# Jin-Oh Hahn

List of Publications by Year
in descending order



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|---|---|---|---|
| 123 papers | 3,186 citations | 236833 25 h-index | 175177 52 g-index |
| 124 all docs | 124 docs citations | 124 times ranked | 2213 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Toward Ubiquitous Blood Pressure Monitoring via Pulse Transit Time: Theory and Practice. IEEE Transactions on Biomedical Engineering, 2015, 62, 1879-1901. | 2.5 | 640 |
| 2 | GPS-based real-time identification of tire-road friction coefficient. IEEE Transactions on Control Systems Technology, 2002, 10, 331-343. | 3.2 | 177 |
| 3 | Smartphone-based blood pressure monitoring via the oscillometric finger-pressing method. Science Translational Medicine, 2018, 10, . | 5.8 | 147 |
| 4 | Ballistocardiogram: Mechanism and Potential for Unobtrusive Cardiovascular Health Monitoring. Scientific Reports, 2016, 6, 31297. | 1.6 | 122 |
| 5 | Ballistocardiogram as Proximal Timing Reference for Pulse Transit Time Measurement: Potential for Cuffless Blood Pressure Monitoring. IEEE Transactions on Biomedical Engineering, 2015, 62, 2657-2664. | 2.5 | 114 |
| 6 | New adaptive approaches to real-time estimation of vehicle sideslip angle. Control Engineering Practice, 2009, 17, 1367-1379. | 3.2 | 108 |
| 7 | Weighing Scale-Based Pulse Transit Time is a Superior Marker of Blood Pressure than Conventional Pulse Arrival Time. Scientific Reports, 2016, 6, 39273. | 1.6 | 105 |
| 8 | Evaluation of the Accuracy of Cuffless Blood Pressure Measurement Devices: Challenges and Proposals. Hypertension, 2021, 78, 1161-1167. | 1.3 | 88 |
| 9 | Individualized closed-loop control of propofol anesthesia: A preliminary study. Biomedical Signal Processing and Control, 2013, 8, 500-508. | 3.5 | 78 |
| 10 | Ballistocardiogram-Based Approach to Cuffless Blood Pressure Monitoring: Proof of Concept and Potential Challenges. IEEE Transactions on Biomedical Engineering, 2018, 65, 2384-2391. | 2.5 | 70 |
| 11 | Toward Ubiquitous Blood Pressure Monitoring via Pulse Transit Time: Predictions on Maximum Calibration Period and Acceptable Error Limits. IEEE Transactions on Biomedical Engineering, 2018, 65, 1410-1420. | 2.5 | 63 |
| 12 | PPG Sensor Contact Pressure Should Be Taken Into Account for Cuff-Less Blood Pressure Measurement. IEEE Transactions on Biomedical Engineering, 2020, 67, 3134-3140. | 2.5 | 58 |
| 13 | Conventional pulse transit times as markers of blood pressure changes in humans. Scientific Reports, 2020, 10, 16373. | 1.6 | 49 |
| 14 | Real-Time Identification of Road-Bank Angle Using Differential GPS. IEEE Transactions on Control Systems Technology, 2004, 12, 589-599. | 3.2 | 46 |
| 15 | Error Mechanisms of the Oscillometric Fixed-Ratio Blood Pressure Measurement Method. Annals of Biomedical Engineering, 2013, 41, 587-597. | 1.3 | 46 |
| 16 | Patient-Specific Oscillometric Blood Pressure Measurement. IEEE Transactions on Biomedical Engineering, 2016, 63, 1220-1228. | 2.5 | 43 |
| 17 | Formulas to Explain Popular Oscillometric Blood Pressure Estimation Algorithms. Frontiers in Physiology, 2019, 10, 1415. | 1.3 | 43 |
| 18 | Nonlinear Robust Control of Torque Converter Clutch Slip System for Passenger Vehicles Using Advanced Torque Estimation Algorithms. Vehicle System Dynamics, 2002, 37, 175-192. | 2.2 | 42 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Robust closed-loop control of hypnosis with propofol using WAVCNS index as the controlled variable. Biomedical Signal Processing and Control, 2012, 7, 517-524. | 3.5 | 39 |
