Title: Some Practical Tools and Lessons Learned from Working with Wearable Sensor Data Facilitated by: Jaejoon Song, MS

Research Spotlight: Getting to Know Jaejoon Song, MS

Jaejoon Song is a statistical analyst and a PhD student who enjoys writing software that drives science for the benefit of his research community. Although he could license and privatize his unique programs, he believes that scientific software should be readily accessible, so that researchers can run, study, modify and redistribute for the public good. His software is free and available online for other statisticians as well as those with non-technical backgrounds. Soft-spoken and modest, he is accomplished and busy, developing strategies for using individual-centered data streams for personalized medicine.

A native of South Korea, Jaejoon earned his BA in psychology from Yonsei University in Seoul, South Korea. After moving to the U.S., he earned an MA in Psychology from the University of Rhode Island, in Kingston. A mentor on quantitative methods led him into statistics regarding biomedical sciences, and he earned his MS in Biostatistics at the University of Minnesota in Minneapolis. He is currently finalizing his PhD in Biostatistics at the University of Texas School of Public Health, here in Houston, under the tutelage of Dr. Michael Swartz. Jaejoon came to MD Anderson to gain more experience and enrich his academic knowledge.

“My primary interest is developing integrative statistical methods for data collected using wearable sensors,” he explains. “We are now able to track behavioral factors such as physical activity and sleep patterns, as well as biological indicators such as blood pressure, blood sugar, heart rate, insulin, and electroencephalography (EEG) throughout the day, and this information will soon be integrated into electronic health models of the future. We can create ‘buttons’ to track the results we want, and our data collection devices enable us to contribute directly to health outcomes. When we combine wearable data with clinical and genomic information, we can connect everyday information to the chances of cancer occurrence or obesity,” he proclaims.

Jaejoon’s open-source (free) software is available online on both a repository for other biostatisticians as well as a web-based program that enables less experienced users to point and click for data analysis. His three software programs have been downloaded over 14,000 times by users in 12 countries, and his work has been recognized by the American Statistical Association. “I am always quite busy at MD Anderson, analyzing data and building software infrastructure for projects conducted at The Center for Energy Balance.”

As a statistical analyst, he has worked closely with Dr. Karen Basen-Engquist, writing research articles and collaborating on study protocols and grant applications with faculty, staff, post-doctoral researchers, as well as graduate students working in the cancer prevention and survivorship arena.

“We deal with lots of physical activity data, and I have assisted in writing five papers on the psychosocial variables and physical activities which impact cancer survivorship. Originally, I came on board to just analyze data we’ve collected, but recently I have been fortunate to be engaged at the initial design stage for several studies. We are currently designing a multi-year study on wearable devices which we hope will optimize our findings over time.”

“In my work, I hope to demonstrate to both laypeople and professionals that it is easy to collect, access and interpret data from wearable devices, using simple web-based programs. I am open to collaborating on new software development and would like to see more people using these, as a means for improving information collection and the outcomes it can generate.”

“"At the end of the day, I'm more of a problem-driven and big-picture thinker," he confides. "My psychology background keeps me grounded in solving problems that matter and I enjoy working with a variety of professionals, given all the numbers I deal with. It's a very exciting time to be in this field and play a role in the processes that make data a simple, every day concept. You don't have to be a mathematician to understand the data. But given our electronic world, information is the wave of the future. Before long, wearables will be non-wearables, and our environment will track us. I can't wait to see this in our lifetime.”

New Provocative Questions NIH Funding Opportunities announced for research on the effects of nutritional interventions on cancer treatment

We at the Center for Energy Balance have identified questions in the recent NCI provocative questions RFA that may be relevant to energy balance. We will be convening a group to discuss this FOA. Application due June 28, 2017.

Research Answers to NCI’s Provocative Questions (R01): RFA-CA-17-017; (R21): RFA-CA-17-018
Bionutrition Research Core News
The Bionutrition Research Core provides MD Anderson researchers with the expertise and resources required to apply for nutrition-related funding, conduct clinical feeding trials, dietary assessment, and research-related nutritional education and counseling. Contact Christine Ranieri at brc@mdanderson.org for more information.

