

**CURRICULUM VITAE**  
**DINESH JOHN, Ph.D.**

**OFFICE ADDRESS**

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**EDUCATION**

- 1995                    **Bachelor of Arts (Economics and Politics)**  
S.I.E.S. College of Arts, Science, and Commerce, Bombay, India
- 2006                    **Master of Science (Exercise Science)**  
Ithaca College, Ithaca, NY
- 2009                    **Doctor of Philosophy (Exercise Science)**  
University of Tennessee, Knoxville, TN.

**EMPLOYMENT HISTORY**

- Sept. 2012-            **Associate Professor, Department of Health Sciences**  
Northeastern University, Boston, MA.
- 2009 - 2012           **Post-Doctoral Research Associate,**  
**Department of Kinesiology**  
University of Massachusetts, Amherst, MA.
- 2007 - 2009           **Graduate Research Assistant**  
University of Tennessee, Knoxville, TN.

**SCHOLARSHIP / RESEARCH**

**Publications** (underline = corresponding/senior author; \* = student author/co-author)

*Peer-reviewed articles*

- 1) **John D.**, \* Morton A., \* Arguello D., Lyden K., Bassett D. "What is a Step?" Variability in Step-Detection Criteria Among Three Motion Sensors Used in Physical Activity Research. *Sensors*. 2018; 18(4), 1206, doi: 10.3390/s18041206.
- 2) \* Arguello D., \* Anderson K., \* Morton A., Freedson P., Intille S., **John D.** Validation of the ActiGraph wear-time sensor. *Journal of Sports Sciences*. 2017; Nov 3, 1-6.
- 3) Sasaki J., **John D.**, Hickey A., Lyden K., Hagobian T., Freedson P. Feasibility of using a continuous direct observation technique for assessment of free-living physical activity in young adults. *Arquivos de Ciências do Esporte*. 2016; 4(1), 2-6.
- 4) Sasaki J., Howe C., **John D.**, Hickey A., Steeves J., Lyden K., Kozey-Keadle S., Burkhart S., Alhassan S., Bassett D., Freedson P. Energy expenditure for 70 activities in children and adolescents. *Journal of Physical Activity and Health*. 2016; 13(6), S24-S28.
- 5) Sasaki J., Hickey A., Staudenmayer J., **John D.**, Kent J., Freedson P. Performance of activity classification algorithms in free-living older adults. *Medicine & Science in Sports & Exercise*. 2016; 48(5), 941-950, 2016.
- 6) Lyden K., **John D.**, Dall P., Granat M. Detecting lying time from a single thigh-worn acceleration sensor. *Medicine & Science in Sports & Exercise*. 2016; 48(4), 742-747.

