**STANDARDIZED CURRICULUM VITAE University of Alabama at Birmingham School of Medicine Faculty**

Date: September 21, 2023

**PERSONAL INFORMATION**

Name: Ryan C. Godwin

Citizenship: United States of America

Foreign Language(s): Spanish (intermediate)

Home Address: 5712 Spice Meadow Ln, Winston Salem, NC 27106

Phone: 520-465-7476

**Research Instructor / Data Scientist**

Departments: Anesthesiology and Perioperative Medicine

Radiology

Business Address: 804 Jefferson Tower, 619 South 19 St., Birmingham AL 35249

Phone: 520-465-7476

Fax: 205-975-9732

Email: ryangodwin@uabmc.edu

**NON-ACADEMIC APPOINTMENTS:**

2022 - Present Founder, Blaze Pascal, LLC

2020 - 2021 Senior Research Associate; Atrium Health Wake Forest Baptist

2019 - 2020 Research Associate; Wake Forest Baptist Health

2018 - 2019 Partner at Breakthrough Technology, Winston Salem

2014 - 2019 Licensed Soccer Coach, NC Fusion, Winston Salem

2013 - Present Cofounder at Apeiron Engineering, Lotz, Lacasse, Godwin, LLC

2009 - 2012 Software Engineer, Discovery Channel Telescope

**EDUCATION:**

2017 Ph.D. (Physics) Wake Forest University

Dissertation Title: Binding NEMO: Adventures in Molecular Dynamics

Certificate in Structural and Computational Biophysics

2008 M.S. (Applied Physics) Northern Arizona University

Thesis Title: Fast Folding Proteins: Analysis Based on the Energy Landscape and Transition State Ensemble

Graduated with Distinction (4.0 GPA)

2005 B.S. (Astronomy & Physics) University of Arizona

Mathematics Minor

**ACADEMIC APPOINTMENTS: (In reverse chronological order)**

2022 – Present Biomedical Innovation Fellow UAB

2022 – Present Center/ Center for Women’s Reproductive Health UAB

2022 – Present Division/ Imaging Informatics Division UAB

2021 – Present Research Instructor University of Alabama at Birmingham

2017-2018 Visiting Assistant Professor Wake Forest University

2016-2017 Graduate Teaching Assistant Wake Forest University

2014-2016 Graduate Research Assistant Wake Forest University

2012-2014 Graduate Teaching Assistant Wake Forest University

2007-2008 Graduate Teaching Assistant Northern Arizona University

**AWARDS/HONORS:**

2022 Introduction to Academic Radiology for Scientists – Radiological Society of North America (travel award)

2019 AI Competition: Brain CT – 3nd place – Hemorrhage detection & 2rd place – Normal/abnormal for age - American Society for Functional Neuroradiology

2019 New Ventures Accelerator, (1st Place), F6S, Winston Salem, NC

2017 Outstanding Physics Teaching Assistant, Wake Forest University

2016-2017 Deacon Springboard Finalist, Wake Forest University

2014-2016 National Institutes of Health T32 Training Grant in Structural and Computational Biophysics

2014 Elected Sigma Pi Sigma - Wake Forest University

2008 Graduated with Distinction - Northern Arizona University

2007 Elected Golden Key Honor Society - Northern Arizona University

**PROFESSIONAL SOCIETIES:**

2023-Present Society for Industrial and Applied Mathematics (SIAM)

2023-Present Society for Imaging Informatics in Medicine (SIIM)

2023-Present Midsouth Computational Biology & Bioinformatics Society (MCBIOS)

2014-2017 Biophysical Society (BPS)

2014-2016 American Physical Society (APS)

**COUNCILS AND COMMITTEES:**

2023-Present Associate Editor for IEEE Journal of Translational Engineering in Health and Medicine

2023-Present Reviewer for Journal of Digital Imaging

2023-Present Reviewer for Society for Imaging Informatics in Medicine annual meeting

2023-Present Reviewer for SciPy

2022-Present Faculty RED (Research Education and Development) Departmental Initiative

