## Edward S Sazonov

List of Publications by Year in descending order

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169 papers 4,252 citations

34 h-index 149479 56 g-index

170 all docs

170 docs citations

170 times ranked

3674 citing authors

#	Article	IF	CITATIONS
1	Passive Sensors for Detection of Food Intake. , 2023, , 218-234.		1
2	Perspective: Opportunities and Challenges of Technology Tools in Dietary and Activity Assessment: Bridging Stakeholder Viewpoints. Advances in Nutrition, 2022, 13, 1-15.	2.9	7
3	A Novel Approach to Dining Bowl Reconstruction for Image-Based Food Volume Estimation. Sensors, 2022, 22, 1493.	2.1	8
4	Empirical Study on Human Movement Classification Using Insole Footwear Sensor System and Machine Learning. Sensors, 2022, 22, 2743.	2.1	9
5	FOODCAM: A Novel Structured Light-Stereo Imaging System for Food Portion Size Estimation. Sensors, 2022, 22, 3300.	2.1	7
6	Feasibility of the automatic ingestion monitor (AIM-2) for infant feeding assessment: a pilot study among breast-feeding mothers from Ghana. Public Health Nutrition, 2022, 25, 2897-2907.	1.1	1
7	Development of Cloud-based Infrastructure for Real Time Analysis of Wearable Sensor Signal. , 2022, , .		1
8	A Systematic Review of Sensor-Based Methodologies for Food Portion Size Estimation. IEEE Sensors Journal, 2021, 21, 12882-12899.	2.4	10
9	A Lightweight Exoskeleton-Based Portable Gait Data Collection System. Sensors, 2021, 21, 781.	2.1	13
10	Detection and characterization of food intake by wearable sensors., 2021,, 541-574.		4
11	"Automatic Ingestion Monitor Version 2―– A Novel Wearable Device for Automatic Food Intake Detection and Passive Capture of Food Images. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 568-576.	3.9	48
12	Electromyogram in Cigarette Smoking Activity Recognition. Signals, 2021, 2, 87-97.	1.2	1
13	Implementing Real-Time Food Intake Detection in a Wearable System Using Accelerometer. , 2021, , .		6
14	Food/Non-Food Classification of Real-Life Egocentric Images in Low- and Middle-Income Countries Based on Image Tagging Features. Frontiers in Artificial Intelligence, 2021, 4, 644712.	2.0	5
15	Grand Challenges in Wearable Electronics. Frontiers in Electronics, 2021, 2, .	2.0	6
16	Ankle Angle Prediction Using a Footwear Pressure Sensor and a Machine Learning Technique. Sensors, 2021, 21, 3790.	2.1	7
17	Food Detection and Segmentation from Egocentric Camera Images. , 2021, 2021, 2736-2740.		3
18	Detection of Food Intake Sensor's Wear Compliance in Free-Living. IEEE Sensors Journal, 2021, 21, 27728-27735.	2.4	3