Share Your Ideas to Help Shape the Next 10 Years of NIH Nutrition Research
The NIH Nutrition Research Task Force (NRTF) hopes to obtain input in developing the first-ever NIH-wide strategic plan for nutrition research. Click on https://ideabuzz.com/a/buzz/nih/strategic-plan to provide input. Closes on April 16th.

Need Some Help Pushing that Paper Across The Finish Line?
Register for the Energy Balance Writing Retreat on April 14th, from 9-5pm in FCT3.5018 (Lab E). Step away from your desk, and work on papers in a quiet space with other researchers and investigators. If you are interested, please email Miranda Baum at mbaum@mdanderson.org by April 7th. We have 10 spots available.

Gynecologic Oncology Fellow, Shannon Armbruster takes 1st Place!
Congratulations to Shannon Armbruster, MD, who took 1st place in the Trainee category at the Fifth State of the Science Cancer Survivorship Research Symposium: Cancer Survivorship Research Across Texas. Her project looked at five-year post-intervention BMI and post-intervention physical activity level among endometrial cancer survivors.

Dr. Armbruster is mentored by Dr. Karen Basen-Engquist and Dr. Karen Lu.

Environmental and Policy Change Course
Building skills for policy and environmental change to promote health
Instructor: Belinda Reininger, DrPH
Date: March 30th, 2017, 8-5pm
Location: 1200 Pressler St, Room 102A
Researchers $350; Students, Community health workers and community partners $100* *scholarships available
To register, please email Jo.D.Spears@uth.tmc.edu

Current Funding Opportunities
National Institutes of Health [Standard dates apply]
Testing Interventions for Health-Enhancing Physical Activity: PAR-14-315 (R01)
Developing Interventions for Health-Enhancing Physical Activity: PAR-14-321 (R21/R33)
Collaborative Innovation Award, Clinical and Translational Science Award (CTSA) Program (U01): PAR-15-172
Advancing Translational and Clinical Probiotic/Prebiotic and Human Microbiome Research: PA-15-127(R01)
Education and Health: New Frontiers (R21): PAR-16-078; (R01): PAR-16-080; (R03): PAR-16-079
Examination of Survivorship Care Planning Efficacy and Impact (R21): PA-16-011; (R01): PA-16-012
Exploratory/Developmental Clinical Research Grants in Obesity: PA-15-163 (R21)
Education and Health: New Frontiers (R21): PAR-16-078; (R01): PAR-16-009
Systems Science and Health in the Behavioral and Social Sciences (R01): PAR-15-048
Translational Research to Improve Diabetes and Obesity Outcomes (R01): PA-13-362
Leveraging Cognitive Neuroscience to Improve Assessment of Cancer Treatment-Related Cognitive Impairment (R01): PAR-16-212; (R21): PAR-16-213
Predicting Behavioral Responses to Population-Level Cancer Control Strategies (R21): PAR-16-257
Innovative Approaches to Studying Cancer Communication in the New Media Environment (R01): PAR-16-249; (R21): PAR-16-248
Cancer-Related Behavioral Research through Integrating Existing Data (R01): PAR-16-256; (R21): PAR-16-255
Stimulating Innovations in Behavioral Intervention Research for Cancer Prevention and Control (R21): PAR-16-278
National Cancer Institute Program Project Applications (P01): PAR-15-023
Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects on Biomarkers of Prognosis and Survival (R21): PAR-16-123; (R01): PAR-16-122

American Cancer Society
The Extramural Grants department encourages applications for research projects that focus on the multifaceted relationship between nutrition, physical activity and cancer:
Extramural Grants

Cancer Prevention & Research Institute of Texas
Competitive Continuation/Expansion-Evidence-Based Cancer Prevention Services: RFA P-17.1-CCE
Dissemination of CPRIT-Funded Cancer Control Interventions: RFA P-17.1-DI
Evidence-Based Cancer Prevention Services: RFA P-17.1-EBP
Evidence-Based Cancer Prevention Services - See, Test & Treat® Program: RFA P-17.1-EBP-ST
Cancer Prevention Promotion and Navigation to Clinical Services: RFA P-17.1-PN