2021-Present Radiology Awards Committee

2020-2022 Advisory Committee, Davis ITEC Center, Forsyth Technical CC

2018-Present Middle School Robot Initiative – Winston Salem Forsyth County Schools

**UNIVERSITY ACTIVITIES:**

2022 Mentor for summer interns educating them about NLP and Deep Learning

2021-Present Adopt a Physicist program (Society of Physics Students)

**MAJOR RESEARCH INTERESTS:**

My primary research goal is to build machine learning and artificial intelligence algorithms to facilitate, streamline, optimize, and improve clinical work, primarily in the areas of perioperative and radiological medicine. I am particularly interested in using large dataset to build models for prediction, diagnosis, and risk assessment, whether that be using a patient’s real-time surgical data to estimate vascular stiffness or assessing risk for who will after an escalation of care after being discharged from an ICU. Additionally, I am excited to build and integrate generative AI tools to reduce clerical burden for physicians. There is tremendous promise for improving healthcare costs and outcomes with emerging technologies, and I’m passionate to use my analytical and programming expertise to help build novel, useful AI/ML models and translate innovative solutions into patient-care improvements.

**TEACHING EXPERIENCE:**

2023 Summer University of Alabama at Birmingham – HCI 612: Applications of AI in Medicine

2023 Mentor for Dakota Williams (Medical Student)

2022-2023 Mentor for Kenneth Davis (Medical Student)

2023 Spring Guest Lecture – ECE 623 Computer Vision, University of Alabama at Birmingham, “MLOps Fundamentals with Real World Use Case”

2017-2018 Wake Forest University – PHY 114: General Physics II (3 sections)

2017 Summer Wake Forest University – PHY 114: General Physics II Assistant

2017 Spring Wake Forest University – PHY 266: Intermediate Laboratory

2017 Spring Wake Forest University – PHY 113: General Physics I Lab (2 sections)

2016 Fall Wake Forest University – PHY 265: Modern Physics Lab (2 sections)

2016 Fall Wake Forest University – PHY 113: General Physics I Lab

2014 Spring Wake Forest University – PHY 266: Intermediate Laboratory

2014 Spring Wake Forest University – PHY 113: General Physics I Lab

2013 Fall Wake Forest University – PHY 114: General Physics II Assistant

2013 Spring Wake Forest University – PHY 266: Intermediate Laboratory

2013 Spring Wake Forest University – PHY 110: Introductory Physics Lab

2012 Fall Wake Forest University – PHY 265: Modern Physics Lab (2 sections)

2012 Fall Wake Forest University – PHY 114: General Physics II Lab

2008 Spring Northern Arizona University – PHY 112: General Physics II Lab (3 sections)

2007 Fall Northern Arizona University – PHY 112: General Physics II Lab

2007 Fall Northern Arizona University – AST 181: Introduction to Observational Astronomy (2 sections)

**MAJOR LECTURES AND VISITING PROFESSORSHIPS:**

2022 Anesthesia Grand Rounds – Department of Anesthesiology and Perioperative Medicine, University of Alabama at Birmingham, “The Physics of Blood Flow: Historical Context and Modern Applications”, Virtual.

2017-2018 Visiting Assistant Professor – Wake Forest University -

General Physics II Lectures - “Introduction to Physics II”, “Electric Fields”, “Gauss’s Law”, “Electric Potential”, “Capacitors”, “Resistance”, “DC Circuits”, “Magnetic Fields”, “Magnetic Sources”, “Faraday’s Law”, “Inductance”, “AC Circuits”, “Maxwell’s Equations”, “Electromagnetic Waves”, “Optics: Reflection and Refraction”, “Optics: Understanding Images”, “Interference and Diffraction”, “The Strange World of Quantum Mechanics”

2016 “Dynamic Behavior of a Zinc Finger Protein and a Modified Therapeutic Nucleic Acid.” Wake Forest University Physics Colloquium (January) Godwin, R. C. and Melvin, R.L. (both presenters)

**GRANT SUPPORT:**

Previous Funding:

T32GM095440 Hollis, Thomas J 07/01/11-06/30/21

Fellow - Structural and Computational Biophysics Training Program

Funded:

PI – Jennifer DeBerry/ Co-I Ryan C. Godwin; Department internal funding: REINVENT, “Effects of sustained-release oral sodium nitrite supplementation on pain-related outcomes and peri- and postoperative physiology in people undergoing unilateral all-component revision total knee arthroplasty.”

