

# JUNRUI DI

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## STATISTICAL METHODS RESEARCH INTERESTS

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feature engineering for wearable devices, matrix and tensor decompositions, dimension reduction, functional data analysis.

## SCIENTIFIC RESEARCH INTERESTS

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wearable computing and its applications in public health (e.g. mental health and aging), physical activity assessment, sleep, circadian rhythm, gerontological epidemiology.

## EDUCATION

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**Johns Hopkins Bloomberg School of Public Health** Expected: *May 2019*  
Ph.D, Biostatistics

Advisor: Vadim Zipunnikov, Ph.D.

**Georgetown University** *Dec 2013*  
M.S., Biostatistics

Thesis: *Robust Integrative Analysis of Multi-Block Contaminated Datasets*

Advisor: Valeriy Korostyshevskiy, Ph.D.

**University of California, Berkeley** *May 2012*  
B.A. Applied Mathematics

*High Distinction General Scholarship (roughly equivalent to Magna Cum Laude)*

## EXPERIENCE

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**Research Assistant** *Jun 2015 - Present*  
*Johns Hopkins Bloomberg School of Public Health*  
*Baltimore, MD*

Advisor: Vadim Zipunnikov, Ph.D.

**Co-Investigator** *May 2013 - Apr 2014*  
*Multicenter AIDS Cohort Study*  
*Washington, DC*

Advisor: Michael Plankey, Ph.D.

**Research Assistant** *Sep 2012 - May 2013*  
*Georgetown University*  
*Washington, DC*

Advisor: George Luta, Ph.D. and Valeriy Korostyshevskiy, Ph.D.

## PUBLICATIONS

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### Published / In Press

1. Varma, V., Dey D., Leroux A., **Di, J.**, Urbanek, J., and Zipunnikov, V.. Re-evaluating the effect of age on physical activity over the lifespan. Accepted by *Preventive Medicine*.

2. **Di, J.**, Li, Y., Friedman, MR., Reddy, S., Surkan, PJ., Shoptaw, S., and Plankey, M.. Determining Survey Satisficing of Online Longitudinal Survey Data in the Multicenter AIDS Cohort Study using a Group-Based Trajectory Analysis. *Journal of Medical Internet Research Public Health and Surveillance*. 2016; 2(2): e150.

#### **Under Review / Revision**

3. Zipunnikov, V., Dey, D., Leroux, A., **Di, J.**, Urbanek, J., Harris, T., and Crainiceanu, C.. Objectively measured late-morning physical activity predicts mortality in the NHANES 2003-2006 cohorts. Resubmitted to *PLOS One* after revision.
4. **Di, J.**, Leroux, A., Urbanek, J., Spira, A., Schrack, J., and Zipunnikov, V.. Methods to quantify fragmentation of accelerometry-measured physical activity. Under review *Medicine & Science in Sports & Exercise*.
5. Johns, J., **Di, J.**, Merikangas, K., Cui, L., Swendsen, J., and Zipunnikov, V.. Fragmentation as a novel measure of stability in normalized trajectories of mood and attention assessed by electronic diaries. Under review *Physiological Measurement*.
6. Grigsby, M., **Di, J.**, Leroux, A., Xiao, L., Zipunnikov, V., Crainiceanu, C., and Checkley, W.. Novel Metrics for Growth Model Selection. Under review *Emerging Themes in Epidemiology*.
7. Urbanek, J., Spira, A., **Di, J.**, Leroux, A., Crainiceanu, C., and Zipunnikov, V.. Epidemiology of Objectively Measured Bedtime and Chronotype in the US adolescents and adults: NHANES 2003-2006. Under review *Chronobiology International*.

#### **In Preparation**

8. A study on extension of the fragmentation metrics.
9. A study on analyzing accelerometry data measured at multiple days.

### **PRESENTATIONS**

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1. Integrative Analysis of Multi-Block Contaminated Datasets (oral contributed). *2013 JSM, Montreal, Canada*
2. Fragmentation of Physical Activity and Its Application (poster). *2016 Baltimore Aging Showcases, Baltimore, MD*
3. Novel Statistical Framework to Quantify Fragmentation of Physical Activity (oral contributed). *2017 ENAR, Washington, DC*.
4. Fragmentation of Physical Activity and Its Application (oral). *2017 ICAMPAM, Bethesda, MD*.
5. Fragmentation of Daily Physical Activity: Prediction of Mortality in NHANES 2003-2006 (oral). *2017 IAGG, San Francisco, CA*.

### **EDITORIAL ACTIVITIES**

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**Referee for:** IAGG

### **HONORS & AWARDS**

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The Louis I. and Thomas D. Dublin Award	<i>Mar 2017</i>
Washington Statistical Society Outstanding Graduate Student Award	<i>Jun 2013</i>
Phi Beta Kappa Honor Society Inductee	<i>May 2012</i>

## TEACHING EXPERIENCE

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PH.140.623-4 - Statistical Methods in Public Health III-IV	<i>Spring 2017</i>
PH.140.621-2 - Statistical Methods in Public Health I-II	<i>Fall 2016</i>
PH.140.753-4 - Advanced Methods in Biostatistics III-IV	<i>Spring 2016</i>
PH.140.751-2 - Advanced Methods in Biostatistics I-II	<i>Fall 2015</i>
BIST 514 - Linear Modeling & Multivariate Analysis	<i>Spring 2014</i>

## PROFESSIONAL MEMBERSHIP

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Americal Statistical Association (ASA)  
Washington Statistical Society (WSS)  
International Biometric Society (ENAR)

## CERTIFICATIONS

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SAS Certified Advanced Programmer for SAS 9	<i>Aug 2013</i>
SAS Certified Base Programmer for SAS 9	<i>Jul 2013</i>

## COMPUTING SKILLS

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R, Matlab, SAS,  $\text{\LaTeX}$