| 20 | A Direct Dynamic Dose-Response Model of Propofol for Individualized Anesthesia Care. IEEE Transactions on Biomedical Engineering, 2012, 59, 571-578. | 2.5 | 35 |
| 21 | Subject-Specific Estimation of Central Aortic Blood Pressure Using an Individualized Transfer Function: A Preliminary Feasibility Study. IEEE Transactions on Information Technology in Biomedicine, 2012, 16, 212-220. | 3.6 | 35 |
| 22 | Photoplethysmography Fast Upstroke Time Intervals Can Be Useful Features for Cuff-Less Measurement of Blood Pressure Changes in Humans. IEEE Transactions on Biomedical Engineering, 2022, 69, 53-62. | 2.5 | 30 |
| 23 | Smooth shift control of automatic transmissions using a robust adaptive scheme with intelligent supervision. International Journal of Vehicle Design, 2003, 32, 250. | 0.1 | 29 |
| 24 | Development and In Silico Evaluation of a Model-Based Closed-Loop Fluid Resuscitation Control Algorithm. IEEE Transactions on Biomedical Engineering, 2019, 66, 1905-1914. | 2.5 | 28 |
| 25 | Tube-Load Model Parameter Estimation for Monitoring Arterial Hemodynamics. Frontiers in Physiology, 2011, 2, 72. | 1.3 | 27 |
| 26 | Control-oriented physiological modeling of hemodynamic responses to blood volume perturbation. Control Engineering Practice, 2018, 73, 149-160. | 3.2 | 27 |
| 27 | Estimation of pulse transit time using two diametric blood pressure waveform measurements. Medical Engineering and Physics, 2010, 32, 753-759. | 0.8 | 25 |
| 28 | Unobtrusive Estimation of Cardiovascular Parameters with Limb Ballistocardiography. Sensors, 2019, 19, 2922. | 2.1 | 25 |
| 29 | The Potential of Wearable Limb Ballistocardiogram in Blood Pressure Monitoring via Pulse Transit Time. Scientific Reports, 2019, 9, 10666. | 1.6 | 25 |
| 30 | Estimation of cardiac output and peripheral resistance using square-wave-approximated aortic flow signal. Frontiers in Physiology, 2012, 3, 298. | 1.3 | 24 |
| 31 | Hypotension in ICU Patients Receiving Vasopressor Therapy. Scientific Reports, 2017, 7, 8551. | 1.6 | 24 |
| 32 | Enabling the assessment of trauma-induced hemorrhage via smart wearable systems. Science Advances, 2020, 6, eabb1708. | 4.7 | 24 |
| 33 | Closed-Loop Anesthetic Drug Concentration Estimation Using Clinical-Effect Feedback. IEEE Transactions on Biomedical Engineering, 2011, 58, 3-6. | 2.5 | 23 |
| 34 | Patient-Specific Oscillometric Blood Pressure Measurement: Validation for Accuracy and Repeatability. IEEE Journal of Translational Engineering in Health and Medicine, 2017, 5, 1-10. | 2.2 | 23 |
| 35 | Vehicle lateral stability management using gain-scheduled robust control. Journal of Mechanical Science and Technology, 2006, 20, 1898-1913. | 0.7 | 22 |
| 36 | Estimation of Cardiovascular Risk Predictors from Non-Invasively Measured Diametric Pulse Volume Waveforms via Multiple Measurement Information Fusion. Scientific Reports, 2018, 8, 10433. | 1.6 | 22 |

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|---|---|---|---|
| 37 | Physiological Association between Limb Ballistocardiogram and Arterial Blood Pressure Waveforms: A Mathematical Model-Based Analysis. Scientific Reports, 2019, 9, 5146. | 1.6 | 21 |
| 38 | Pulse Transit Time-Pulse Wave Analysis Fusion Based on Wearable Wrist Ballistocardiogram for Cuff-Less Blood Pressure Trend Tracking. IEEE Access, 2020, 8, 138077-138087. | 2.6 | 21 |
| 39 | Subject-specific estimation of central aortic blood pressure via system identification: preliminary in-human experimental study. Medical and Biological Engineering and Computing, 2014, 52, 895-904. | 1.6 | 20 |