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19	Wearable Egocentric Camera as a Monitoring Tool of Free-Living Cigarette Smoking: A Feasibility Study. Nicotine and Tobacco Research, 2020, 22, 1883-1890.	1.4	11
20	Computation of Cigarette Smoke Exposure Metrics From Breathing. IEEE Transactions on Biomedical Engineering, 2020, 67, 2309-2316.	2.5	7
21	Detection of Oil-Containing Dressing on Salad Leaves Using Multispectral Imaging. IEEE Access, 2020, 8, 86196-86206.	2.6	14
22	Selective Content Removal for Egocentric Wearable Camera in Nutritional Studies. IEEE Access, 2020, 8, 198615-198623.	2.6	4
23	Cigarette Smoke Exposure Computation using Bioimpedance Sensor. , 2020, , .		0
24	PACT CAM: Wearable Sensor System to Capture the Details of Cigarette Smoking in Free-Living. , 2020, , .		3
25	Automatic Count of Bites and Chews From Videos of Eating Episodes. IEEE Access, 2020, 8, 101934-101945.	2.6	21
26	Reproducibility of Dietary Intake Measurement From Diet Diaries, Photographic Food Records, and a Novel Sensor Method. Frontiers in Nutrition, 2020, 7, 99.	1.6	8
27	Development and Validation of an Objective, Passive Dietary Assessment Method for Estimating Food and Nutrient Intake in Households in Low- and Middle-Income Countries: A Study Protocol. Current Developments in Nutrition, 2020, 4, nzaa020.	0.1	15
28	Comparison of Wearable Sensors for Estimation of Chewing Strength. IEEE Sensors Journal, 2020, 20, 5379-5388.	2.4	20
29	A CNN-LSTM neural network for recognition of puffing in smoking episodes using wearable sensors. Biomedical Engineering Letters, 2020, 10, 195-203.	2.1	34
30	Quantitative assessment of nutritive sucking patterns in preterm infants. Early Human Development, 2020, 146, 105044.	0.8	2
31	Loosely Coupled Wireless Charging of Footwear-based Sensor System. , 2019, , .		1
32	Estimating Berg Balance Scale and Mini Balance Evaluation System Test Scores by Using Wearable Shoe Sensors., 2019,,.		9
33	A Comparison of SVM and CNN-LSTM Based Approach for Detecting Smoke Inhalations from Respiratory signal., 2019, 2019, 3262-3265.		7
34	Objective Detection of Cigarette Smoking from Physiological Sensor Signals. , 2019, 2019, 3563-3566.		11
35	A Case Study of Household Food-Related Assessment Using an Innovative Passive Dietary Assessment Device in Mampong-Akuapem, Ghana (FS17-03-19). Current Developments in Nutrition, 2019, 3, nzz035.FS17-03-19.	0.1	1
36	Sensors and Embedded Systems in Agriculture and Food Analysis. Journal of Sensors, 2019, 2019, 1-2.	0.6	7

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37	Methodology for Objective, Passive, Image- and Sensor-based Assessment of Dietary Intake, Meal-timing, and Food-related Activity in Ghana and Kenya (P13-028-19). Current Developments in Nutrition, 2019, 3, nzz036.P13-028-19.	0.1	2
38	Quantitative Assessment of Nutritive Sucking Patterns in Preterm Infants (P11-095-19). Current Developments in Nutrition, 2019, 3, nzz048.P11-095-19.	0.1	0
39	Validation of Sensor-Based Food Intake Detection by Multicamera Video Observation in an Unconstrained Environment. Nutrients, 2019, 11, 609.	1.7	37
40	A Systematic Review of Technology-Driven Methodologies for Estimation of Energy Intake. IEEE Access, 2019, 7, 49653-49668.	2.6	24
41	Cigarette Smoking Detection with An Inertial Sensor and A Smart Lighter. Sensors, 2019, 19, 570.	2.1	30
42	Smoking detection based on regularity analysis of hand to mouth gestures. Biomedical Signal Processing and Control, 2019, 51, 106-112.	3.5	20
43	Development of a Smart IoT Charger for Wearable Cigarette Smoking Monitor. , 2019, , .		4
44	Design and Preliminary Testing of an Instrumented Exoskeleton for Walking Gait Measurement. , 2019, , .		3
45	Processing of Egocentric Camera Images from a Wearable Food Intake Sensor. , 2019, , .		6
46	Sensor System for Open/Closed Eye Detection in Infants During Feeding., 2019,,.		0
47	Wearable Sensors for Monitoring of Cigarette Smoking in Free-Living: A Systematic Review. Sensors, 2019, 19, 4678.	2.1	34
48	Statistical models for meal-level estimation of mass and energy intake using features derived from video observation and a chewing sensor. Scientific Reports, 2019, 9, 45.	1.6	12
49	The Pediatric SmartShoe: Wearable Sensor System for Ambulatory Monitoring of Physical Activity and Gait. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 477-486.	2.7	40
50	Accelerometer-Based Detection of Food Intake in Free-Living Individuals. IEEE Sensors Journal, 2018, 18, 3752-3758.	2.4	52
51	Automatic Recognition of Activities of Daily Living Utilizing Insole-Based and Wrist-Worn Wearable Sensors. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 979-988.	3.9	79
52	Design and Testing of an Instrumented Infant Feeding Bottle. , 2018, , .		2
53	Motion-Adaptive Image Capture in a Body-Worn Wearable Sensor. , 2018, , .		4
54	The importance of field experiments in testing of sensors for dietary assessment and eating behavior monitoring., 2018, 2018, 5759-5762.		12

