

## TIN NGUYEN

Assistant Professor  
Computer Science and Engineering  
University of Nevada, Reno

Phone: (775) 784-6619  
Email: tinn@unr.edu  
1664 N. Virginia Street, Reno, NV 89557

Google Scholar: <https://scholar.google.com/citations?user=aUjOGMEAAAAJ&hl=en&oi=ao>  
Web: <https://bioinformatics.cse.unr.edu>

## RESEARCH INTERESTS

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- **Bioinformatics:** cancer subtyping, single-cell data analysis, pathway analysis, multi-omics integration, meta-analysis
- **Machine learning:** unsupervised and supervised learning, deep neural network, big data analytics

## EDUCATION

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- PhD, Computer Science, Wayne State University** Detroit, Michigan  
– Advisor: Dr. Sorin Draghici May 2017  
– Dissertation: “*Horizontal and vertical integration of bio-molecular data*”
- MS and BS, Computer Science, Eotvos Lorand University** Budapest, Hungary  
– Major: graph theory, information systems, and calculus Feb 2008

## PROFESSIONAL APPOINTMENT

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**Assistant Professor** (*Jul 2017 – present*), Department of Computer Science and Engineering, University of Nevada, Reno

**Bioinformatics Scientist** (*Feb 2017 – Jun 2017*), Progenity Inc., Ann Arbor, Michigan

**Graduate Research Assistant** (*Aug 2011 – May 2017*), Dept. of Computer Science, Wayne State University, Detroit, Michigan

**Software Developer** (*Jul 2004 – Jul 2010*), Allied Software Systems Kft., Budapest, Hungary

## GRANT AWARDS

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I have received 11 external grants – 8 as PI and 3 as Co-PI. The total external funding is \$8,266,397, in which \$1,785,689 as PI and \$6,480,708 as Co-PI. My total share is \$2,379,021.

### External grants

- National Science Foundation – PI** \$490,039 Jul 2022 - Jun 2027
- CAREER: Integrative Pathway Analysis for Cancer Subtyping, Patient Stratification, and Risk Prediction
  - PI: Tin Nguyen
  - Grant number: 2141660

<b>National Science Foundation – PI</b>	\$600,000	Jul 2022 - Jun 2027
<ul style="list-style-type: none"> <li>– FET: III: Small: Innovative Approaches for Bias Correction and Systems-level Analysis in Integrated Multi-omics Data</li> <li>– PI: Tin Nguyen, Co-PI: Juli Petereit</li> <li>– Grant number: 2203236</li> </ul>		
<b>National Aeronautics and Space Administration – PI</b>	\$100,000	Aug 2019 - Jul 2020
<ul style="list-style-type: none"> <li>– Multi-cohort, Pathway-level Analysis of Spaceflight Disorders</li> <li>– Science PI: Tin Nguyen, Co-PI: Hung La</li> <li>– Grant number: 80NSSC19M0170</li> </ul>		
<b>Nevada INBRE/NIH – PI</b>	\$123,438	Apr 2022 - Mar 2023
<ul style="list-style-type: none"> <li>– NOSI Cloud-based Learning Module</li> <li>– PI: Tin Nguyen, Co-PI: Juli Petereit</li> </ul>		
<b>Nevada INBRE/NIH – PI</b>	\$108,000	Apr 2021 - Mar 2022
<ul style="list-style-type: none"> <li>– Cross-cohort Clustering and Data Integration for Molecular Subtype Identification (Second Module)</li> <li>– PI: Tin Nguyen</li> </ul>		
<b>Nevada INBRE/NIH – PI</b>	\$107,113	Apr 2020 - Mar 2021
<ul style="list-style-type: none"> <li>– Cross-cohort Clustering and Data Integration for Molecular Subtype Identification (First Module)</li> <li>– PI: Tin Nguyen</li> </ul>		
<b>Mountain West CTR-IN/NIH – PI</b>	\$207,099	Jun 2022 - Mar 2023
<ul style="list-style-type: none"> <li>– Tackling Cancer Disparities: A Bayesian Approach for Personalized Pathway Analysis and Risk Prediction</li> <li>– <b>PI: Tin Nguyen</b>, Co-PI (UNM PI): Marianne Berwick, Co-PI (BSU PI): Cheryl Jorcyk, Co-PI (UI PI): Tyler Bland</li> </ul>		
<b>National Science Foundation – Co-PI</b>	\$599,999	Jul 2020 - Jun 2023
<ul style="list-style-type: none"> <li>– Elements: The ThYme database and identifying representative amino acid sequences that originate thioester-active enzyme families</li> <li>– PI: David Cantu (\$300,000), Co-PI: Tin Nguyen (\$299,999)</li> <li>– Grant number: 2001385</li> </ul>		
<b>National Science Foundation – UNR Co-PI</b>	\$5,831,000	Aug 2020 - Jul 2024
<ul style="list-style-type: none"> <li>– RII Track-2 FEC: Leveraging Big Data to Improve Prediction of Tick-Borne Disease Patterns and Dynamics</li> <li>– PI: Xiaogang Ma, Co-PI (UNR PI): Frederick Harris; Co-PI (UI PI): Barrie Robinson, Co-PI (Dartmouth PI): Xun Shi, UNR Co-PI: Tin Nguyen (\$283,333)</li> <li>– Grant number: 2019609</li> </ul>		
<b>Nevada NASA – PI</b>	\$50,000	Aug 2020 - Jul 2021
<ul style="list-style-type: none"> <li>– Machine Learning and Applied Data Analytics Curriculum Development for UNR College of Engineering</li> <li>– Grant number NNX15AI02H (sub-award no. 21-02)</li> <li>– PI: Tin Nguyen; Co-PI: Lei Yang, Co-PI: Hung La</li> </ul>		
<b>Nevada NASA – Co-PI</b>	\$50,000	Aug 2018 - Jul 2019

