   Jeff Ames, Amanda Randles  
   Department of Computer Science, Duke University

2. “Klamp’t, An Online Toolkit for Robotics Instruction”  
   Hayden Bader  
   Department of Electrical and Computer Engineering and IML Lab, Duke University

3. “Using Social Network Analysis on Biomedical Data for Knowledge Generation and Precision Health”  
   Marcia Bowen (1), Rachel L. Richesson (1), James Moody (2), Robert McCarter (3)  
   1 - Duke University School of Nursing and Duke Center for Health Informatics, Duke University  
   2 - Duke University Department of Sociology and Duke Social Sciences Research Institute, Duke University  
   3 - Children's National Health System, The Children's Research Institute

4. “Efficient designing of high-performance biomarker assays using computational modeling”  
   Mahsa Dabagh, Cassio Fontes, Daniel Joh, Rohan Achar, John Gounley, Angus Hucknall, Ashutosh Chilkoti, Amanda Randles  
   Department of Biomedical Engineering, Duke University

5. “Mechanotransmission in endothelial cells subjected to oscillatory and multidirectional shear flow”  
   Mahsa Dabagh (1), Payman Jalali (2), Peter J. Butler (3), Amanda Randles (1), John M. Tarbell (4)  
   1 - Department of Biomedical Engineering, Duke University  
   2 - Faculty of Technology, Lappeenranta University of Technology  
   3 - Department of Biomedical Engineering, The Pennsylvania State University  
   4 - Department of Biomedical Engineering, The City College of New York

6. “Multi-scale modeling of interactions between deformable cancer cell and the vessel wall”  
   Mahsa Dabagh, John Gounley, Amanda Randles  
   Department of Biomedical Engineering, Duke University

   Leighanne Davis (1), Tracey Wallace (2), John Morris (2), Kevin Caves, (1,3)  
   1 - Duke University Head and Neck Surgery & Communication Sciences  
   2 - Shepherd Center Atlanta, GA  
   3 - Departments of Surgery, Medicine and Biomedical Engineering, Duke University

8. “Automating Electricity Access Prediction with Satellite Imagery”  
   Fangge Deng (1,2), Shamikh Hossain (1,3), Prithvir Jhaveri (1), Ashley Meuser (1,3), Harshvardhan Sanghi (4), Joe Squillace (1), Anuj Thakkar (4), Brian Wong, Xiaolan You (1,5)  
   1 - Department of Computer Science  
   2 - Department of Environmental Science/Policy  
   3 - Department of Electrical and Compuer Engineering  
   4 - Department of Mechanical Engineering & Material Science  
   5 - Department of Statistical Science
   Bradley Feiger (1), John Gounley (1), Jane A. Leopold (2), Amanda Randles (1)
   1 - Department of Biomedical Engineering, Duke University
   2 - Brigham and Women's Hospital, Harvard Medical School

    Guerry Grune (1), David Staffel (2), Erik Madrid (2), Daniel Lerner (2), Monty Points (2)
    1 - Department of Mechanical Engineering and Materials Science, Duke University
    2 - Ironclad Encryption Corporation

11. “Many Thousand GPU Simulations of Arterial Geometries”
    Gregory Herschlag, Amanda Randles
    Department of Biomedical Engineering, Duke University

12. “Machine learning on EHR data for prediction of emergency visits and hospitalization during cancer radiotherapy”
    Julian C. Hong (1), Manisha Palta (1), Jessica D. Tenenbaum (2)
    1 - Department of Radiation Oncology, Duke University
    2 - Department of Biostatistics & Bioinformatics, Duke University

    Bohao Huang (1), Leslie M. Collins (1), Kyle Bradbury (2), Jordan M. Malof (1)
    1 - Department of Electrical and Computer Engineering, Duke University
    2 - Energy Initiative, Duke University

14. “Validation and Extension of an MGH Predictive Model to Identify Patients More Susceptible to Insulin Nonadherence Using Duke EHR Data Sources”
    Yimeng Jia (1), Ricardo Henao (2), Hillary Mulder (3), Bradi Granger (4), Shelley Rusincovitch (5)
    1 - Department of Statistical Science, Duke University
    2 - Department of Biostatistics and Bioinformatics, Duke University
    3 - DCRI, Duke University
    4 - School of Nursing, Duke University
    5 - Duke CTSA, Duke University

15. “Orientation of polymer-grafted nanocubes”
    Brian Lee, Gaurav Arya
    Department of Mechanical Engineering and Materials Science, Duke University

16. “bcSeq: An R Package for Fast Sequence Alignment for High-throughput shRNA and CRISPR Screens”
    Jiaxing Lin, Jeremy Gresham, Tongrong Wang, So Young Kim, James Alvarez, Jeffrey Damrauer, Scott Floyd, Joshua Granek, Andrew Allen, Cliburn Chan, Jichun Xie, Kouros Owzar
    Duke University Medical Center