PI – Andre Gosling/ Co-I Ryan C. Godwin; Funding Agency: Dept. of Anes. - REINVENT, “Measurement of Pulse Arrival Time and Arterial Stiffness in Patients Undergoing Cardiac Surgery.”

Not Funded:

PI – Andre Gosling/ Co-I Ryan C. Godwin; Funding Agency: UAB CCTS Pilot, “Measurement of Pulse Arrival Time and Arterial Stiffness in Patients Undergoing Cardiac Surgery.”

PI – Kevin Harrod/ Co-I Ryan L. Melvin; Funding Agency: NIG, “Center for ARDS, pneumonia, and sepsis (APS) in underserved populations.”

PI – Srini Tridandapani/Co-I Ryan C. Godwin; Integrating Patient Photographs with Radiography Studies

PI – Andrew Smith/Co-I – Ryan C. Godwin; Augmented Intelligence for Advanced Ovarian Cancer Response Evaluation

PI – Andrew Smith/Co-I – Ryan C. Godwin; AI Metrics for Advanced Cancer Imaging and Reporting

PI – Andre Gosling/ Co-I Ryan C. Godwin; Funding Agency: UAB CCTS, “Measurement of Pulse Arrival Time and Arterial Stiffness in Patients Undergoing Cardiac Surgery.”

PI - Mark Benayoun/Co-PI – Ryan C. Godwin, “Automated PET and MRI Classification of Alzheimer’s Disease with Hybrid Deep Learning” (R21)

PI – Ryan C. Godwin; “A Precision Learning Math Game: ReSolve.” (SBIR)