- NVSCG: Robotics and Big Data Curriculum for Undergraduate and Graduate Students of UNR College of Engineering
- PI: Hung La, Co-PI: Dave Feil-Seifer; Co-PI: Tin Nguyen
- Grant number NNX15AI02H (sub-award no. 18-54)

### Internal grants

<b>VPRI Research Enhancement Grant</b>	\$20,000	Jul 2019 - Jun 2020
<b>UNR VPRI miCRo Grant</b>	\$1,900	Dec 2018 - Nov 2019
<b>UNR CSE Differential Fee Award</b>	\$31,204	Jan 2018 - Dec 2018

### PUBLICATIONS

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#### Journal Articles

- J.1. Bang Tran, Duc Tran, Hung Nguyen, Seungil Ro, and **Tin Nguyen\***. scCAN: single-cell clustering using autoencoder and network fusion. **Nature Scientific Reports**, DOI: 10.1038/s41598-022-14218-6, 2020. [*impact factor: 4.4, h-index: 242, h5-index: 200*]
- J.2. Hung N. Luu\*, Pedram Paragomi, Renwei Wang, Joyce Y. Huang, Jennifer Adams-Haduch, Øivind Midttun, Arve Ulvik, **Tin Nguyen**, Randall E. Brand, Yutang Gao, Per Magne Ueland, and Jian-Min Yuan. The Association between Serum Serine and Glycine and Related-Metabolites with Pancreatic Cancer in a Prospective Cohort Study. **MDPI Cancers**, 14(9):2199, 2022. [*impact factor: 6.6, h-index: 92, h5-index: 76*]
- J.3. Quang-Huy Nguyen, **Tin Nguyen**, and Duc-Hau Le\*. DrCA: cancer driver gene analysis in a simpler manner. **BMC Bioinformatics**, 23:86, 2022. [*impact factor: 3.2, h-index: 208, h5-index: 72*]
- J.4. Duc Tran, Bang Tran, Hung Nguyen, and **Tin Nguyen\***. A novel method for single-cell data imputation using subspace regression. **Nature Scientific Reports**, 12:2697, 2022. [*impact factor: 4.4, h-index: 242, h5-index: 200*]
- J.5. Amruta Kale, **Tin Nguyen**, Frederick C. Harris, Chenhao Li, Jiyin Zhang, and Xiaogang Ma\*. Provenance documentation to enable explainable and trustworthy AI: A literature review. **Data Intelligence**, DOI: 10.1162/dint\_a\_00119, 2022.
- J.6. Quang-Huy Nguyen, **Tin Nguyen**, and Duc-Hau Le\*. Identification and validation of a novel three hub long noncoding RNAs with m6A modification signature in low-grade gliomas. **Frontiers in Molecular Biosciences**, DOI: 10.3389/fmolb.2022.801931, 2022. [*impact factor: 4.6, h-index: 49, h5-index:37*]
- J.7. Benjamin T. Caswell, Caio C. de Carvalho, Hung Nguyen, Monikrishna Roy, **Tin Nguyen**, and David C. Cantu\*. Thioesterase enzyme families: Functions, structures, and mechanisms. **Protein Science**, DOI: 10.1002/pro.4263, 2022. [*impact factor: 6.7, h-index: 182, h5-index: 51*]
- J.8. Duc Tran, Hung Nguyen, Bang Tran, Carlo La Vecchia, Hung N. Luu, and **Tin Nguyen\***. Fast and precise single-cell data analysis using hierarchical autoencoder. **Nature Communications**, 12:1029, 2021. [*impact factor:14.9, h-index: 365, h5-index: 287*]

