title: Pollution prevention (P2) for metal manufacturing and fabrication facilities in the state of West Virginia

Funded by: United States Environmental Protection Agency (EPA)

This project is aimed at identification, development and implementation of "Pollution Prevention" (or "P2") practices for the metal manufacturing and fabrication facilities (NAICS codes 331 and 332) in the state of West Virginia, using various technical assistance programs. Specifically, on-site assessments will be conducted to identify opportunities for productivity enhancement by improving energy efficiency, waste minimization, lean implementations, and human factors of the operations.

2. Energy Benchmarking

Project title: Developing and deploying a building energy performance benchmarking & transparency initiative in West Virginia

Funded by: Department of Energy (DOE) and West Virginia Office of Energy

This project deals with providing training and analyzing data related to the energy efficiency and benchmarking needs for the state/local government buildings in West Virginia.

3. Rural Energy Audit Program

Project title: West Virginia Agricultural and Rural Small Business Energy Audit Program

Funded by: United States Department of Agriculture (USDA)

The objective of this research project is to implement an energy audit program that delivers cost-effective audits to assist agricultural producers and rural small businesses in reducing their energy consumption and costs.

4. P2 for food manufacturing

Project title: Pollution prevention through technical assistance and training programs for the food and beverage manufacturing and processing facilities in the state of West Virginia

Funded by: United States Environmental Protection Agency (EPA)

In this project various industrial engineering tools are used to motivate facilities to reconsider and reformulate their processes, products, raw material, supply-chain and/or sale operations by adopting and implementing pollution prevention (P2) practices.

5. Industrial Assessment Center (IAC)

Project title: Industrial Assessment Center (IAC): energy efficiency, productivity, sustainability and competitiveness enhancement of SMEs and training of the next generation of energy and manufacturing engineers

Funded by: Department of Energy (DOE)

This project provides technical assistance to local/regional Small and Medium sized enterprises (SME) with respect to energy efficiency, smart manufacturing, productivity improvement, cyber security and water/waste conservation.

6. Industries of future

Project title: Energy assessments for the WV industries of the future

Funded by: West Virginia Office of Energy

The project deals with energy efficiency needs of non-profit and state government facilities in West Virginia.

7. Training grant

Project title: Appalachian training program in occupational health and safety

Funded by: National Institute for Occupational Safety and Health (NIOSH)

This training program is designed to educate engineering graduate students in the areas of occupational safety and ergonomics. This grant specifically promotes basic and applied research projects and training activities to achieve an expedited resolution and promotion of safety interventions within the Appalachian region.

8. P2 through E3

Project title: Pollution prevention through a structured E3, Economy, Energy, and Environment, approach

Funded by: United States Environmental Protection Agency (EPA)

This project implemented pollution prevention (P2) using a novel Economy, Energy and Environment (E3) approach: On-site assessments targeting energy, environment, and process waste were performed; post-assessment recommendations were delivered using P2 Knowledge Center (P2KC); a structured follow-up process and P2KC was used to enhance implementation of the P2 initiatives.

9. Innovative strategies to increase stakeholder participation

Project title: Implementation of innovative strategies to increase stakeholder participation in state-wide energy efficiency and emissions reduction initiatives

Funded by: Department of Energy (DOE) and West Virginia Office of Energy

In this project efforts were carried out to increase awareness of the local industries regarding the energy related technical assistance services provided by the WV Office of Energy, WVU

Industrial Assessment Center (IAC) and Manufacturing Extension Partnership, as well as to stimulate communication and engagement of stakeholders.

10. Rural energy audit program

Project title: West Virginia Agricultural and Rural Small Business Energy Audit Program

Funded by: United States Department of Agriculture (USDA)

The project objective was to implement an energy audit program that delivers cost-effective audits to assist agricultural producers and rural small businesses in reducing their energy consumption and costs.