**MANUSCRIPTS:**

Manuscripts published

1. 2023: Godwin, R. C., Melvin, R.L., “The Role of Quality Metrics in the Evolution of AI in Healthcare and Implications for Generative AI”, Physiological Reviews. (In Press)
2. 2023: Godwin, R. C., Tridandapani, S. “Beyond the AJR: Applying Screening Algorithms (Artificially) Intelligently”, American Journal of Roentgenology.
3. 2023: Sotoudeh, H., Rezaei, A., Godwin, R. C., Prattipati, V., Singhal, A., Sotoudeh, M., Tanwar, M. “Prediction of Spontaneous Basal Ganglia Hematoma Expansion: A Pilot Study”, Cureus.
4. 2021: Treacher, A. H., Garg, P., Davenport, E., Godwin, R. C., Proskovec, A., Bezerra, L. G., Murugesan, G., Wagner, B., Whitlow, C. T., Stitzel, J. D., Maldjian, J. A., Montillo, A. A., “MEGnet: Automatic ICA-Based Artifact Removal for MEG using Spatiotemporal Convolutional Neural Networks.” NeuroImage, 241.
5. 2018: Godwin, R. C., Macnamara, L. M., Alexander, R. W., Salsbury Jr., F. R., “Structure and Dynamics of tRNAMet Containing Core Substitutions.” ACS Omega. 3(9), 10668-10678.
6. 2018: Melvin, R.L., Xiao, J., Berenhaut, K.S., Godwin, R. C., Salsbury Jr., F.R. “Using correlated motions to determine sufficient sampling times for molecular dynamics.” Physical Review E., 98(2), 023307.
7. 2018: Melvin, R.L., Xiao, J., Godwin, R. C., Berenhaut, K.S., Salsbury Jr., F.R. “Visualizing correlated motion with HDBSCAN clustering.” Protein Science. 27(1) 62-75
8. 2018: Godwin, R. C., Gmeiner, W. H., Salsbury Jr., F.R., “All-atom molecular dynamics comparison of disease-associated zinc fingers”, Journal of Biomolecular Structure and Dynamics, 36:10, 2581-2594.
9. 2017: Melvin, R.L., Thompson, W. G., Godwin, R. C., Gmeiner, W. H., Salsbury Jr., F.R., “MutSα’sMulti-Domain Allosteric Response to Three DNA Damage Types Revealed by Machine Learning.” Frontiers in Physics. 5(10).
10. 2017: Godwin R. et al., “Binding NEMO: Adventures in Molecular Dynamics”, Doctoral Dissertation, Wake Forest University.
11. 2017: Godwin, R. C., Melvin, R.L., Gmeiner W H., & Salsbury, Jr, F.R., “Binding Site Configurations Probe Structure and Dynamics of the Zinc-finger NEMO (NF-κβ Essential Modulator).” Biochemistry,56(4), 623-633.
12. 2016: Melvin, R.L., Godwin, R. C., Xiao, J., Thompson, WG., Berenhaut, K.S., & Salsbury Jr., F.R. “Uncovering large-scale conformational change in molecular dynamics without prior knowledge.” Journal of Chemical Theory and Computation, 12(12), 6130-6146.
13. 2016: Godwin R. C., Gmeiner W. H., Salsbury Jr., F.R., “Importance of long-time simulations for rare event sampling in zinc finger proteins.” Journal of Biomolecular Structure and Dynamics, 34(1):125-34.
14. 2012: Lotz, P. J., Lacasse M. J., Godwin, R. C., "Discovery Channel Telescope software component template and state design: principles and implementation." Proc. SPIE 8451, Software and Cyberinfrastructure for Astronomy II, 845108.
15. 2010: Lotz, P.J., Greenspan, D., Godwin, R. C., Taylor P., "Discovery Channel Telescope software development overview." Proc. SPIE 7740, Software and Cyberinfrastructure for Astronomy, 77401M.
16. 2008: Godwin, R. C., Young, R.D., “Fast Folding Proteins: Analysis Based on the Energy Landscape and Transition State Ensemble.” Masters Thesis, Northern Arizona University.

Manuscripts in preparation

1. Godwin, R. C., Melvin, R. L., “Toward Efficient Data Science: A Comprehensive MLOps Template for Collaborative Code Development and Automation”, *in review.*
2. Godwin, R. C., Flood, W. C., Melvin, R. L., Benayoun, M. D., Z Hudson, J. P., Whitlow, C. T., “Extracting Heart-Rate-Variability from Magnetoencephalography Data.” *In review – Heylion*.
3. Barker, A. Melvin, R. L., Godwin, R. C., Wagener, B., “Machine Learning Predicts Unplanned Care Escalations for post-Anesthesia Care Unit Patients During the Perioperative Period”, *in submission*.
4. Godwin, R. C., Bryant, A., Wagener, B. M., Ness, T., DeBerry, J., Horn, L., Graves S., Archer, A., Melvin, R. L., “IRB-Draft-Generator: A Generative AI Tool to Streamline the Creation of Institutional Review Board Applications” *in review*.
5. Barker, A. Melvin, R. L., Godwin, R. C., Wagener, B., “Artificial Intelligence Predicts Post-Surgical Bleeding.”
6. Godwin, R. C., Melvin, R. L., Berkowitz, D. E., Gosling, A., “Inferring Vascular Stiffness from Real-Time Streaming Operating Room Data.”
7. Mladinov, D., Melvin, R. L., Godwin, R. C., Berkowitz, D. E., “Hypothermic Circulatory Arrest Does Not Impact Cerebral Autoregulation.”
8. Paiste H., Godwin, R. C., Smith, A., Berkowitz, D. E., and Melvin R. L. “The Strengths, Weaknesses, Opportunities, and Threats of Artificial Intelligence in Perioperative Medicine.”

**BOOKS:**

1. 2015: \*Godwin, R. C., \*Melvin, R., & Salsbury Jr, F. R. Molecular Dynamics Simulations and Computer-Aided Drug Discovery. In W. Zhang (Ed.), Computer-Aided Drug Discovery (pp. 1 to 30). In book, New York, NY: Springer New York. \*Authors contributed equally.