| 40 | A Lumped-Parameter Subject-Specific Model of Blood Volume Response to Fluid Infusion. Frontiers in Physiology, 2016, 7, 390. | 1.3 | 20 |
| 41 | Modeling and control of a hydraulic unit for direct yaw moment control in an automobile. Control Engineering Practice, 2006, 14, 1011-1022. | 3.2 | 19 |
| 42 | Blind Identification of Two-Channel IIR Systems With Application to Central Cardiovascular Monitoring. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2009, 131, . | 0.9 | 19 |
| 43 | Comparative Study on Tube-Load Modeling of Arterial Hemodynamics in Humans. Journal of Biomechanical Engineering, 2013, 135, 31005. | 0.6 | 19 |
| 44 | Modeling and 2-sensor blind identification of human cardiovascular system. Control Engineering Practice, 2009, 17, 1318-1328. | 3.2 | 18 |
| 45 | Relationship between Stroke Volume and Pulse Pressure during Blood Volume Perturbation: A Mathematical Analysis. BioMed Research International, 2014, 2014, 1-10. | 0.9 | 17 |
| 46 | Pulse arrival time, a novel sleep cardiovascular marker: the multi-ethnic study of atherosclerosis. Thorax, 2021, 76, thoraxjnl-2020-216399. | 2.7 | 16 |
| 47 | Quantification of Wave Reflection Using Peripheral Blood Pressure Waveforms. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 309-316. | 3.9 | 15 |
| 48 | Data mining investigation of the association between a limb ballistocardiogram and blood pressure. Physiological Measurement, 2018, 39, 075009. | 1.2 | 15 |
| 49 | Individualized Estimation of the Central Aortic Blood Pressure Waveform: A Comparative Study. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 215-221. | 3.9 | 14 |
| 50 | The role of tactile sensation in online and offline hierarchical control of multi-finger force synergy. Experimental Brain Research, 2015, 233, 2539-2548. | 0.7 | 14 |
| 51 | A semiâ€adaptive control approach to closedâ€loop medication infusion. International Journal of Adaptive Control and Signal Processing, 2017, 31, 240-254. | 2.3 | 14 |
| 52 | Model-based cardiovascular disease diagnosis: a preliminary in-silico study. Biomechanics and Modeling in Mechanobiology, 2017, 16, 549-560. | 1.4 | 13 |
| 53 | Evaluation of Fluid Resuscitation Control Algorithms via a Hardware-in-the-Loop Test Bed. IEEE Transactions on Biomedical Engineering, 2020, 67, 471-481. | 2.5 | 13 |
| 54 | Detection and Severity Assessment of Peripheral Occlusive Artery Disease via Deep Learning Analysis of Arterial Pulse Waveforms: Proof-of-Concept and Potential Challenges. Frontiers in Bioengineering and Biotechnology, 2020, 8, 720. | 2.0 | 13 |

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|---|---|---|---|
| 55 | Individualized PID control of depth of anesthesia based on patient model identification during the induction phase of anesthesia. , 2011, , . | | 12 |
| 56 | System Identification and Closed-Loop Control of End-Tidal CO‹formula formulatype="inline"›‹tex Notation="TeX"›$_{f 2}$‹/tex›‹/formula› in Mechanically Ventilated Patients. IEEE Transactions on Information Technology in Biomedicine, 2012, 16, 1176-1184. | 3.6 | 12 |
| 57 | Closed-Loop Fluid Resuscitation Control Via Blood Volume Estimation. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2016, 138, . | 0.9 | 12 |
| 58 | Central Blood Pressure Monitoring via a Standard Automatic Arm Cuff. Scientific Reports, 2017, 7, 14441. | 1.6 | 12 |
| 59 | Mitigation of Instrument-Dependent Variability in Ballistocardiogram Morphology: Case Study on Force Plate and Customized Weighing Scale. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 69-78. | 3.9 | 12 |