- J.9. Hung Nguyen, Duc Tran, Jonathan M. Galazka, Sylvain V. Costes, Afshin Behesti, Juli Petereit, Sorin Draghici, and **Tin Nguyen\***. CPA: A web-based platform for Consensus Pathway Analysis and interactive visualization. **Nucleic Acids Research**, 49(W1):W114--W124, 2021. [*impact factor: 17.0, h-index: 537, h5-index: 233*]
- J.10. Hung Nguyen, Duc Tran, Bang Tran, Monikrishna Roy, Adam Cassell, Sergiu Dascalu, Sorin Draghici, and **Tin Nguyen\***. SMRT: Randomized Data Transformation for Cancer Subtyping and Big Data Analysis. **Frontiers in Oncology**, DOI: 10.3389/fonc.2021.725133, 2021. [*impact factor: 6.2, h-index: 83, h5-index: 78*]
- J.11. Thi Hai Yen Nguyen, **Tin Nguyen**, Quang-Huy Nguyen, and Duc-Hau Le\*. Re-Identification of Patient Subgroups in Uveal Melanoma. **Frontiers in Oncology**, DOI: 10.3389/fonc.2021.731548, 2021. [*impact factor: 6.2, h-index: 83, h5-index: 78*]
- J.12. Attila Gabor, Marco Tognetti, Alice Driessen, Jovan Tanevski, Baosen Guo, Wencai Cao, He Shen, Thomas Yu, Verena Chung, Bernd Bodenmiller, Julio Saez-Rodriguez, Augustinas Prusokas, Alidivinas Prusokas, Renata Retkute, Anand Rajasekar, Karthik Raman, Malvika Sudhakar, Raghunathan Rengaswamy, Edward S.C. Shih, Min-jeong Kim, Changje Cho, Dohyang Kim, Hyeju Oh, Jinseub Hwang, Kim Jongtae, Yeongeun Nam, Sanghoo Yoon, Taeyong Kwon, Kyeongjun Lee, Sarika Chaudhary, Nehal Sharma, Shreya Bande, Gao Gao, Cankut Cubuk, Pelin Gundogdu, Joaquin Dopazo, Kinza Rian, Carlos Loucera, Matias M Falco, Martin Garrido-Rodriguez, Maria Peña-Chilet, Huiyuan Chen, Gabor Turu, Laszlo Hunyadi, Adam Misak, Baosen Guo, Wencai Cao, He Shen, Lisheng Zhou, Xiaoqing Jiang, Pieta Zhang, Aakansha Rai, Rintu Kutum, Sadhna Rana, Rajgopal Srinivasan, Swatantra Pradhan, James Li, Vladimir Bajic, Christophe Van Neste, Didier Barradas-bautista, Somayah Abdullah Albarade, Igor Nikolskiy, Musalula Sinkala, Duc Tran, Hung Nguyen, **Tin Nguyen**, Alexander Wu, Benjamin DeMeo, Brian Hie, Rohit Singh, Jiwei Liu, Xueer Chen, Leonor Saiz, Jose M. G Vilar, Peng Qiu, Akash Gosain, Anjali Dhall, Dinesh Bajaj, Harpreet Kaur, Krishna Bagaria, Mayank Chauhan, Neelam Sharma, Gajendra Raghava, Sumeet Patiyal, Jianye Hao, Jiajie Peng, Shangyi Ning, Yi Ma, Zhongyu Wei, Atte Aalto, Jorge Goncalves, Laurent Mombaerts, Xinnan Dai, Jie Zheng, Piyushkumar Mundra, Fan Xu, Jie Wang, Krishna Kant Singh, Mingyu Lee. Cell-to-cell and type-to-type heterogeneity of signaling networks: insights from the crowd. **Molecular Systems Biology**, DOI: 10.15252/msb.202110402, 2021. [*impact factor: 11.4, h-index: 148, h5-index: 56*]
- J.13. Bashir Dabo, Claudio Pelucchi, Matteo Rota, Harshonnati Jain, Paola Bertuccio, Rossella Bonzi, Domenico Palli, Monica Ferraroni, Zuo-Feng Zhang, Aurora Sanchez-Anguiano, Yen Thi-Hai Pham, Chi Thi-Du Tran, Anh Gia Pham, Guo-Pei Yu, **Tin Nguyen**, Joshua Muscat, Shoichiro Tsugane, Akihisa Hidaka, Gerson S. Hamada, David Zaridze, Dmitry Maximovitch, Manolis Kogevinas, Nerea Fernandez de Larrea-Baz, Stefania Boccia, Roberta Pastorino, Robert C. Kurtz, Areti Lagiou, Pagona Lagiou, Jesus Vioque, M. Constanza Camargo, Maria Paula Curado, Nuno Lunet, Paolo Boffetta, Eva Negri, Carlo La Vecchia, and Hung N. Luu\*. The Association Between Diabetes and Gastric Cancer: Results from the StomachCancer Pooling (StoP) Project Consortium. **European Journal of Cancer Prevention**, DOI: 10.1097/CEJ.0000000000000703, 2021. [*impact factor: 3.0, h-index: 77, h5-index: 30*]
- J.14. Hung Nguyen, Duc Tran, Bang Tran, Bahadir Pehlivan, and **Tin Nguyen\***. A comprehensive survey of regulatory network inference methods using single-cell RNA