***Published abstracts***

1. 2007: Godwin, R. C., Barlow, N.G., “Interior Morphologies of Impact Craters on Ganymede”, Lunar Planetary Science Conference, Houston, TX.
2. 2007: Barlow, N.G., “Is There a Relationship Between Central Pit and Anomalous Dome Craters on Ganymede?”, American Astronomical Society, Seattle, WA.

***Poster Exhibits***

1. 2023: Godwin, R. C. (presenter), Flood, W. C., Hudson, J. P., Whitlow, C. T., “Automated Extraction of Heart Rate Variability from Magnetoencephalography Data”, Society for Imaging Informatics in Medicine, Austin, TX.
2. 2023: Shukla, V. V. (presenter), A., Battarbee, A. N., Melvin, R. L., Godwin, R. C., Tita, A. T., Waldemar, C. A., Subramaniam, A., “Prediction of Neonatal Hypoglycemia Risk from Maternal Continuous Glucose Monitoring Data Using Artificial Intelligence”, Society for Maternal-Fetal Medicine, San Francisco, CA.
3. 2022: Godwin, R. C., Flood, W. C., “Automated Extraction of Heart Rate Variability from Magnetoencephalography Data”, at Society for Neuroscience Annual Meeting, San Diego, CA.
4. 2022: Melvin, R. L., Godwin, R. C., Hagood, J.M., Berkowitz, D.E., Mladinov D. “Hypothermic Circulatory Arrest does not Impact Cerebral Autoregulation,” at Society of Cardiovascular Anesthesiologists 2022 Annual Meeting, Palm Springs, CA.
5. 2022: Melvin, R. L., Godwin, R. C., Hagood, J.M., Berkowitz, D.E., Mladinov D. “Hypothermic Circulatory Arrest does not Impact Cerebral Autoregulation,” at UAB Anesthesiology and Perioperative Medicine 2022 Research Day, Birmingham, AL.
6. 2022: Melvin, R. L., Godwin, R. C., Hagood, J.M., Berkowitz, D.E., Mladinov D. “Hypothermic Circulatory Arrest does not Impact Cerebral Autoregulation,” at Society of Critical Care Anesthesiologists 2022 Annual Meeting, Virtual.
7. 2022: Melvin, R. L., Godwin, R. C., Hagood, J.M., Berkowitz, D.E., Mladinov D. “Hypothermic Circulatory Arrest does not Impact Cerebral Autoregulation,” at Association of University Anesthesiologists 2022 Annual Meeting. Virtual.
8. 2022: Melvin, R. L., Godwin, R. C., Hagood, J.M., Berkowitz, D.E., Mladinov D., “Hypothermic Circulatory Arrest does not Impact Cerebral Autoregulation,” at International Anesthesia Research Society 2022 Annual Meeting. Virtual.
9. 2021: Gowd, A.K., Beck, E., Agarwalla, A. Patel, Dev., Godwin, R., Waterman B.R., Little, T.M., Liu, J., “Machine Learning Algorithms Exceed Comorbidity Indices in Prediction of Short-Term Complications Following Hip Fracture Surgery”, Orthopedic Trauma Association.
10. 2017: Melvin, R.L. (presenter), Godwin, R. C., Xiao, J., Thompson, W. G., Berenhaut, K.S., Salsbury, F. R., Jr. “A Modern Approach to Determining and Displaying Conformational Ensembles,” at Conformational Ensembles from Experimental Data and Computer Simulations. Berlin, Germany.
11. 2015: Godwin, R. C., Gmeiner W.H., Salsbury Jr., F.R., “Disease-Related Mutational Effects on Conformations and Dynamics of the Zinc-Finger NEMO”,  
    29th Annual Symposium of Protein Society, Barcelona, Spain
12. 2015: Godwin, R. C. (presenter), Gmeiner, W.H., Salsbury Jr., F.R.,   
    “Comparison of Active Site Configurations of Similar Zinc Fingers”, Biophysical Society Annual Meeting, Baltimore, MD.
13. 2014: Godwin, R. C. (presenter), Salsbury Jr. F.R., “Conformational Analysis of Structural Perturbations of the Zinc-Finger NEMO”, American Physical Society Annual Meeting, Denver, CO.
14. 2014: Salsbury, F.R., Melvin, R.L., Godwin, R. C., “Conformational Dynamics of nucleic acid-binding proteins studied via long-time all-atom molecular dynamics,” Barcelona 1st Technical Meeting on High-Throughput Molecular Dynamics. Barcelona, Spain.
15. 2007: Godwin, R. C., Barlow, N.G., “Interior Morphologies of Impact Craters on Ganymede”, Lunar Planetary Science Conference, Houston, TX.