| 60 | Twoâ€stage vs mixedâ€effect approach to pharmacodynamic modeling of propofol in children using state entropy. Paediatric Anaesthesia, 2011, 21, 691-698. | 0.6 | 11 |
| 61 | Model-based fault detection and isolation in automotive yaw moment control system. International Journal of Automotive Technology, 2017, 18, 405-416. | 0.7 | 11 |
| 62 | Practical Use of Regularization in Individualizing a Mathematical Model of Cardiovascular Hemodynamics Using Scarce Data. Frontiers in Physiology, 2020, 11, 452. | 1.3 | 11 |
| 63 | Robust observer-based monitoring of a hydraulic actuator in a vehicle power transmission control system. Control Engineering Practice, 2002, 10, 327-335. | 3.2 | 10 |
| 64 | Data-Driven Lossy Tube-Load Modeling of Arterial Tree: In-Human Study. Journal of Biomechanical Engineering, 2014, 136, 101011. | 0.6 | 10 |
| 65 | Investigation of Viscoelasticity in the Relationship Between Carotid Artery Blood Pressure and Distal Pulse Volume Waveforms. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 460-470. | 3.9 | 10 |
| 66 | Commentary: Relation Between Blood Pressure and Pulse Wave Velocity for Human Arteries. Frontiers in Physiology, 2019, 10, 1179. | 1.3 | 10 |
| 67 | A Unified Approach to Wearable Ballistocardiogram Gating and Wave Localization. IEEE Transactions on Biomedical Engineering, 2021, 68, 1115-1122. | 2.5 | 10 |
| 68 | Identification of Multichannel Cardiovascular Dynamics Using Dual Laguerre Basis Functions for Noninvasive Cardiovascular Monitoring. IEEE Transactions on Control Systems Technology, 2010, 18, 170-176. | 3.2 | 9 |
| 69 | Unifying the Estimation of Blood Volume Decompensation Status in a Porcine Model of Relative and Absolute Hypovolemia Via Wearable Sensing. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 3351-3360. | 3.9 | 9 |
| 70 | Model-Based Blind System Identification Approach to Estimation of Central Aortic Blood Pressure Waveform From Noninvasive Diametric Circulatory Signals. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, . | 0.9 | 8 |
| 71 | Collective Variational Inference for Personalized and Generative Physiological Modeling: A Case Study on Hemorrhage Resuscitation. IEEE Transactions on Biomedical Engineering, 2022, 69, 666-677. | 2.5 | 8 |
| 72 | Posture-Dependent Variability in Wrist Ballistocardiogram-Photoplethysmogram Pulse Transit Time: Implication to Cuff-Less Blood Pressure Tracking. IEEE Transactions on Biomedical Engineering, 2022, 69, 347-355. | 2.5 | 8 |

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| 73 | Conflicting interactions in multiple closed-loop controlled critical care Treatments: A hemorrhage resuscitation-intravenous propofol sedation case study. Biomedical Signal Processing and Control, 2022, 71, 103268. | 3.5 | 8 |
| 74 | Photoplethysmography in noninvasive blood pressure monitoring. , 2022, , 359-400. | | 8 |
| 75 | Physiological closed-loop control in critical care: opportunities for innovations. Progress in Biomedical Engineering, 2022, 4, 033001. | 2.8 | 8 |
| 76 | Prediction of Hemodynamic Response to Epinephrine via Model-Based System Identification. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 416-423. | 3.9 | 7 |
| 77 | Virtual Patient Generation using Physiological Models through a Compressed Latent Parameterization. , 2020, , . | | 7 |
| 78 | Design and In Silico Evaluation of a Closed-Loop Hemorrhage Resuscitation Algorithm With Blood Pressure as Controlled Variable. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2022, 144, . | 0.9 | 7 |