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55	Dietary Intake and Physical Activity Assessment: Current Tools, Techniques, and Technologies for Use in Adult Populations. American Journal of Preventive Medicine, 2018, 55, e93-e104.	1.6	72
56	Segmentation and Characterization of Chewing Bouts by Monitoring Temporalis Muscle Using Smart Glasses With Piezoelectric Sensor. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 1495-1503.	3.9	38
57	Reduction of energy intake using justâ€inâ€time feedback from a wearable sensor system. Obesity, 2017, 25, 676-681.	1.5	17
58	Clustering of Food Intake Images into Food and Non-food Categories. Lecture Notes in Computer Science, 2017, , 454-463.	1.0	4
59	Feature Extraction Using Deep Learning for Food Type Recognition. Lecture Notes in Computer Science, 2017, , 464-472.	1.0	19
60	Guest Editorial Nutrition Informatics: From Food Monitoring to Dietary Management. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 585-587.	3.9	3
61	Measurement of fidgeting in patients with anorexia nervosa using a novel shoe-based monitor. Eating Behaviors, 2017, 24, 45-48.	1.1	24
62	Recognizing cigarette smoke inhalations using hidden Markov models., 2017, 2017, 1242-1245.		6
63	Real time monitoring and recognition of eating and physical activity with a wearable device connected to the eyeglass. , 2017, , .		11
64	Evaluation of RIP sensor calibration stability for daily estimation of lung volume. , 2017, , .		4
65	One size fits all electronics for insole-based activity monitoring. , 2017, 2017, 3564-3567.		4
66	Early Detection of the Initiation of Sit-to-Stand Posture Transitions Using Orthosis-Mounted Sensors. Sensors, 2017, 17, 2712.	2.1	12
67	Development of a Multisensory Wearable System for Monitoring Cigarette Smoking Behavior in Free-Living Conditions. Electronics (Switzerland), 2017, 6, 104.	1.8	32
68	Meal Microstructure Characterization from Sensor-Based Food Intake Detection. Frontiers in Nutrition, 2017, 4, 31.	1.6	36
69	A Novel Wearable Device for Food Intake and Physical Activity Recognition. Sensors, 2016, 16, 1067.	2.1	99
70	A Comparative Review of Footwear-Based Wearable Systems. Electronics (Switzerland), 2016, 5, 48.	1.8	82
71	Automatic Measurement of Chew Count and Chewing Rate during Food Intake. Electronics (Switzerland), 2016, 5, 62.	1.8	45
72	A method for early detection of the initiation of sit-to-stand posture transitions. Physiological Measurement, 2016, 37, 515-529.	1.2	10