17. “One-Thing-Straight: An Application for People with Parkinson's Disease”
    Jack Livingston (1), Leighanne Davis (2), Mike Revoir (2), Kevin Caves (3, 4)
    1 - Duke Institute for Health Innovation, Rapid Health App Prototyping Center
    2 - Department of Surgery, Division of Head and Neck Surgery & Communication Sciences, Duke University
    3 - Department of Medicine, Duke University
    4 - Department of Biomedical Engineering, Duke University
Arpita Mandan (1,2), Matt Phelan (2), Ricardo Henao (1,2), Shelley Rusincovitch (3,4), Jennifer Green (2,5)
1 - Department of Statistical Science, Duke University
2 - DCRI, Duke University
3 - Duke CTSI, Duke University
4 - Duke Forge, Duke University
5 - Department of Endocrinology, Duke University

19. “Molecular dynamics simulations of the bacteriophage T4 DNA packaging motor”
Joshua Pajak (1), Firmin Dingue (2), Gaurav Arya (1)
1 - Department of Mechanical Engineering and Materials Science, Duke University
2 - Department of NanoEngineering, UC San Diego

Ismael Perez, Daniel F. Puleri, L.A. Hegele, John Gounley, Amanda Randles
Department of Biomedical Engineering, Duke University

21. “Predicting Downstream Wall Shear Stress Profiles in Aortas Using Simulations and Overall Morphology”
Daniel Puleri (1), Ismael Perez (1), Austin Ferguson (1), Ziyun Niu (2), John Gounley (1), Amanda Randles (1)
1 - Department of Biomedical Engineering, Duke University
2 - North Carolina School of Science and Mathematics

22. “Targeted sequencing and bioinformatics pipeline for capturing and characterizing isoform diversity”
Thomas A. Ray (1), Kelly J. Cochran (2), Jeremy N. Kay (1)
1 - Department of Neurobiology and Ophthalmology, Duke University
2 - Department of Computer Science, Duke University

23. “Three Dimensional Shape Description of Buried Threat Detection in Ground Penetrating Radar”
Daniël Reichman, Leslie M. Collins, Jordan M. Malof
Department of Electrical and Computer Engineering, Duke University

Bilva G. Sanaba (1,2), Brittany S. Morgan (1), Jordan E. Forte (1), Amanda E. Hargrove (1,3)
1 - Department of Chemistry, Duke University
2 - Department of Computer Science, Duke University
3 - Department of Biochemistry, Duke University

25. “Predicting Admissions in the Medicare Shared Savings Program Population”
Xilin Cecilia Shi (1), AJ Overton (2), Ricardo Henao (2,3)
1 - Department of Statistical Science, Duke University
2 - DCRI, Duke University
3 - Department of Biostatistics & Bioinformatics, Duke University

26. “Performance Modeling & Analysis of Permissioned Blockchain Networks (Hyperledger Fabric)”
Harish Sukhwani (1), Kishor Trivedi (1), Andy Rindos (2)
1 - Duke University
2 - IBM Corporation, RTP & IBM Research, Bengaluru, India
27. “Neonatal Intensive Care Unit (NICU) Prediction”
Muyao Sun, Robert (AJ) Overton, Ricardo Henao
Department of Statistical Science, Duke University
DCRI, Duke University

Brandon Thio (1), Warren M. Grill (1-4)
1 - Department of Biomedical Engineering, Duke University
2 - Department of Electrical and Computer Engineering, Duke University
3 - Department of Neurobiology, Duke University
4 - Department of Surgery, Duke University

29. “Massively parallel 3D hemodynamic simulations based on 2D angiogram data to study atherosclerosis in coronary arteries”
Madhurima Vardhan (1), John Gounley (1), James Chen (2), Jane Leopold (3), Andrew Kahn (4), Amanda Randles (1)
1 - Duke University
2 - University of Colorado AMC
3 - Brigham and Women's Hospital
4 - University of California San Diego

30. Department of Biostatistics & Bioinformatics, Duke University
“A Phenotyping Method Development for Necrotizing Enterocolitis Definition and Prediction”
Lanqiu “Kate” Yao, Robert Overton, Ricardo Henao
Duke Clinical Research Institute, Department of Biostatistics, Duke University Department of Statistical Science, Duke University

Ran Zhou, Peter Merrill

32. “VR Touch Museum”
Yuchen Zhao
Department of Art, Art History, and Visual Studies, Duke University

Scholars@Duke Visualization Challenge

33. “Exploring Interdisciplinary Connections in Duke Ph.D. Committees”
Matthew Epland
Department of Physics, Duke University

34. “Multiple Sources of Interdisciplinary Training”
James Moody & The DNAC Lab
Duke Network Analysis Center lab
Department of Sociology

35. “Does interdisciplinarity drive impact?”
Ksenia Sokolova (1), Yuqi Yun (2)
1 - Duke Mathematics & Biophysics major, Computer Science minor
2 - Duke Mathematics & Physics major
Aghil Abed Zadeh (1), Varda F. Hagh (2)
1 - Department of Physics & Center for Non-linear and Complex Systems, Duke University
2 - Department of Physics, Arizona State University, Tempe, Arizona 85287-1504, USA