- 7) Libertine A., **John D.**, Sasaki J., Mavilia M., Freedson P. Validity of activity monitor step detection is related to movement patterns. *Journal of Physical Activity and Health*. 2016; 13(2), 145-153.
- 8) **John D.**, Lyden K., Bassett D. Treadmill and sit-to-stand workstations: A physiological perspective. *Ergonomics in Design*. 2015; 23(3), 14-19.
- 9) Bassett D., **John D.**, Fitzhugh E., Coe D. Trends in physical activity and sedentary behaviors of US youth. *Journal of Physical Activity and Health*. 2015; 12(8), 1102-1111.
- 10) Sasaki J., Hickey A., Mavilia M., **John D.**, Keadle S., Freedson P. Validation of the FitBit wireless activity tracker® for prediction of energy expenditure. *Journal of Physical Activity and Health*. 2015; 12(2), 149-154.
- 11) Welch W., Bassett D., Freedson P., **John D.**, Steeves A., Conger S., Ceaser T., Howe C., Sasaki J. Cross-validation of waist-worn Genea accelerometer cut-points. *Medicine & Science in Sports & Exercise*. 2014; 46(9), 1825-1830.
- 12) Bassett D., **John D.**, Conger S., Rider B., Passmore R., Clark J. Detection of lying down, sitting, standing, and ambulating using two ActivPAL monitors. *Medicine & Science in Sports & Exercise*. 2014; 46(10), 2025-2029.
- 13) **John D.**, Sasaki J., Hickey A., Mavilia M., Freedson P. Actigraph™ activity monitors: "The firmware effect". *Medicine & Science in Sports & Exercise*. 2014; 46(4), 834-839.
- 14) **John D.**, Sasaki J., Staudenmayer J., Mavillia M., Freedson P. Comparison of raw acceleration from the Genea and ActiGraph™ GT3X+ activity monitors. *Sensors*. 2013; 13(11), 14754-14763.
- 15) Freedson P., **John D.** Comment on "Estimating activity and sedentary behavior from an accelerometer on the hip and wrist." *Medicine & Science in Sports & Exercise*. 2013; 5(45), 962-963.
- 16) Welch W., Bassett D., Thompson D., Freedson P., Staudenmayer J., **John D.**, Steeves J., Conger S., Ceaser T., Sasaki J., Fitzhugh E. Classification accuracy of the wrist-worn Genea accelerometer. *Medicine & Science in Sports & Exercise*. 2013; 45(10), 2012-2019.
- 17) **John D.**, Staudenmayer J., Freedson P. Simple to complex modeling of ActiGraph activity counts to estimate ventilation. *Science of the Total Environment*. 2013; 454-455C, 184-188.
- 18) Liu S., Gao R., **John D.**, Staudenmayer J., Freedson P. Tissue artifact removal from respiratory signals based on empirical mode decomposition. *Annals of Biomedical Engineering*. 2013; 41(5), 1003-1015.
- 19) Dudley P., Bassett D., **John D.**, Crouter S. Validity of a multi-sensor armband for estimating energy expenditure during eighteen different activities. *Journal of Obesity and Weight Loss Therapy*. 2013; 2(7), 2-7.
- 20) **John D.**, Kozey S., Miller R., Caldwell G., Freedson P. Biomechanical examination of the 'plateau phenomenon' in ActiGraph vertical activity counts. *Physiological Measurement*. 2012; 33(2), 219-230.
- 21) **John D.**, Bassett D., Thompson D., Bielak K., Raynor H. Treadmill workstations: A worksite physical activity intervention in overweight and obese office workers. *Journal of Physical Activity and Health*. 2011; 8(8), 1034-1043.
- 22) **John D.**, Liu S., Sasaki J., Howe C., Gao R., Staudenmayer J., Freedson P. Calibrating a novel multi-sensor physical activity measurement system. *Physiological Measurement*. 2011; 32(9), 1473-1489.

- 23) Liu S., Gao R., **John D.**, Staudenmayer J., Freedson P. Multi-sensor data fusion for physical activity assessment under free-living conditions. *IEEE Transactions on Biomedical Engineering*. 2011; 59(3), 687-696.
- 24) Tyo B., Fitzhugh E., Bassett D., **John D.**, Feito Y., Thompson, D. Effects of BMI and step rate on pedometer error in the free-living environment. *Medicine & Science in Sports & Exercise*. 2011; 43(2), 350-356.
- 25) Sasaki J., **John D.**, Freedson P. Validation and comparison of ActiGraph activity monitors. *Journal of Science and Medicine in Sport*. 2011; 14(5), 411-416.
- 26) Liu S., Gao R., **John D.**, Staudenmayer J., Freedson P. SVM-based multi-sensor fusion for free-living physical activity assessment. *Proceedings of the 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*. 2011; 3188-3191.
- 27) Mo L., Liu S., Gao R., **John D.**, Staudenmayer J., Freedson P., Zigbee-based wireless multi-sensor system for physical activity assessment. *Proceedings of the 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*. 2011; 846-849.
- 28) **John D.**, Bassett D., Tyo B. Comparison of output from four ActiGraph accelerometers during walking and running. *Medicine & Science in Sports & Exercise*. 2010; 42(2), 368-374.
- 29) Kane N., Simmons M., **John D.**, Thompson D., Bassett D. Accuracy of an in-shoe device for assessing speed, distance, and energy expenditure. *International Journal of Sports Medicine*. 2009; 31(2), 101-105.
- 30) **John D.**, Bassett D., Thompson D., Fairbrother J., Baldwin D. Effect of using a treadmill workstation on the performance of simulated office work tasks. *Journal of Physical Activity and Health*. 2009; 6(5), 617-624.
- 31) **John D.**, Sforzo G., Swensen T. Monitoring exercise heart rate using manual palpation. *ACSM's Health and Fitness Journal*. 2007; 11(6), 14-18.