- sequencing data. **Briefings in Bioinformatics**, 22(3):1-15, 2021. [*impact factor: 11.6, h-index: 113, h5-index: 73*]
- J.15. Quang-Huy Nguyen, Hung Nguyen, **Tin Nguyen**, Duc-Hau Le\*. Multi-omics analysis detects novel prognostic subgroups of breast cancer. **Frontiers in Genetics**, DOI: 10.3389/fgene.2020.574661, 2020. [*impact factor: 4.3, h-index: 81, h5-index: 64*]
- J.16. Jovan Tanevski, Thin Nguyen, Buu Truong, Nikos Karaiskos, Mehmet E. Ahsen, Xinyu Zhang, Chang Shu, Ke Xu, Xiaoyu Liang, Ying Hu, Hoang V. Pham, Li Xiaomei, Thuc D. Le, Adi L. Tarca, Gaurav Bhatti, Roberto Romero, Nestoras Karathanasis, Philippe Loher, Yang Chen, Zhengqing Ouyang, Disheng Mao, Yuping Zhang, Maryam Zand, Jianhua Ruan, Christoph Hafemeister, Peng Qiu, Duc Tran, **Tin Nguyen**, Attila Gabor, Thomas Yu, Justin Guinney, Enrico Glaab, Roland Krause, Peter Banda, DREAM SCTC Consortium, Gustavo Stolovitzky, Nikolaus Rajewsky, Julio Saez-Rodriguez, and Pablo Meyer\*. Gene selection for optimal prediction of cell position in tissues from single-cell transcriptomics data. **Life Science Alliance**, 3(11):e202000867, 2020. [*impact factor: 4.6, h-index: 22, h5-index: 23*]
- J.17. Duc Tran, Hung Nguyen, Uyen Le, George Bebis, Hung Luu, and **Tin Nguyen**\*. A novel method for cancer subtyping and risk prediction using consensus factor analysis. **Frontiers in Oncology**, 10:1052, 2020. [*impact factor: 6.2, h-index: 83, h5-index: 78*]
- J.18. **Tin Nguyen**\*, Adib Shafi, Tuan-Minh Nguyen, A. Grant Schissler, and Sorin Draghici. NBIA: a network-based integrative analysis framework – applied to pathway analysis. **Nature Scientific Reports**, 10:4188, 2020. [*impact factor: 4.4, h-index: 242, h5-index: 200*]
- J.19. Tuan-Minh Nguyen, Adib Shafi, **Tin Nguyen**, and Sorin Draghici\*. Identifying significantly impacted pathways: a comprehensive review and assessment. **Genome Biology**, 20(1):203, 2019. [*impact factor: 13.5, h-index: 248, h5-index: 124*]
- J.20. Hung Nguyen, Sangam Shrestha, Sorin Draghici, and **Tin Nguyen**\*. PINSPlus: a tool for tumor subtype discovery in integrated genomic data. **Bioinformatics**, 35(16):2843-2846, 2019. [*impact factor: 6.9, h-index: 390, h5-index: 136*]
- J.21. Michael J. Menden, Dennis Wang, Mike J. Mason, Bence Szalai, Krishna C. Bulusu, Yuanfang Guan, Thomas Yu, Jaewoo Kang, Minji Jeon, Russ Wolfinger, **Tin Nguyen**, Mikhail Zaslavskiy, AstraZeneca-Sanger Drug Combination DREAM Consortium, In Sock Jang, Zara Ghazoui, Mehmet E. Ahsen, Robert Vogel, Elias C. Neto, Thea Norman, Eric K. Y. Tang, Mathew J. Garnett, Giovanni Y. Di Veroli, Christian Zwaan, Stephen Fawell, Gustavo Stolovitzky, Justin Guinney, Jonathan R. Dry, and Julio Saez-Rodriguez\*. Community assessment of cancer drug combination screens identifies strategies for synergy prediction. **Nature Communications**, 10:2674, 2019. [*impact factor: 14.9, h-index: 365, h5-index: 287*]
- J.22. Adib Shafi, **Tin Nguyen**, Azam Peyvandipour, and Sorin Draghici\*. GSMA: an approach to identify robust global and test Gene Signatures using Meta-Analysis. **Bioinformatics**, DOI: 10.1093/bioinformatics/btz561, 2019. [*impact factor: 6.9, h-index: 390, h5-index: 136*]
- J.23. Hung Nguyen, Sangam Shrestha, Duc Tran, Adib Shafi, Sorin Draghici, and **Tin Nguyen**\*. A comprehensive survey tools and software for active subnetwork identification. **Frontiers in Genetics**, 10:155, 2019. [*impact factor: 4.3, h-index: 81, h5-index: 64*]