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73	Measuring Human Energy Intake and Ingestive Behavior: Challenges and Opportunities [From the Technical Committees]. IEEE Pulse, 2016, 7, 6-7.	0.1	3
74	Detection of chewing from piezoelectric film sensor signals using ensemble classifiers. , 2016, 2016, 4929-4932.		26
75	Analysis of a coverstitched stretch sensor for monitoring of breathing. , 2016, , .		6
76	Linear regression models for chew count estimation from piezoelectric sensor signals. , 2016, , .		7
77	Using respiratory signals for the recognition of human activities. , 2016, 2016, 173-176.		11
78	Development of a real time activity monitoring Android application utilizing SmartStep. , 2016, 2016, 1886-1889.		13
79	Sensor sensitivity to posture transitions in a lower-extremity orthotic device. , 2015, , .		2
80	Comparative testing of piezoelectric and printed strain sensors in characterization of chewing., 2015, 2015, 7538-41.		19
81	Monitoring of Infant Feeding Behavior Using a Jaw Motion Sensor. Journal of Healthcare Engineering, 2015, 6, 23-40.	1.1	19
82	A wireless sensor system for quantification of infant feeding behavior. , 2015, , .		9
83	Development of the RT-GAIT, a Real-Time feedback device to improve Gait of individuals with stroke., 2015, 2015, 5724-7.		11
84	SmartStep 2.0 - A completely wireless, versatile insole monitoring system. , 2015, , .		17
85	Early detection of sit-to-stand transitions in a lower limb orthosis., 2015, 2015, 5028-31.		1
86	Detection of cigarette smoke inhalations from respiratory signals using decision tree ensembles. , $2015, \ldots$		6
87	Clustering technical documents by stylistic features for authorship analysis. , 2015, , .		1
88	Posture and Activity Recognition and Energy Expenditure Estimation in a Wearable Platform. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 1339-1346.	3.9	41
89	Energy intake estimation from counts of chews and swallows. Appetite, 2015, 85, 14-21.	1.8	57
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91	Measuring gait symmetry in children with cerebral palsy using the SmartShoe. , 2014, , .		5
92	Detection and Characterization of Food Intake by Wearable Sensors. , 2014, , 591-616.		10
93	Posture and activity recognition and energy expenditure prediction in a wearable platform. , 2014, 2014, 4163-7.		7
94	Public and health professionals' misconceptions about the dynamics of body weight gain/loss. System Dynamics Review, 2014, 30, 58-74.	1.1	32
95	Sensors and systems for obesity care and research. , 2014, 2014, 3188-91.		5
96	Development of wheelchair cushion pressure monitoring system. , 2014, , .		3
97	Validation of two novel monitoring devices to measure physical activity in healthy women. , 2014, 2014, 1727-30.		4
98	Understanding smoking behavior using wearable sensors: Relative importance of various sensor modalities., 2014, 2014, 6899-902.		6
99	The design and evaluation of an activity monitoring user interface for people with stroke. , 2014, 2014, 5908-11.		5
100	Highly Accurate Recognition of Human Postures and Activities Through Classification With Rejection. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 309-315.	3.9	55
101	A novel damage index for damage identification using guided waves with application in laminated composites. Smart Materials and Structures, 2014, 23, 095015.	1.8	69
102	A novel approach for food intake detection using electroglottography. Physiological Measurement, 2014, 35, 739-751.	1.2	77
103	Android TWEETY $\hat{a} \in \H$ A wireless activity monitoring and biofeedback system designed for people with Anorexia Nervosa. , 2014, , .		16
104	Automatic Ingestion Monitor: A Novel Wearable Device for Monitoring of Ingestive Behavior. IEEE Transactions on Biomedical Engineering, 2014, 61, 1772-1779.	2.5	166
105	Electronic and Electromechanical Tester of Physiological Sensors. Smart Sensors, Measurement and Instrumentation, 2014, , 243-261.	0.4	0
106	Development of SmartStep: An insole-based physical activity monitor., 2013, 2013, 7209-12.		24
107	Estimation of feature importance for food intake detection based on Random Forests classification., 2013, 2013, 6756-9.		24
108	Using decision trees to measure activities in people with stroke. , 2013, 2013, 6337-40.		18