11. Industrial Assessment Center

Project title: Industrial assessments for energy and cost savings, waste reduction, sustainability and productivity improvements: creating the next generation of energy engineers

Funded by: Department of Energy (DOE)

This project was focused on providing real world experience to students to produce energy savvy engineers with specialized technical knowledge on industrial energy assessments resulting in energy savings, waste reduction, sustainability and productivity improvement.

12. Firefighter vehicle safety

Project title: Reducing firefighter vehicle crashes: simulation and intervention

Funded by: National Institute for Occupational Safety and Health (NIOSH), Morgantown

This project was aimed at developing science-based guidelines for the adaptation of curve over-speed warning technologies to the specific requirements of fire trucks and emergency driving tasks.

13. Occupational driver safety at intersections

Project title: Best-practice guidelines for occupational driver safety at intersections

Funded by: National Institute for Occupational Safety and Health (NIOSH), Morgantown

This project was the next phase of an earlier occupational driver safety project. The overall goal of the project was to develop data-driven best-practice guidelines for occupational drivers to ensure safe vehicle operation using a lab-based virtual reality platform.

14. Surface mining safety system

Project title: Integrated Surface Mining Safety System

Funded by: Alpha Foundation

The objective of this research project was to develop and deploy an integrated safety system to help reduce equipment-related fatal and non-fatal injuries in US surface mining operations.

15. Study of hand hydration

Project title: Study of hand hydration to understand mechanism of glove-related injuries

Funded by: NASA West Virginia Space Grant (NASA WVSGC)

This project was aimed at understanding the effect of extreme environmental conditions on hand/finger/nail hydration under different types of physical exertions.

16. Training grant

Project title: Appalachian training program in occupational health and safety

Funded by: National Institute for Occupational Safety and Health (NIOSH)

This training program was designed to educate engineering graduate students in the areas of occupational safety and ergonomics.

17. Intersection-traffic-driver interface evaluation

Project title: Intersection-traffic-driver interface evaluation for occupational driver safety

Funded by: National Institute for Occupational Safety and Health (NIOSH)

This project dealt with development of a lab-based virtual reality experiment protocol to generate empirical data necessary for the development of safety recognition material and intersection safety guidelines for occupational drivers.

18. Intersection-traffic-driver interface evaluation

Project title: Sustainable manufacturing through E3

Funded by: United States Environmental Protection Agency (EPA)

This project implemented source reduction through on-site assessments of industrial facilities. The assessments consisting of energy audits, clean and lean reviews, and ergonomics evaluation were designed to assist the participating facilities to identify potential sources of waste associated with the energy, materials, water, and human use.

19. Motion capture protocol for working dog

Project title: Lumbosacral (lower back) Disease in Working Dogs

Funded by: West Virginia Agricultural and Forestry Experiment Station Hatch Program

In this project a new computational model was developed to study 3D low back kinematics in working dogs

20. Biomechanics of suited ingress and egress

Project title: Biomechanics of suited ingress and egress

Funded by: NASA West Virginia Space Grant (NASA WVSGC)

In this project a novel conceptual analysis method to quantify kinematic compatibility between the human body and a spacesuit was developed.

21. Occupational drivers' decision making

Project title: Occupational drivers' decision making and intersection safety

Funded by: National Institute for Occupational Safety and Health (NIOSH), Morgantown

This study was performed to identify the factors that influence occupational drivers' decision-making process while crossing signalized intersections.

22. Cervical spine disorders among the surgeons

Project title: Biomechanical evaluation of cervical spine disorders among the surgeons using surgical loupes and headlamps

Funded by: West Virginia University Senate

An “in the field” study was completed to quantify physical risk factors for cervical spine musculoskeletal disorders among surgeons who operate using loupes and headlamp.

23. Musculoskeletal loading during extra-vehicular activities

Project title: Development of a biomechanical modeling method to assess upper extremity musculoskeletal loading during extra-vehicular activities

Funded by: NASA West Virginia Space Grant (NASA WVSGC)

In this project a new experimental method to record the body kinematics independent of suit kinematics was established.

24. E3 West Virginia

Project title: Energy, Environment, and Economics (E3) – West Virginia

Funded by: West Virginia Department of Commerce

In this project ergonomic assessments were performed for the manufacturing facilities in the state of West Virginia.