#### **Articles under review**

- 1) **John D.**, Tang Q., Albinali F., Intille S. A device-independent acceleration summary to harmonize data processing and analyses of accelerometer data. *Journal for the Measurement of Physical Behavior* . 2017.

#### **Non-reviewed articles**

- 1) **John D.** The active desk. Fitting in fitness, *ACSM - Fit Society Page*. 2015; 1(15), 4-5.
- 2) **John D.**, Freedson P. Actigraph and Actical: A peek under the hood. *Medicine & Science in Sports & Exercise*. 2012; 44(Suppl. 1), S86-S89.
- 3) **John D.** Walking at the desk - Workplace innovation fosters better health. *ACSM Sports Medicine Bulletin*, 2010; Aug 3.
- 4) Bassett D., **John D.** Use of pedometer and accelerometers in clinical populations. *Physical Therapy Reviews*. 2010; 15(3), 135-142.

#### **Book chapters**

- 1) **John D.**, Intille S. Assessing sedentary behavior using new technology. In: Zhu W., Owen N., editors, *Sedentary Behavior and Health: Concepts, Assessment and Intervention*. Human Kinetics: Champaign, IL. 2017; 197-208.
- 2) Bassett D., **John D.** Assessing sedentary behavior using physiological sensors. In: Zhu W., Owen N., editors, *Sedentary Behavior and Health: Concepts, Assessment and Intervention*. Human Kinetics: Champaign, IL. 2017; 189-196.

- 3) Sasaki J., DaSilva K., Costa B., and **John D.** Measurement of physical activity using accelerometers. In: Luiselli J., Fischer A., editors, *Computer-Assisted and Web-Based Innovations in Psychology, Special Education, and Health*. Elsevier: Atlanta, GA. 2016; 33-56.

**Presentations** (\* = student presenter; invited presentations indicated as such)

*International*

- 1) Bassett D., Crouter S., **John D.** Step/min Cut-points based on walking do not predict intensity of non-walking activities, *International Conference on Ambulatory Monitoring of Physical Activity and Movement*, International Society for the Measurement of Physical Behavior, Limerick, Ireland. June 10-12, 2015.
- 2) Lyden K., **John D.**, Dall P., Granat M. Wouldn't it be cool if we could distinguish sitting from lying and sleep? *Loch Lemond Lecture*, Ross Priory, Scotland. June 7-8, 2015 (*Invited*).
- 3) **John D.**, Staudenmayer J., Freedson P. Simple to complex modeling of ActiGraph activity counts to estimate ventilation. *International Conference on Diet and Activity Methods*. Rome, Italy. May 14-17, 2012.
- 4) **John D.**, Liu S., Sasaki J., Gao R., Staudenmayer J., Freedson P. Ventilation estimates using a single piezoelectric respiration sensor of the indigenous multi-sensor integrated measurement system. *International Conference on Ambulatory Monitoring of Physical Activity and Movement*. Glasgow, Scotland. May 24-27, 2011.
- 5) **John D.**, Sasaki J., Freedson P. Comparison of activity counts from the ActiGraph GT3X and GT1M. 3<sup>rd</sup> *International Congress on Physical Activity and Public Health*, Toronto, Canada. May 6, 2010.

*National*

- 1) \* Arguello D., \* Anderson K., **John D.** Effect of Three Methods of ActiGraph Wear/Non-wear Time Determination on Waking Day Free-living Estimates of Physical Activity and Sedentary Behavior. *International Conference on Ambulatory Monitoring of Physical Activity and Movement*. Bethesda, MD. June 21-23, 2017.
- 2) \* Cloutier G., \* Lee B., **John D.** Does it matter which wrist you wear your FitBit® to count steps? *International Conference on Ambulatory Monitoring of Physical Activity and Movement*. Bethesda, MD. June 21-23, 2017.
- 3) \* Lee B., **John D.** "How 'bout them Apples?" Validating step counts from the Apple Watch. *Annual Meeting of the American College of Sports Medicine*, Denver, CO. May 30-June 3, 2017.
- 4) \* Arguello D., \* Anderson K., **John D.** Performance of ActiGraph's wear-time sensor in classifying wear and non-wear time. *Annual Meeting of the American College of Sports Medicine*, Denver, CO. May 30-June 3, 2017.
- 5) \* Morton A., \* Arguello D., **John D.** Relationship between Walking Speed and Step Detection Accuracy Using Wrist and Hip-Worn ActiGraph GT3X+ monitors. *Annual Meeting of the American College of Sports Medicine*, Boston, MA. May 31-June 4, 2016.
- 6) \* Arguello D., \* Morton A., Cloutier G., **John D.** Associations between Incidental Physical Activity and Cardiometabolic Health in Sedentary Overweight and Obese Adults. *Annual Meeting of the American College of Sports Medicine*, Boston, MA. May 31-June 4, 2016.