***Oral Presentations***

1. 2023: Godwin, R. C. (presenter), “MLOps: Infrastructure and Tools for Rapid Development”, UAB Hackathon Preparedness 2023.
2. 2023: Godwin, R. C. (presenter), “Machine Learning and AI for Tabular Data”, UAB Hackathon Preparedness 2023.
3. 2023: Godwin, R. C. (presenter), “Live Demonstration: Generative AI Tools to Support Clinical Research”, Generative AI for Healthcare: Progress of Peril – MHIBI.
4. 2023: Godwin, R. C. (presenter), Melvin R. L. (presenter), “Machine Learning and AI for Tabular Data and Generative AI,” Machine Learning Bootcamp – Annual UAB Informatics Institute Hackathon.
5. 2023: Godwin, R. C. (presenter), Melvin, R. L. (presenter), “Modeling Techniques for Clinical Time Series: Lessons Learned the Hard Way,” Society of Industrial and Applied Mathematics Annual Meeting, Portland, OR.
6. 2023: Godwin, R. C. (presenter), Melvin, R. L., “MLOps: Fundamental Elements and their Implementation”, at MCBIOS 2023 Annual Meeting, Dallas, TX.
7. 2023: Melvin, R. L. (presenter), Godwin, R. C., Subramaniam, A., Battarbee, A. N., Shukla, V. V., “Prediction of Neonatal Hypoglycemia Risk from Maternal Continuous Glucose Monitoring Data Using Transfer Learning”, at Society of Technology in Anesthesia Annual Meeting, Las Vegas, NV.
8. 2023: Melvin, R. L. (presenter), Godwin, R. C., Barker, A. B., Wagener B., “Perioperative Risk Factors Associated with Unplanned Escalation of Care after Post-Anesthesia Care Unit Discharge”, at Society of Technology in Anesthesia Annual Meeting, Las Vegas, NV.
9. 2022: Melvin, R. L., Godwin R. G., Berkowitz, D. (all presenters), “Perioperative Autoregulation Collaboration: The Path Forward to Precision Medicine,” Healthcare Data Matters, <https://healthcaredatamatters.com/webinar-preview/rMelvin-rGodwin-dBerkowitz-preview>
10. 2022: Melvin, R. L. (presenter), Godwin, R. C., Hagood, J.M., Berkowitz, D.E., Mladinov D. “Hypothermic Circulatory Arrest does not Impact Cerebral Autoregulation,” at Association of University Anesthesiologists 2022 Annual Meeting, Virtual.
11. 2022: Godwin, R. C., (presenter), “The Physics of Blood Flow: Historical Context and Modern Applications,” University of Alabama at Birmingham, Anesthesia Grand Rounds, Virtual.
12. 2021: Godwin, R. C., (presenter) “Applied Machine Learning: Research, Clinical Practice, and the Translation Between,” University of Alabama at Birmingham, *Virtual.*
13. 2021: Godwin, R. C., (presenter), “Foundational Skills for Computer-Based Research,” Forsyth Tech Community College, Winston Salem, NC.
14. 2020: Godwin, R. C. (presenter) and Tan, J. “Applied Radiology: Integrating Modalities for Clinical Decision Support and Beyond,” Dean’s Research Symposium, Wake Forest Baptist Health, Winston-Salem, NC.
15. 2019: Godwin, R. C. (presenter), “Using Convolutional Neural Networks to detect ICH and Normal Aging in Brain CT,” American Society for Functional Neuroradiology Annual Meeting, San Francisco, CA.
16. 2017: Godwin, R. C. (presenter), “Binding NEMO: Adventures in Molecular Dynamics,” Dissertation Defense, Wake Forest University, Winston Salem, NC
17. 2016: Godwin, R. C. and Melvin, R.L., (both presenters) “Dynamic Behavior of a Zinc Finger Protein and a Modified Therapeutic Nucleic Acid,” Wake Forest University Physics Colloquium, Winston Salem, NC.
18. 2014: Godwin, R. C. (presenter), Gmeiner, W.H., Salsbury Jr., F.R., “The Zinc Finger NEMO: A Molecular Dynamics Study,” Molecular Biophysics Symposium, Virginia Tech, Blacksburg, VA.