- J.24. Adib Shafi, **Tin Nguyen**, Azam Peyvandipour, Hung Nguyen, and Sorin Draghici\*. A multi-cohort and multi-omics meta-analysis framework to identify network-based gene signatures. **Frontiers in Genetics**, 10:150, 2019. [*impact factor: 4.3, h-index: 81, h5-index: 64*]
- J.25. Edward Cruz, Hung Nguyen, **Tin Nguyen**, and Ian Wallace\*. Functional analysis tools for post-translational modification: a post-translational modification database for analysis of proteins and metabolic pathways. **The Plant Journal**, DOI: 10.1111/tpj.14372, 2019. [*impact factor: 6.4, h-index: 269, h5-index: 77*]
- J.26. John Stansfield, Duc Tran, **Tin Nguyen\***, and Mikhail Dozmorov\*. R Tutorial: detection of differentially interacting chromatin regions from multiple Hi-C datasets. **Current Protocols in Bioinformatics**, 66(1):e76, 2019. [*impact factor: 9.2, h-index: 57*]
- J.27. Alfred Schissler\*, Hung Nguyen, **Tin Nguyen**, Juli Petereit, and Vincent Gardeux. Statistical Software. **Wiley StatsRef: Statistics Reference Online**, DOI: 10.1002/9781118445112.stat00527.pub2, 2019
- J.28. **Tin Nguyen**, Cristina Mitrea, and Sorin Draghici\*. Network-based approaches for pathway level analysis. **Current Protocols in Bioinformatics**, 61(1):8.25.1-8.25.24, 2018. [*impact factor: 9.2, h-index: 57*]
- J.29. **Tin Nguyen**, Rebecca Tagett, Diana Diaz, and Sorin Draghici\*. A novel method for data integration and disease subtyping. **Genome Research**, 27(12):2025-2039, 2017. [*impact factor: 9.0, h-index: 297, h5-index: 88*]
- J.30. **Tin Nguyen**, Cristina Mitrea, Rebecca Tagett, and Sorin Draghici\*. DANUBE: Data-driven meta-ANalysis using UnBiased Empirical distributions – applied to biological pathway analysis. **Proceedings of the IEEE**, 105(3):496-515, 2017. [*impact factor: 10.9, h-index: 287, h5-index: 93*]
- J.31. Adib Shafi, Cristina Mitrea, **Tin Nguyen**, and Sorin Draghici\*. A survey of the approaches for identifying differential methylation using bisulfite sequencing data. **Briefing in Bioinformatics**. DOI: 10.1093/bib/bbx013, 2017. [*impact factor: 11.6, h-index: 113, h5-index: 73*]
- J.32. **Tin Nguyen**, Rebecca Tagett, Michele Donato, Cristina Mitrea, and Sorin Draghici\*. A novel bi-level meta-analysis approach: applied to biological pathway analysis. **Bioinformatics**, 32(3):409-416, 2016. [*impact factor: 6.9, h-index: 390, h5-index: 136*]
- J.33. **Tin Nguyen**, Diana Diaz, Rebecca Tagett, and Sorin Draghici\*. Overcoming the matched-sample bottleneck: an orthogonal approach to integrate omic data. **Nature Scientific Reports**, 6:29251, 2016. [*impact factor: 4.4, h-index: 242, h5-index: 200*]