25. Cervical spine loading among the surgeons

Project title: Quantification of the cervical spine loading among the surgeons using surgical loupes

Funded by: West Virginia University Department of Ophthalmology

In this project a new method was established using wireless sensors to record 3D kinematics and muscle activity data from the surgeons while they perform surgical procedures on real patients.

26. Ingress, egress and reaching tasks

Project title: Understanding the relationship between ingress, egress and reaching tasks volumes and influence of anthropometric dimensions on motions during such tasks

Funded by: NASA West Virginia Space Grant (NASA WVSGC)

In this project differences between ingress/egress kinematics and reach due to seat orientation were studied using a marker based 3D kinematic system.

27. Cervical spine loading among the surgeons

Project title: Cervical spine loading

Funded by: West Virginia University Senate

In this project a new optimization based cervical spine model was formulated to study the effects of forceful arm exertions on the biomechanical loading of cervical spine

E. Teaching and Advising

Courses Taught

- Human Factors Engineering (IENG 360) (Fall 09,10,11,12,13,14,15,16,17,18,19,20 Spring 11, 12,13,14,15,16,17,18,19,20)
- Industrial Ergonomics (IENG 564) (Fall 12,14,15,20)
- Human Factors System Design (IENG 660) (Spring 10; Fall 13)

New Course Development

- Ergonomics (IH&S 460) (Fall 13,14,15,16,17,18,19,20 Spring 15,16,17,18,19,20)
- Human Computer (Machine) Interaction (IENG 493/593 B) (Spring 17, Fall 18)

Student Evaluation of Instructor (SEI) Scores for the Courses Taught since 2015

Semester	Course Number	Credit hours	Students Enrolled	No. of SEI Responses	Effectiveness	Overall Rating	Learning
Fall 2020	IENG 360	3	61	35	4.31	4.54	4.2
Fall 2020	IH&S 460	3	6	5	4	4.13	3.6
Fall 2020	IENG 564	3	14	11	4.48	4.47	3.91
Spring 2020	IH&S 460	3	4	4	5	4.91	5
Spring 2020	IENG 360	3	76	32	4.67	4.75	4.44
Spring 2019	IH&S 460	3	3	3	5	4.89	5
Spring 2019	IENG 360	3	90	71	4.75	4.77	4.54
Fall 2019	IH&S 460	3	5	3	4.78	4.78	4.67
Fall 2019	IENG 360	3	55	42	4.9	4.76	4.76
Spring 2018	IENG 360	3	90	59	3.73	4.2	3.46
Fall 2018	IENG 593B	3	11	10	4.66	4.73	4.7
Fall 2018	IENG 360	3	40	28	4.62	4.38	4.57
Fall 2018	IH&S 460	3	13	8	4.96	4.75	4.63
Spring 2017	IH&S 460	3	10	5	4.2	4.2	4.4
Spring 2017	IENG 360	3	62	40	4.43	4.48	4.4
Spring 2017	IENG 493B	3	7	7	4.86	4.57	4.43
Fall 2017	IENG 360	3	48	28	3.88	4.32	3.93
Fall 2017	IH&S 460	3	10	7	4.72	4.9	4.71
Spring 2016	IENG 360	3	49	30	4.47	4.6	4.47
Spring 2016	IH&S 460	3	1	1	5	5	5
Fall 2016	IENG 360	3	52	23	4.35	4.35	4.3
Fall 2016	IH&S 460	3	5	5	4.4	4.6	4
Spring 2015	IENG 360/IH&S460	3	65	58	4	4.05	4.03
Fall 2015	IENG 360/IH&S460	3	91	54	4.21	4.1	4.08
Fall 2015	IENG 564	3	15	14	4	4.14	4.08
				Mean	4.50	4.53	4.37