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109	Monitoring of Cigarette Smoking Using Wearable Sensors and Support Vector Machines. IEEE Transactions on Biomedical Engineering, 2013, 60, 1867-1872.	2.5	24
110	A Comparative Study of Food Intake Detection Using Artificial Neural Network and Support Vector Machine. , 2013, , .		16
111	A Comparison of Energy Expenditure Estimation of Several Physical Activity Monitors. Medicine and Science in Sports and Exercise, 2013, 45, 2105-2112.	0.2	106
112	Detection of cigarette smoke inhalations from respiratory signals using reduced feature set., 2013, 2013, 6031-4.		9
113	A Wearable Sensor System for Monitoring Cigarette Smoking. Journal of Studies on Alcohol and Drugs, 2013, 74, 956-964.	0.6	46
114	Evaluation of Chewing and Swallowing Sensors for Monitoring Ingestive Behavior. Sensor Letters, 2013, 11, 560-565.	0.4	15
115	Detection of Hand-to-Mouth Gestures Using a RF Operated Proximity Sensor for Monitoring Cigarette Smoking. Open Biomedical Engineering Journal, 2013, 7, 41-49.	0.7	24
116	Analogue-to-digital and digital-to-analogue conversion with memristive devices. Electronics Letters, 2012, 48, 73.	0.5	20
117	Identification of cigarette smoke inhalations from wearable sensor data using a Support Vector Machine classifier., 2012, 2012, 4050-3.		23
118	A Sensor System for Automatic Detection of Food Intake Through Non-Invasive Monitoring of Chewing. IEEE Sensors Journal, 2012, 12, 1340-1348.	2.4	138
119	Highly accurate classification of postures and activities by a shoe-based monitor through classification with rejection., 2012, 2012, 2611-4.		2
120	Electronic and Electromechanical Tester of physiological sensors. , 2012, , .		0
121	Recognition of household and athletic activities using smartshoe., 2012, 2012, 6382-5.		5
122	Comparative sensor analysis for an electronic wearable and non-invasive respiratory signal acquisition system. , 2012, , .		2
123	Identifying Activity Levels and Steps of People With Stroke Using a Novel Shoe-Based Sensor. Journal of Neurologic Physical Therapy, 2012, 36, 100-107.	0.7	39
124	Damage detection and identification in smart structures using SVM and ANN. Proceedings of SPIE, 2012,	0.8	8
125	Automatic identification of the number of food items in a meal using clustering techniques based on the monitoring of swallowing and chewing. Biomedical Signal Processing and Control, 2012, 7, 474-480.	3.5	16
126	Automatic food intake detection based on swallowing sounds. Biomedical Signal Processing and Control, 2012, 7, 649-656.	3.5	56

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127	A robust classification scheme for detection of food intake through non-invasive monitoring of chewing., 2012, 2012, 4891-4.		18
128	Classification of posture and activities by using decision trees., 2012, 2012, 4353-6.		10
129	Automatic breathing segmentation from wearable respiration sensors. , 2011, , .		12
130	Design of a instrumentation module for monitoring ingestive behavior in laboratory studies. , 2011, 2011, 1884-7.		7
131	Swallowing detection by sonic and subsonic frequencies: A comparison. , 2011, 2011, 6890-3.		10
132	Impact of out-of-focus blur on iris recognition. , 2011, , .		6
133	Using Sensors to Measure Activity in People with Stroke. Topics in Stroke Rehabilitation, 2011, 18, 746-757.	1.0	66
134	Monitoring of Posture Allocations and Activities by a Shoe-Based Wearable Sensor. IEEE Transactions on Biomedical Engineering, 2011, 58, 983-990.	2.5	199
135	Automatic Detection of Temporal Gait Parameters in Poststroke Individuals. IEEE Transactions on Information Technology in Biomedicine, 2011, 15, 594-601.	3.6	120
136	RF hand gesture sensor for monitoring of cigarette smoking. , 2011, , .		20
137	Characterizing walking activity in people with stroke. , 2011, 2011, 5211-4.		4
138	Accurate Prediction of Energy Expenditure Using a Shoe-Based Activity Monitor. Medicine and Science in Sports and Exercise, 2011, 43, 1312-1321.	0.2	44
139	Prediction of Bodyweight and Energy Expenditure Using Point Pressure and Foot Acceleration Measurements. Open Biomedical Engineering Journal, 2011, 5, 110-115.	0.7	26
140	Clustering (Xu, R. and Wunsch, D.C.; 2008) [Book review. IEEE Pulse, 2010, 1, 74-76.	0.1	1
141	Detection of Food Intake from Swallowing Sequences by Supervised and Unsupervised Methods. Annals of Biomedical Engineering, 2010, 38, 2766-2774.	1.3	25
142	Automatic Detection of Swallowing Events by Acoustical Means for Applications of Monitoring of Ingestive Behavior. IEEE Transactions on Biomedical Engineering, 2010, 57, 626-633.	2.5	135
143	The Energetics of Obesity: A Review: Monitoring Energy Intake and Energy Expenditure in Humans. IEEE Engineering in Medicine and Biology Magazine, 2010, 29, 31-35.	1.1	20
144	Algorithm for haplotype resolution and block partitioning for partial XOR-genotype data. Journal of Biomedical Informatics, 2010, 43, 51-59.	2.5	11