### **Conference Proceedings**

- C.1. Duc Tran, Hung Nguyen, Frederick C. Harris, Jr., and **Tin Nguyen\***. Single-cell RNA sequencing data imputation using similarity preserving network. In *Proceedings of the 13<sup>th</sup> IEEE International Conference on Knowledge and Systems Engineering*, 2021.

- C.2. Bang Tran, Quyen Nguyen, Sangam Shrestha, and **Tin Nguyen\***. scIDS: Single-cell Imputation by combining Deep autoencoder neural networks and Subspace regression. In *Proceedings of the 13<sup>th</sup> IEEE International Conference on Knowledge and Systems Engineering*, 2021.
- C.3. Duc Tran, Frederick C. Harris Jr, Bang Tran, Nam Sy Vo, Hung Nguyen, and **Tin Nguyen\***. Single-Cell RNA Sequencing Data Imputation Using Deep Neural Network. In *Proceedings of the 18<sup>th</sup> International Conference on Information Technology-New Generations*, pages 403-410, 2021.
- C.4. Quang Tran, Nam Vo, Eric Hicks, **Tin Nguyen**, and Vinhthuy Phan\*. Analysis of Short-read Aligners using Genome Sequence Complexity. In *Proceedings of the 12<sup>th</sup> IEEE International Conference on Knowledge and Systems Engineering*, pages 312-317, 2020.
- C.5. Hung Nguyen, Bang Tran, Duc Tran, Quang-Huy Nguyen, Duc-Hau Le, and **Tin Nguyen\***. Disease subtyping using community detection from consensus networks. In *Proceedings of the 12<sup>th</sup> IEEE International Conference on Knowledge and Systems Engineering*, pages 318-323, 2020.
- C.6. Suzan Arslanturk\*, **Tin Nguyen**, and Sorin Draghici. Integrated Cancer Subtyping using Heterogeneous Genome-Scale Molecular Datasets. In *Pacific Symposium on Biocomputing*, volume 25, pages 551-562, 2020.
- C.7. Bang Tran, Duc Tran, Hung Nguyen, Nam Sy Vo, and **Tin Nguyen**. RIA: a novel Regression-based Imputation Approach for single-cell RNA sequencing. In *Proceedings of the 11<sup>th</sup> IEEE International Conference on Knowledge and Systems Engineering*, pages 1-9, 2019.
- C.8. Hung Nguyen, Sushil Louis, and **Tin Nguyen\***. MGKA: A genetic algorithm-based clustering technique for genomic data. In *Proceedings of the 2019 IEEE Congress on Evolutionary Computation*, pages 103-110, 2019.
- C.9. Yan Yan, **Tin Nguyen**, Bobby Bryant, and Frederick Harris Jr. Robust Fuzzy Cluster Ensemble on Cancer Gene Expression Data. In *Proceedings of the 11<sup>th</sup> International Conference on Bioinformatics and Computational Biology*, 60:120-128, 2019.
- C.10. Brian Marks, Nina Hees, Hung Nguyen, and **Tin Nguyen\***. MIA: A Multi-cohort Integrated Analysis for biomarker identification. In *Proceedings of the 9<sup>th</sup> ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics*, pages 360-365. ACM, 2018.