Advising Activities

- Advised 18 Doctor of Philosophy students, 7 as the chair and 11 as a member of Advisory Examination Committee
- Advised 42 Master of Science students, 26 as the chair and 16 as a member of Advisory Examination Committee
- Major Professor (advisor) of Best Student Paper award winner, Hossein Motabar (PhD student), XXIXth Annual Occupational Ergonomics and Safety Conference, Seattle, WA, June 1 to 2, 2017

- Advisor of 1st place Winner of Technical Paper Competition, Esther Raub (undergraduate student), IISE Mid-Atlantic Regional Conference, Knoxville, Tennessee, February 24 to 26, 2017
- Major Professor (advisor) of Best Student Paper award winner, Suman Chowdhury (PhD student), XXVIIth Annual Occupational Ergonomics and Safety Conference, Nashville, Tennessee, May 28 to 29, 2015

Doctor of Philosophy Students

No	Name of student	Year of graduation	Degree	Type	Role
1	Faisal Mohammed Alessa	2020	PhD	Dissertation	Committee Chair
2	Hossein Motabar	2020	PhD	Dissertation	Committee Chair
3	Hamad Alasim	2020	PhD	Dissertation	Committee Chair
4	Christopher Moore	2019	PhD	Dissertation	Committee Chair
5	Suman Kanti Chowdhury	2016	PhD	Dissertation	Committee Chair
6	Majed Zreiqat	2014	PhD	Dissertation	Committee Chair
7	Yun Sun	2011	PhD	Dissertation	Committee Chair

1	Md Amdad Hossen	Ongoing	PhD	Dissertation	Committee Member
2	Md Tawhidur Rahman	Ongoing	PhD	Dissertation	Committee Member
3	Jamal Alanazi	2020	PhD	Dissertation	Committee Member
4	Jeremy Gouzd	2018	PhD	Dissertation	Committee Member
5	Amin Azimian	2018	PhD	Dissertation	Committee Member
6	Jintuo Zhu	2018	PhD	Dissertation	Committee Member
7	Amir Abolhassani	2016	PhD	Dissertation	Committee Member
8	Lubna Hamdan	2016	PhD	Dissertation	Committee Member
9	Boyi Hu	2016	PhD	Dissertation	Committee Member
10	Masahiro Nakagawa	2016	PhD	Dissertation	Committee Member
11	Brian DeCann	2014	PhD	Dissertation	Committee Member

Master of Science Students

No	Name of student	Year of graduation	Degree	Type	Role
1	Fabiha Islam	Ongoing	MS	Thesis	Committee Chair
2	McKayla Eddy	Ongoing	MS	Thesis	Committee Chair
3	Isha Gaut	2020	MS	Thesis	Committee Chair

4	Pradyumna Bettagere Jagadish	2020	MS	Thesis	Committee Chair
5	Hui Ci	2020	MS	Thesis	Committee Chair
6	Akash Mehta	2020	MS	Coursework-only	Committee Chair
7	Kevin Oberdick	2020	MS	Coursework-only	Committee Chair
8	Fajer Alrowaih	2020	MS	Coursework-only	Committee Chair
9	Nyasha Carter	2020	MS	Coursework-only	Committee Chair
10	Sachin Sah	2019	MS	Thesis	Committee Chair
11	Aaron Fonner	2019	MS	Thesis	Committee Chair
12	Goutham Kumar Reddy Challa	2019	MS	Problem Report	Committee Chair
13	Temitope Agboola	2019	MS	Coursework-only	Committee Chair
14	Nathaniel Smith	2018	MS	Thesis	Committee Chair
15	Kevin Acquah	2018	MS	Coursework-only	Committee Chair
16	Vikram Jakka	2018	MS	Coursework-only	Committee Chair
17	Riteesh Koganti	2018	MS	Coursework-only	Committee Chair
18	Sricharan Reddy Kommera	2018	MS	Coursework-only	Committee Chair
19	Hamad Nasser Alasim	2016	MS	Thesis	Committee Chair
20	John Kaiser	2016	MS	Thesis	Committee Chair
21	Marsha Chapman	2015	MS	Thesis	Committee Chair
22	Kasey Cutlip	2014	MS	Thesis	Committee Chair
23	Suman Kanti Chowdhury	2012	MS	Thesis	Committee Chair
24	Christopher Moore	2012	MS	Thesis	Committee Chair
25	Mohammed Alhassan	2011	MS	Thesis	Committee Chair
26	Rabab Al Abdulmohsen	2011	MS	Thesis	Committee Chair