- 7) **John D.** Physiology of sitting, standing, and walking - Integration of treadmills to improve workstations, *Ergonomics and Human Factors: Strategic Solutions for Workplace Safety and Health*, Harvard School of Public Health, Boston, MA. October 5-9, 2015 (Invited).
- 8) **John D.** Chronic Health Conditions and Sedentary Work. *NIOSH Total Worker Health Webinar Series- Sedentary Work: Implications and Interventions for Worker Safety and Health*, <https://www.cdc.gov/niosh/twh/webinar.html>. July 23, 2015 (Invited).
- 9) **John D.** Technologies to measure activity behavior. *Annual Meeting of the American College of Sports Medicine*, San Diego, CA. May 26-30, 2015.
- 10) **John D.** Changing the way we work: workstation alternatives to seated desks. *Annual Meeting of the American College of Sports Medicine*, San Diego, CA. May 26-30, 2015.
- 11) **John D.** Standing up against sedentary behavior. *Harvard School of Public Health, Center for Work, Health and Wellbeing*. Boston, MA. May 5, 2014 (Invited).
- 12) **John D.** Physical activity, sedentary behavior and the workplace, *Advancing Wellness Seminar Series*, Massachusetts Institute of Technology, Boston, MA. November 19, 2014 (Invited).
- 13) **John D.** Reduction in BMI using treadmill workstations. *Office Ergonomics Research Committee Conference*. Austin, TX. Jan 24-26, 2014 (Invited).
- 14) **John D.**, Bassett D., Conger S., Rider B., Passmore R., Clark J. Discriminating between lying down, sitting, standing, and ambulating using two accelerometers. *International Conference on Ambulatory Monitoring of Physical Activity and Movement*. Amherst, MA. June 17-19, 2013.
- 15) **John D.**, Sasaki J., Staudenmayer J., Freedson P. Comparison of raw acceleration from two commercially available accelerometers. *Annual Meeting of the American College of Sports Medicine*. Indianapolis, IN. May 28-June 1, 2013.
- 16) Loria K., Sun M., Intille S., Kerr J., Freedson P., **John D.** New technology to assess physical activity. *International Society for Behavioral Nutrition and Physical Activity*. Austin, TX, May 23, 2012 (Invited).
- 17) **John D.**, Liu S., Sasaki J., Gao R., Staudenmayer J., Freedson P. Breathing frequency and volume estimations using a multi-sensor integrated measurement system. *Annual Meeting of the American College of Sports Medicine*. Denver, CO. May 31-June 4, 2011.
- 18) **John D.**, Freedson P., Kozey S., Stevens B., Lyden K. Sedentary behavior 101: How to measure it, reduce it, and its impact on health. *Annual New England American College of Sports Medicine Conference*, Providence, RI. November 11, 2010.
- 19) **John D.** Treadmill workstations: A worksite obesity intervention. *Annual Meeting of the American College of Sports Medicine*. Baltimore, MD. June 1-5, 2010.
- 20) **John D.**, Tyo B., Bassett D. Comparison of output from four ActiGraph accelerometers during walking and running. *Annual Meeting of the American College of Sports Medicine*. Seattle, WA. May 27-30, 2009.
- 21) **John D.**, Bassett D., Thompson D., Fairbrother J., Baldwin D. Effect of using a treadmill workstation on performance of simulated office work tasks. *Annual Meeting of the American College of Sports Medicine*. Indianapolis, IN. May 28-31, 2008.