- C.11. **Tin Nguyen\***, Diana Diaz, and Sorin Draghici. TOMAS: A novel TOpology-aware Meta-Analysis approach applied to System biology. In *Proceedings of the 7<sup>th</sup> ACM International Conference on Bioinformatics, Computational Biology and Health Informatics*, pages 13-22. ACM, 2016.
- C.12. Diana Diaz, Michele Donato, **Tin Nguyen**, and Sorin Draghici\*. MicroRNA-augmented pathways (mirAP) and their applications to pathway analysis and disease subtyping. In *Pacific Symposium on Biocomputing*, volume 22, pages 390-401, 2016.
- C.13. Diana Diaz, **Tin Nguyen**, and Sorin Draghici\*. A systems biology approach for unsupervised clustering of high-dimensional data. In *International Workshop on Machine Learning, Optimization and Big Data*, pages 193–203. Springer, 2016.

- C.14. **Tin Nguyen** and Dongxiao Zhu. Markovbin: An algorithm to cluster metagenomic reads using a mixture modeling of hierarchical distributions. In *Proceedings of the 4<sup>th</sup> International Conference on Bioinformatics, Computational Biology and Biomedical Informatics*, page 115. ACM, 2013.
- C.15. Thair Judeh, **Tin Nguyen**, and Dongxiao Zhu\*. QSEA for fuzzy subgraph querying of KEGG pathways. In *Proceedings of the ACM Conference on Bioinformatics, Computational Biology and Biomedicine*, pages 474-481. ACM, 2012.
- C.16. **Tin Nguyen**, Nan Deng, Guorong Xu, Zhansheng Duan, and Dongxiao Zhu\*. iQuant: A fast yet accurate GUI tool for transcript quantification. In *Proceedings of the 2011 IEEE International Conference on Bioinformatics and Biomedicine Workshops (BIBMW)*, pages 1048-1050. IEEE, 2011.
- C.17. **Tin Nguyen**, Zhiyu Zhao, and Dongxiao Zhu\*. SPATA: A highly accurate GUI tool for de novo transcriptome assembly. In *Proceedings of the 2011 IEEE International Conference on Bioinformatics and Biomedicine Workshops (BIBMW)*, pages 1051-1053. IEEE, 2011.
- C.18. Zhiyu Zhao, **Tin Nguyen**, Nan Deng, Kristen Johnson, and Dongxiao Zhu\*. SPATA: a seeding and patching algorithm for de novo transcriptome assembly. In *Proceedings of the 2011 IEEE International Conference on Bioinformatics and Biomedicine Workshops (BIBMW)*, pages 26-33. IEEE, 2011.

## PATENTS AND DISCLOSURES

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- Sorin Draghici and Tin Nguyen. PINS: A Perturbation Clustering Approach for Data Integration and Disease Subtyping. US patent number 10529451, 2020.
- Sorin Draghici and Tin Nguyen. Orthogonal approach to integrate independent omic data. US patent application number 1609975, 2019.

