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| **JDACS4C Pilot** | **Title** | **Author(s)** | **Date** | **Source** |
| 1 | Predicting Tumor Cell Line Response to Drug Pairs with Deep Learning. | Fangfang Xia, Maulik Shukla, Thomas Brettin, Cristina Garcia-Cardona, Judith Cohn, Jonathan Allen, Sergei Maslov, Yvonne A. Evrard, Susan L. Holbeck, James H. Doroshow, Eric A. Stahlberg, Rick L. Stevens |  |  |
| 1 | A Workflow Framework for Machine Learning Applied to Cancer Research. | J. Wozniak, R. Jain, P. Balaprakash, J. Ozik, N. Collier, J. Bauer, F. Xia, T. Brettin, R. Stevens, K. Mohi-Yusof, C. Cardona, B. Van Essen, and M. Baughman |  |  |
| 1 | Sparse Coding of Pathology Slides. | Sanketh S. Moudgalya, William M. Fischer and Garrett T. Kenyon |  |  |
| 1 | Dissecting RAF inhibitor resistance by structure-based modeling reveals ways to overcome oncogenic RAS signaling. | Oleksii S. Rukhlenko, Fahimeh Khorsand, Jan Rozanc, Leonidas Alexopoulos, Nora Rauch, William S. Hlavacek, Richard G. Posner, Silvia Gómez-Coca, Edina Rosta, Cheree Fitzgibbon, David Matallanas, Jens Rauch, Walter Kolch, Boris N. Kholodenko |  |  |
| 1 | CANDLE/Supervisor: A Workflow Framework for Machine Learning Applied to Cancer Research. | Justin M. Wozniak, Rajeev Jain, Prasanna Balaprakash, Jonathan Ozik, Nicholson Collier, John Bauer, Fangfang Xia, Thomas Brettin, Rick Stevens and Jamaludin Mohd-Yusof, Cristina Garcia Cardona, Brian Van Essen, Matthew Baughman | 2018 | Open Access BMC Supplement, 2018 |
| 1 | Precision Medicine as an Accelerator for Next Generation Cognitive Supercomputing | Edmon Begoli, Jim Brase, Bambi DeLaRosa, Penelope Jones, Dimitri Kusnezov, Jason Paragas, Rick Stevens, Fred Streitz, Georgia Tourassi | April 2018 | Published with open access at SuperFri.org |
| 1 | Autoencoder Node Saliency: Selecting Relevant Latent Representation | Ya Ju Fan | Nov 2017 | Computer Vision and Pattern Recognition, arXiv:1711.07871 (<https://arxiv.org/abs/1711.07871>) |
| 2 | Computational Lipidomics of the Neuronal Plasma Membrane | H.I. Ingólfsson, T.S. Carpenter, H. Bhatia, P.T. Bremer, S.J. Marrink, F.C. Lightstone | 2017 | Biophys. J.  113(10):2271–2280, 2017. open access, DOI: <http://dx.doi.org/10.1016/j.bpj.2017.10.017> |
| 2 | K-Ras4B Remains Monomeric on Membranes over a Wide Range of Surface Densities and Lipid Compositions | Chung JK, Lee YK, Denson JP, Gillette WK, Alvarez  S, Stephen AG, Groves JT | 01/09/2018 | Biophys J. 2018 Jan 9;114(1):137-145. <http://dx.doi.org/10.1016/j.bpj.2017.10.042>PubMed PMID: 29320680 |
| 2 | Molecular recognition of RAS/RAF complex at the membrane: Role of RAF cysteine-rich domain | T. Travers et al | 2018 | Scientific Reports, 8, 8461 |
| 2 | A membrane strider model for weak association of the RAS-binding domain of RAF to anionic  membranes | Timothy Travers, Cesar A. Lopez, Jeevapani J. Hettige, Que N. Van, Andrew G. Stephen, Angel E. Garcia, S. Gnanakaran | 2018 | Biophysical Journal. Manuscript submitted. |
| 2 | Capturing Phase Behavior of Ternary Lipid Mixtures with a Refined Martini Coarse-Grained Force Field | Carpenter, Ti; López, C; Neale, C; Montour, C; Ingólfsson, H; Di Natale, F; Lightstone, F; Gnanakaran | 2018 | Journal of Chemical Theory and Computation. Manuscript Submitted |
| 3 | Hierarchical Attention Networks for Information Extraction from Cancer Pathology Reports | S. Gao, M.T. Young, J.X. Qiu, J.B. Christian, P.A. Fearn, G.D. Tourassi, A. Ramanathan | Nov 2017 | Journal of American Medical Informatics Association |