## GRANTS

### External Grants

#### *Funded*

- 1) Physical activity estimates in the US population: Analyses of accelerometer data from the NHANES 2011-14 (research contract). Sponsors: Office of Behavior and Social Sciences Research and the National Cancer Institute. **John Co-I** (PI: Intille S.), Direct costs: \$97,000, Project period: 8/1/17 to 7/31/18, %Effort: 13% Summer.
- 2) Crowd-sourced annotation of longitudinal sensor data to enhance data-driven precision medicine for behavioral health (UH2EB024407). Sponsored by the National Institute of Biomedical Imaging and Bioengineering. **John Co-I** (PI: Intille S.), Direct costs: \$295,155, Project period: 9/1/2016 to 4/31/2019, %Effort: 21% Summer.
- 3) Modifying the workplace to decrease sedentary behavior and improve health (1R21OH010564-01). Sponsored by the National Institute for Occupational Safety and Health. **John PI**, Direct Costs: \$274,249, Project period: 5/1/2014 to 4/31/2018, %Effort: 17% Academic year.
- 4) SPADES: A system for encouraging adoption of new methods for activity monitoring (261201300082C-2-0-1). Sponsored by the National Cancer Institute. **John Co-I** (PI- Albinali F.) Direct costs: \$145,912, Project period: 6/1/14 to 3/31/16, %Effort: 19% Summer.
- 5) Boston Roybal Center Pilot Project: Do exercise-induced improvements in emotion regulation enhance daily physical activity and well-being in frail sedentary older adults? (P30-AG048785) Sponsored by the National Institute on Aging, Roybal Centers for Translational Research on Aging. **John Co-I** (PI: Lachman M.), Pilot project direct costs: \$25,000, Project period: 10/1/14 to 9/30/16, %Effort: 5% Academic year.
- 6) Standing–up against sedentary behavior: A pilot study in office workers (U19OH008861). Sponsored by the Harvard School of Public Health, NIOSH Center for Health, Well-being and Wellness. **John PI**, Direct costs: \$17,149, Project period: 1/1/2013 to 8/1/2014, %Effort: 10% Academic year.

**TEACHING AND ADVISING** (\* indicates designed and developed curriculum).

<b>Course number and title</b>	<b>Term</b>
HSCI-1120 Introduction to Exercise Fitness and Health (Undergraduate)	SP13- SP18
EXSC-5210 Physical Activity and Exercise: Prescription, Measurement and Testing (Graduate)	SP13- FA17
EXSC-6300 Internship in Exercise Science (Graduate)	SP15- SP18
PHTH-7976 Directed Study: 1-on-1 classroom instruction (Graduate)	FA15

## **Supervision of Graduate and Undergraduate Students**

*Doctoral program in population health*

*Doctoral practicum in exercise science*

Research Practicum.

*M.S. thesis in exercise science*

*M.S. directed study in exercise science*

## **Supervision of Undergraduate Students**

*B.S. capstone in health sciences*

## **Advising and Mentoring Activities**

*M.S. Program in exercise science*

## **SERVICE AND PROFESSIONAL DEVELOPMENT**

### **Service to the Discipline/Profession**

#### ***Conference co-organizer/committee***

International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM), Amherst, June 17-19, 2013.

BODYNETS 2018: 13<sup>th</sup> EAI International Conference on Body Area Networks, Technical Program Committee Member, Oulu, Finland, Oct 2-3, 2018.

#### ***Editorial board***

- 1) Associate Editor for the *Journal for the Measurement of Physical Behavior*.
- 2) Guest editor for Proceedings of the International Conference on Ambulatory Monitoring of Physical Activity and Movement (2013; 2015), published as a focus issue of the journal *Physiological Measurement*.

#### ***Grant reviewer***

- 1) Population Sciences and Epidemiology Integrated Review Group: Kidney, Nutrition, Obesity, and Diabetes (KNOD) study section: Ad-Hoc Member
- 2) NY/NJ Education and Research Center Pilot Project Program.

#### ***Journal reviewer*** (\* indicates reviews for fields outside exercise physiology)

Medicine and Science in Sports and Exercise, Journal of Physical Activity and Health, American Journal of Preventive Medicine, Physiological Measurement, Journal of Science and Medicine in Sport, Mechatronics\*, PLOS ONE, Biomed Central Research Notes, American Journal of Medicine, Journal of Applied Biomechanics\*, Sensors\*, International Journal of Sports Medicine, Journal for the Measurement of Physical Behavior, Journal of Sports Sciences, International Journal of Environmental Research and Public Health.

#### ***Professional development***

- 1) American College of Sports Medicine (ACSM), Member.
- 2) International Society for the Measurement of Physical Behavior (ISMPB), Member.