| 79 | A Monitor-Decoupled Pharmacodynamic Model of Propofol in Children Using State Entropy as Clinical Endpoint. IEEE Transactions on Biomedical Engineering, 2012, 59, 736-743. | 2.5 | 6 |
| 80 | Is there opportunity for automated decision-support and closed-loop control in ICU patients receiving vasopressor infusion?. , 2014, 2014, 1949-52. | | 6 |
| 81 | An Analytic Tool for Prediction of Hemodynamic Responses to Vasopressors. IEEE Transactions on Biomedical Engineering, 2014, 61, 109-118. | 2.5 | 6 |
| 82 | A model-based approach to stability analysis of autonomic-cardiac regulation. Computers in Biology and Medicine, 2015, 61, 119-126. | 3.9 | 6 |
| 83 | A Comparative Data-Based Modeling Study on Respiratory CO2 Gas Exchange during Mechanical Ventilation. Frontiers in Bioengineering and Biotechnology, 2016, 4, 8. | 2.0 | 6 |
| 84 | Semi-adaptive switching control for infusion of two interacting medications. Biomedical Signal Processing and Control, 2018, 43, 183-195. | 3.5 | 6 |
| 85 | Tapered vs. Uniform Tube-Load Modeling of Blood Pressure Wave Propagation in Human Aorta. Frontiers in Physiology, 2019, 10, 974. | 1.3 | 6 |
| 86 | Deep Learning-Based Diagnosis of Peripheral Artery Disease via Continuous Property-Adversarial Regularization: Preliminary in Silico Study. IEEE Access, 2021, 9, 127433-127443. | 2.6 | 6 |
| 87 | Initialization of Pulse Transit Time-Based Blood Pressure Monitors. , 2019, , 163-190. | | 6 |
| 88 | Forecasting Hypotension during Vasopressor Infusion via Time Series Analysis. , 2019, 2019, 498-501. | | 5 |
| 89 | Mathematical model of volume kinetics and renal function after burn injury and resuscitation. Burns, 2021, 47, 371-386. | 1.1 | 5 |
| 90 | Noninvasive Subject-Specific Monitoring of Autonomic-Cardiac Regulation. IEEE Transactions on Biomedical Engineering, 2014, 61, 1196-1207. | 2.5 | 4 |

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| 91 | In-human subject-specific evaluation of a control-theoretic plasma volume regulation model. Computers in Biology and Medicine, 2017, 91, 96-102. | 3.9 | 4 |
| 92 | Coordinated semiâ€adaptive closedâ€loop control for infusion of two interacting medications. International Journal of Adaptive Control and Signal Processing, 2018, 32, 134-146. | 2.3 | 4 |
| 93 | Semiadaptive Infusion Control of Medications With Excitatory Dose-Dependent Effects. IEEE Transactions on Control Systems Technology, 2019, 27, 1735-1743. | 3.2 | 4 |
| 94 | Mathematical Modeling, In-Human Evaluation and Analysis of Volume Kinetics and Kidney Function After Burn Injury and Resuscitation. IEEE Transactions on Biomedical Engineering, 2022, 69, 366-376. | 2.5 | 4 |
| 95 | Assessment of Calibration Models for Cuff-Less Blood Pressure Measurement After One Year of Aging. IEEE Transactions on Biomedical Engineering, 2022, 69, 2087-2093. | 2.5 | 4 |
| 96 | Classification of Blood Volume Decompensation State via Machine Learning Analysis of Multi-Modal Wearable-Compatible Physiological Signals. Sensors, 2022, 22, 1336. | 2.1 | 4 |
| 97 | Pharmacodynamic modeling of propofol-induced tidal volume depression in children. Journal of Clinical Monitoring and Computing, 2011, 25, 275-284. | 0.7 | 3 |
| 98 | A Regularized System Identification Approach to Subject-Specific Physiological Modeling with Limited Data. , 2019, , . | | 3 |
| 99 | Accuracy assessment methods for physiological model selection toward evaluation of closed-loop controlled medical devices. PLoS ONE, 2021, 16, e0251001. | 1.1 | 3 |
| 100 | Closed-Loop Fuzzy Energy Regulation in Patients With Hypercortisolism via Inhibitory and Excitatory Intermittent Actuation. Frontiers in Neuroscience, 2021, 15, 695975. | 1.4 | 3 |