| 3 | Deep Learning for Automated Extraction of Primary Sites from Cancer Pathology Reports | J.X. Qiu, H.-Y. Yoon, P.A. Fearn, G.D. Tourassi | 2018 | IEEE Journal of Biomedical and Health Informatics 22(1): 244-251 |
| 3 | Analytics Applications Using a Knowledge Graph Approach as a Secondary Use of Cancer Registry Data | S.M. Hasan, P. Fearn, D. Rivera, X-C Wu, J.B. Christian | In internal review | N/A |
| 3 | Scalable Deep Text Comprehension for Cancer Surveillance on High-Performance Computing | J.X. Qiu, H.J. Yoon, K. Srivastava, T.P. Watson, J.B. Christian, A. Ramanathan, X-C Wu, P.A. Fearn, G.D. Tourassi | In internal review | N/A |
| 3 | CAT: Computer Aided Triage: Improving upon the Bayes risk through 𝜀-refusal triage rules | N. Hengartner, L. Cuellar, X-C Wu, G.D. Tourassi, J.X. Qiu, J.B. Christian, T. Bhattacharya | In internal review | N/A |
| 3 | Precision Medicine as an Accelerator for Next Generation Cognitive Supercomputing | E. Begoli, J. Brase, B. DeLaRosa, P. Jones, D. Kusnezov, J. Paragas, R. Stevens, F. Stritz, G.D. Tourassi | 2018 | International Journal of Supercomputing Frontiers and Innovations (under review) |

**Peer-Reviewed Conference Papers and Abstracts:**

1. J. Boten, D. Rivera, M. Myneni, G.D. Tourassi, T. Bhattacharya, A.P. de Oliveira Sales, T. Brettin, P. Fearn, L. Penberthy, “Leveraging Large-Scale Computing for Population Information Integration,” AMIA 2017 Annual Symposium, November 4-8, 2017, Washington, DC.
2. G. Abastillas, S. Morris, J. Boten, T. Tumurchudur, K. Vora, P. Fearn, “Characterizing a Learning Curve for Annotating Data for Training and Validation of Natural Language Processing Systems,’ AMIA2017 Annual Symposium, November 4-8, 2017, Washington, DC.
3. P. Fearn, J. Boten, G.D. Tourassi, J. Lake, T. Battacharya, L. Penberthy, “The Development of the Clinical Document Annotation and Processing Pipeline to Facilitate the Integration of Natural LanguageProcessing to Enhance Cancer Surveillance,” AMIA 2017 Annual Symposium, November 4-8, 2017, Washington, DC.
4. M. Alawad, H.-Y. Yoon, G.D. Tourassi, Energy Efficient Stochastic-Based Deep Spiking Neural Networks for Sparse Datasets. IEEE Big Data Conference, December 11-14, 2017.
5. H.-Y. Yoon, S. Robinson, J.B. Christian, J. Qiu, G.D. Tourassi, Filter Pruning of Convolutional Neural Networks for Text Classiﬁcation: A Case Study of Cancer Pathology Report Comprehension. 2018 IEEE International Conference on Biomedical and Health Informatics, Las Vegas, NV, March 4-7, 2018.
6. M. Alawad, H.-Y. Yoon, G.D. Tourassi, Coarse-to-Fine Training of Convolutional Neural Networks for Automated Information Extraction from Cancer Pathology Reports. 2018 IEEE International Conference on Biomedical and Health Informatics, Las Vegas, NV, March 4-7, 2018.
7. S. Michalak, N. Hengartner, K. Gunguly, T. Bhattacharaya, P. Fearn, J. Boten, X-C Wu, L. Penberthy, “Developing Synthetic Cancer Trajectories to Enable Cancer Research”, NAACCR 2018.
8. N. Hengartner, S. Thulasidasan, J. Mohd-Yusof, B. McMahon, H-.J. Yoon, J. Qiu, X-C Wu, L. Penberthy, G. Tourassi, T. Bhattacharaya, “Using machine learning to develop triage rules to partially automate registry workflow,” NAACCR 2018.
9. B. McMahon, K. Ganguly, N. Hengartner, X-C Wu, L. Penberthy, T. Bhattacharaya, “Sources of error in automated information extraction from pathology reports”, NAACCR 2018.
10. G. Chennupati, K. Ganguly, B. McMahon, S. Thulasidasan, J. Boten, V. Petkov, L. Penberthy, X. Wu, P. Fearn, T. Bhattacharaya, “Extracting Breast Cancer genetic markers in pathology reports using Natural Language Processing”, NAACCR 2018.