**Workshops led and sessions chaired:**

1. 2022: Godwin, R. C., Melvin, R. L. (Round table chaired) “Perioperative Artificial Intelligence,” Machine Learning for Health Care 2022. Durham, NC.
2. 2022: Berkowitz, D.E., Fackler, J., Godwin, R. C., Melvin, R. L., Rosenblatt, K. (Workshop led) “Operationalizing Perioperative AI: A Pathway for Clinical Validation of Well-Studied Algorithms,” Machine Learning for Health Care 2022. Durham, NC.

***MISCELLANEOUS:***

Open-source software projects:

1. 2023: Godwin, R. C., Hudson, J. P., Melvin, R. L. “Automated Extraction of Heart Rate Variability from Magnetoencephalography”, GitLab, <https://gitlab.rc.uab.edu/rcg2/hrv_meg>
2. 2023: Godwin, R. C., Melvin, R. L., “MLOps: A Template Framework for Traceable Machine Learning and Artificial Intelligence”, Github, <https://github.com/UABPeriopAI/MLOpsTemplate>
3. 2018: Melvin R., Salsbury F., Godwin R., Xiao J., “Sufficient Sampling Correlation Code and Examples.” Figshare, <https://doi.org/10.6084/m9.figshare.6613481.v1>
4. 2017: Melvin R., Xiao J., Godwin R., Berenhaut K., Salsbury F., “Code for Correlation Clustering with HDBSCAN.”, Figshare, <https://doi.org/10.6084/m9.figshare.5140234.v2>
5. 2015: Melvin, R., Godwin, R., Xiao, J., & Salsbury, F. “Markov Cluster Analysis in Matlab.” Figshare, <https://doi.org/10.6084/m9.figshare.1566809>.

Educational Materials

1. 2017: Godwin R., Salsbury F., “Statistical Mechanics Examples.” Figshare, <https://doi.org/10.6084/m9.figshare.4757122.v1>.
2. 2017: Godwin R., “Classical Mechanics Examples.” Figshare, <https://doi.org/10.6084/m9.figshare.4728577>.

Software Packages

1. 2015: Godwin R., Salsbury F., “Catdcd Interface.” Figshare, <https://doi.org/10.6084/m9.figshare.1613888.v1>.

Datasets

1. 2016: Godwin R., Salsbury F., “Villin Headpiece Simulations.” Figshare, <https://doi.org/10.6084/m9.figshare.3983526.v1>.

Participation in Tumor Segmentation Competition - Radiological Society of North America (RSNA), the American Society of Neuroradiology (ASNR), and the Medical Image Computing and Computer Assisted Interventions (MICCAI) [Brain Tumor Segmentation Challenge (BraTS), 2021](https://www.synapse.org/#!Synapse:syn25829067/wiki/610863).

Participation in Machine Learning Competition on COVID-19 risk prediction sponsored by the University of Washington. [EHR COVID-19 DREAM Challenge | Center for Data to Health (cd2h.org)](https://cd2h.org/EHR_DREAM_COVID-19)