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145	Hybrid evolutionary algorithm for microscrew thread parameter estimation. Engineering Applications of Artificial Intelligence, 2010, 23, 446-452.	4.3	6
146	Wearable shoe-based device for rehabilitation of stroke patients., 2010, 2010, 3772-5.		42
147	Detection of periods of food intake using Support Vector Machines. , 2010, 2010, 1004-7.		20
148	Wireless Intelligent Sensor and Actuator Network - A Scalable Platform for Time-synchronous Applications of Structural Health Monitoring. Structural Health Monitoring, 2010, 9, 465-476.	4.3	48
149	Reply to â€~Comment on "Non-invasive monitoring of chewing and swallowing for objective quantification of ingestive behaviorâ€â€™. Physiological Measurement, 2009, 30, L5-L7.	1.2	2
150	Automatic Recognition of postures and activities in stroke patients., 2009, 2009, 2200-3.		36
151	Toward Objective Monitoring of Ingestive Behavior in Freeâ€living Population. Obesity, 2009, 17, 1971-1975.	1.5	60
152	Self-Powered Sensors for Monitoring of Highway Bridges. IEEE Sensors Journal, 2009, 9, 1422-1429.	2.4	195
153	Bandwidth Optimization in 802.15.4 Networks through Evolutionary Slot Assignment. International Journal of Communications, Network and System Sciences, 2009, 02, 518-527.	0.4	2
154	Sleep Versus Wake Classification From Heart Rate Variability Using Computational Intelligence: Consideration of Rejection in Classification Models. IEEE Transactions on Biomedical Engineering, 2008, 55, 108-118.	2.5	56
155	Limited receptive area neural classifier for texture recognition of mechanically treated metal surfaces. Neurocomputing, 2008, 71, 1413-1421.	3.5	16
156	Non-invasive monitoring of chewing and swallowing for objective quantification of ingestive behavior. Physiological Measurement, 2008, 29, 525-541.	1.2	141
157	Reservation-based protocol for monitoring applications using IEEE 802.15.4 sensor networks. International Journal of Sensor Networks, 2008, 4, 155.	0.2	19
158	Limited receptive area neural classifier for recognition of swallowing sounds using continuous wavelet transform. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 3128-31.	0.5	10
159	Limited receptive area neural classifier for recognition of swallowing sounds using short-time Fourier transform. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	9
160	Automatic recognition of postural allocations. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4993-6.	0.5	3
161	Experimental evaluation of instantaneous phase-based index for structural health monitoring. , 2006, , .		3
162	Environmental testing of wireless sensor system for structural health monitoring of civil infrastructure., 2006,,.		1

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164	Optimal spatial sampling interval for damage detection by curvature or strain energy mode shapes. Journal of Sound and Vibration, 2005, 285, 783-801.	2.1	141
165	Activity-based sleep–wake identification in infants. Physiological Measurement, 2004, 25, 1291-1304.	1.2	58
166	Wireless intelligent sensor network for autonomous structural health monitoring. , 2004, 5384, 305.		51
167	Non-baseline detection of small damages from changes in strain energy mode shapes. Nondestructive Testing and Evaluation, 2002, 18, 91-107.	1.1	12
168	Fuzzy logic expert system for automated damage detection from changes in strain energy mode shapes. Nondestructive Testing and Evaluation, 2002, 18, 1-20.	1.1	19
169	Improvement of Methodology for Manual Energy Intake Estimation From Passive Capture Devices. Frontiers in Nutrition, 0, 9, .	1.6	2