| 101 | Credibility Assessment of a Subject-Specific Mathematical Model of Blood Volume Kinetics for Prediction of Physiological Response to Hemorrhagic Shock and Fluid Resuscitation. Frontiers in Physiology, 2021, 12, 705222. | 1.3 | 3 |
| 102 | Hemodynamic Monitoring via Model-Based Extended Kalman Filtering: Hemorrhage Resuscitation and Sedation Case Study. , 2022, 6, 2455-2460. | | 3 |
| 103 | Recurrent-neural-network-based identification of a cascade hydraulic actuator for closed-loop automotive power transmission control. Journal of Mechanical Science and Technology, 2012, 26, 1599-1606. | 0.7 | 2 |
| 104 | Active Non-Intrusive System Identification for Cardiovascular Monitoring: Part II â€" Development of System Identifiction Algorithm. , 2013, , . | | 2 |
| 105 | Semi-adaptive feedback control of opioid infusion. , 2016, , . | | 2 |
| 106 | Observer Design and Analysis for Non-Invasive Hemorrhage Detection. IFAC-PapersOnLine, 2021, 54, 310-315. | 0.5 | 2 |
| 107 | A new approach to reconstruction of central aortic blood pressure using â€œadaptiveâ€•transfer function. , 2008, 2008, 813-6. | | 1 |
| 108 | Robust closed-loop control of propofol administration using WAVCNS index as the controlled variable. , 2010, 2010, 6038-41. | | 1 |

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| 109 | Data-driven modeling of pharmacological systems using endpoint information fusion. Computers in Biology and Medicine, 2015, 61, 36-47. | 3.9 | 1 |
| 110 | A Real-Time Hardware-In-The-Loop Testing Platform for Closed-Loop Fluid Resuscitation. , 2018, , . | | 1 |
| 111 | Inference-based subject atypicality and signal quality indicators for physiological data. , 2021, , . | | 1 |
| 112 | Observer-Based Deconvolution of Deterministic Input in Coprime Multichannel Systems With Its Application to Noninvasive Central Blood Pressure Monitoring. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2020, 142, 091006. | 0.9 | 1 |
| 113 | Inter-Personal Motor Synergy: Co-working Strategy Depends on Task Constraints. Journal of Neurophysiology, 2021, 126, 1698-1709. | 0.9 | 1 |
| 114 | Exo-Abs: A Wearable Robotic System Inspired by Human Abdominal Muscles for Noninvasive and Effort-Synchronized Respiratory Assistance. IEEE Transactions on Robotics, 2022, 38, 2994-3014. | 7.3 | 1 |
| 115 | The Potential of Arterial Pulse Wave Analysis in Burn Resuscitation: A Pilot In Vivo Study. Journal of Burn Care and Research, 2023, 44, 599-609. | 0.2 | 1 |
| 116 | Modeling and control of a hydraulic unit for direct yaw moment control in an automobile. , 2004, , . | | 0 |
| 117 | An empirical model of end-tidal CO<inf>2</inf> response to minute ventilation. , 2010, 2010, 524-7. | | 0 |
| 118 | Subject-specific estimation of aortic blood pressure via system identification: Preliminary in-human experimental study. , 2013, , . | | 0 |
| 119 | Data-driven modeling of arterial wave propagation using non-invasive arterial pulse waveforms. , 2015, , . | | 0 |
| 120 | Estimation of Central Aortic Blood Pressure From Non-Invasive Cuff Pressure Oscillation Signals via System Identification. , 2016, , . | | 0 |
| 121 | Coordinated and Semi-Adaptive Cardiorespiratory Control via Sedative and Opioid Drugs. , 2017, , . | | 0 |
| 122 | Semi-Adaptive Closed-Loop Control for Infusion of Medications With Transport Delay in Clinical Effects. Journal of Computational and Nonlinear Dynamics, 2019, 14, . | 0.7 | 0 |
| 123 | Abstract 19755: A More Accurate Automatic Cuff Blood Pressure Measurement Method. Circulation, 2015, 132, . | 1.6 | 0 |