Master of Science Students – continued

No	Name of student	Year of graduation	Degree	Type	Role
1	Josage Chathura Perera	2020	MS	Thesis	Committee Member

2	Unique Karki	2020	MS	Thesis	Committee Member
3	Rupa Das	2020	MS	Thesis	Committee Member
4	James Lapp II	2020	MS	Coursework- only	Committee Member
5	Aminat Adeyemi	2020	MS	Coursework- only	Committee Member
6	Mohammadreza Torkjazi	2020	MS	Coursework- only	Committee Member
7	Bryant Spencer	2019	MS	Problem Report	Committee Member
8	Vivek Komarina	2018	MS	Problem Report	Committee Member
9	Koushik Mandlem	2018	MS	Problem Report	Committee Member
10	Wadei Sindi	2018	MS	Coursework- only	Committee Member
11	Mohammed Alghamdi	2018	MS	Coursework- only	Committee Member
12	Atefeh Malekinezhad	2017	MS	Thesis	Committee Member
13	Shamaya Morris	2016	MS	Problem Report	Committee Member
14	Faisal Mohammed Alessa	2015	MS	Thesis	Committee Member
15	Hasan Habibul Latif	2015	MS	Thesis	Committee Member
16	Ryan Nave	2010	MS	Problem Report	Committee Member

F. Service Activities

Reviewing Activities

- Reviewed over 230 manuscripts

Year	Journal/Conference/Agency Name	No. of papers reviewed
2020	International Journal of Industrial Ergonomics	10
	Clinical Biomechanics	1
	IISE Transactions on Occupational Ergonomics and Human Factors	3
	Human Factors	4
	Sustainable Energy Technologies and Assessments	1
	Institute of Industrial and Systems Engineering Research Conference (IISE conference 2020) - abstracts	2
	Applied Ergonomics	7
	Ergonomics in Design	8
	Ergonomics	1
	Total	37
2019	International Journal of Industrial Ergonomics	7
	Applied Ergonomics	3
	Clinical Biomechanics	4
	Ergonomics	1
	Human Factors	3
	IISE Transactions on Occupational Ergonomics and Human Factors	4
	International Journal of Pervasive Computing and Communications	1
	PLOS ONE	1
	Total	24
2018	Journal of Electromyography and Kinesiology	1
	Applied Ergonomics	2
	Ergonomics in Design	1
	Ergonomics	2
	Human Factors and Ergonomics in Manufacturing & Service Industries	1
	IISE Transactions on Occupational Ergonomics and Human Factors	3
	Safety Science	1
		Total
2017	International Journal of Industrial Ergonomics	6
	Institute of Industrial & Systems Engineers (IISE) conference	2
	Occupational Ergonomics	2
	WORK: A Journal of Prevention, Assessment, and Rehabilitation	2
	Applied Ergonomics	2
	IIE Transactions on Occupational Ergonomics and Human Factors	2
	Total	16

2016	Occupational Ergonomics	1
	Journal of Biomechanical Engineering	1
	International Journal of Industrial Ergonomics	4
	IEEE Transactions on Human-Machine Systems	2
	Applied Ergonomics	4
	IIE Transactions on Occupational Ergonomics and Human Factors	4
	International Journal of Industrial Ergonomics	5
	WORK: A Journal of Prevention, Assessment, and Rehabilitation	12
	Cognition Technology & Work	1
	Total	34
2015	Applied Ergonomics	5
	ASME Journal of Biomechanical Engineering	1
	Clinical Biomechanics	1
	Cognition Technology & Work	2
	Human Factors	1
	Human Movement Science	1
	IEEE Transactions on Human-Machine Systems	1
	IIE Transactions on Occupational Ergonomics and Human Factors	3
	Industrial and Systems Engineering Research Conference (IIE conference and expo 2014)	2
	International Journal of Industrial Ergonomics	5
	Journal of Electromyography and Kinesiology	1
	PLOS ONE	4
	Report was published by Office of Mine Safety and Health Research (OMSHR)	1
WORK: A Journal of Prevention, Assessment, and Rehabilitation	11	
	Total	39
2014	Occupational Ergonomics	3
	Applied Ergonomics	4
	Ergonomics	9
	IIE Transactions on Occupational Ergonomics and Human Factors	2
	International Journal of Industrial Ergonomics	2
	Journal of Electromyography and Kinesiology	2
	International Journal of Vocational and Technical Education	1
	International Annual Meeting of the Human Factors and Ergonomics Society (HFES 2014)	4
	Industrial and Systems Engineering Research Conference (IIE conference and expo 2014)	6
	Total	33
2013	Occupational Ergonomics	2
	International Journal of Industrial Ergonomics	2
	Cognition Technology & Work	1
	PLOS ONE	1
	International Journal of Industrial Ergonomics	2

	Safety Science	2
	Applied Ergonomics	2
	Ergonomics	1
	Human Factors and Ergonomics International Annual Meeting 2013	3
	Total	16
2012	Ergonomics	1
	IIE Transactions on Occupational Ergonomics and Human Factors.	1
	Journal of the Chinese Institute of Industrial Engineers	1
	Safety Science	1
	International Journal of Industrial Ergonomics	1
	International Journal of Human Factors Modelling and Simulation	1
	Journal of Medical and Biological Engineering	1
	Occupational Ergonomics	1
	Human Factors and Ergonomics Society 56th Annual Meeting	3
	Industrial and Systems Engineering Research Conference (ISERC 2012)	2
	Total	13
2011	Research Quarterly for Exercise and Sport	1
	Journal of the Chinese Institute of Industrial Engineers	2
	Safety Science	1
	Industrial Engineering Research Conference (IERC 2011)	1
	Total	5
2010	Industrial Engineering Research Conference (IERC 2010)	2
	ASEE NCS2010 Conference	1
	Physical Medicine & Rehabilitation	1
	Ergonomics	1
	Journal of the Chinese Institute of Industrial Engineers	1
	Research Quarterly for Exercise and Sport	1
	Total	7
	Grand total	235

Professional Activities

- Judge, Ergonomics in Design, Best Paper Award, 2020
- Session Chair, Annual International Occupational Ergonomics & Safety conference, 2013, 2014, 2015
- Session Chair, Annual Industrial Systems Engineering Research Conference 2012, 2013, 2015
- Conference Committee Member, Annual International Occupational Ergonomics & Safety conference, 2013
- Session Chair, Construction Research track, Annual Institute of Industrial Engineers conference & Expo, 2011
- Student Paper Competition Judge, Institute of Industrial Engineers - Great Lakes Region conference, 2011
- Guest researcher, National Institute of Occupational Safety and Health (NIOSH), Morgantown, 2010 – present.
- Affiliated member, Injury Control Research Center, West Virginia University, 2009 – present

University Activities

- Advisor, Alpha Pi Mu, West Virginia University chapter, 2010 – present
 - IMSE P&T Committee, Chair 2019-2020
 - Graduate Programs & Research Committee, college level, chair, 2018-2020
 - Graduate Programs & Research Committee, college level, member, 2016-2018
 - IE Graduate Program Sub-Committee, Chair 2015 – present
 - IE Graduate Program Sub-Committee, Member 2010 – 2015
 - IMSE P&T Committee, Member 2015-2019
 - College Library Committee, Member 2009- 2010
 - Undergraduate Academic Standards Committee, Member 2009-2012
 - IE Undergraduate Curriculum Committee, Member 2012– 2015
 - IMSE Faculty Search Committee, Member, 2010-2011, 2013-2014, 2013-2015
 - IMSE Faculty Search Committee, Chair 2018-2019, 2019-20 and 2020-21
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