## AWARDS AND HONORS

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- NSF CAREER Award, 2022
- NSF CISE Core Program Award, 2022
- Second prize in the DREAM Single Cell Signaling in Breast Cancer Challenge, 2019.
- Second prize in the DREAM Single Cell Transcriptomics Challenge, 2018
- Second prize in the AstraZeneca-Sanger Drug Combination DREAM Challenge, 2016.
- Outstanding Graduate Student Scholarship, to my PhD student (Hung Nguyen), 2022
- Dean Merit Award, to my PhD student (Hung Nguyen), 2021
- Dean Scholarship, to my PhD student (Duc Tran), 2018
- Best Paper Award, to my PhD student (Bang Tran), the 11th IEE International Conference on Knowledge and Systems Engineering
- Best Poster Award, to my PhD student (Hung Nguyen), NV NASA Programs Poster Competition, 2020



- Runners up (Bang Tran and Duc Tran) for graduate students in NV NASA Programs Poster Competition, 2020 and 2021
- Ralph H. Kummeler Award for Distinguished Achievement in Research, among all graduate students in all departments of the College of Engineering, Wayne State University, 2016
- Outstanding Research Assistant, Computer Science, Wayne State University, 2016
- Graduated with honors (M.Sc. and B.Sc.), Eotvos Lorand University, Hungary
- Scholarship from the Minister of Education, for MS and BS education, Hungary
- Fourth prize in the National Olympiad in Physics, Vietnam
- First prize in Student Olympiad in Physics, Ho Chi Minh City, Vietnam

## TEACHING

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### *University of Nevada, Reno*

- 2022
  - CS 791 Advanced Topics in Bioinformatics (Spring)
  - CS 461/661 Statistical Methods in Bioinformatics (Fall)
  - CS 302 Data Structures (Fall)
- 2021
  - CS 791 Advanced Topics in Bioinformatics (Spring)
  - CS 482/682 Artificial Intelligence (Fall)
  - CS 461/661 Statistical Methods in Bioinformatics (Fall)
- 2020
  - CS 791 Advanced Topics in Bioinformatics (Spring)
  - CS 365 Mathematics of Computer Science (Fall)
  - CS 461/661 Statistical Methods in Bioinformatics (Fall)
- 2019
  - CS 791 Advanced Topics in Bioinformatics (Spring)
  - CS 491/691 Introduction to Bioinformatics (Fall)
- 2018
  - CS 491/691 Introduction to Bioinformatics (Fall)
- 2017
  - CS 491/691 Introduction to Bioinformatics (Fall)

### *Wayne State University*

- Summer 2016
  - CSC 3110 Algorithm Design and Analysis

**Postdoctoral Researchers**

- Caio Cesar De Carvalho (Fall 2020 – present)
  - Co-advising with David Cantu

**PhD Students** (*Committee Chair*)

- Duc Tran (Fall 2018 – present)
  - Defended dissertation proposal in May 2022
  - Expected to graduate by December 2022
- Hung Nguyen (Spring 2018 – present)
  - Defended dissertation proposal in May 2022
  - Expected to graduate by May 2023
- Bang Tran (Fall 2018 – present)
  - Expected to graduate by May 2024
- Negar Maghsoudi (Spring 2021 – present)
  - Expected to graduate by May 2026
- Ha Nguyen (Spring 2021 – present)
  - Expected to graduate by May 2026
- Augustine Ofoegbu (Summer 2022 – present)
  - Expected to graduate by May 2027
- Dao Tran (Summer 2022 – present)
  - Expected to graduate by May 2027
- Na Ngo (Summer 2022 – present)
  - Expected to graduate by May 2027
- Md. Jueal Mia (Summer 2022 – present)
  - Expected to graduate by May 2027

**Master Students** (*Committee Chair*)

- Alena Lee (Fall 2017 – Summer 2018)
  - MS in Biotechnology
  - Graduated in August 2018
- Sangam Shrestha (Spring 2018 – Fall 2019)
  - MS in Computer Science and Engineering
  - Graduated in December 2019
- Monikrishna Roy (Fall 2020 – Spring 2022)
  - MS in Computer Science and Engineering
  - Graduated in May 2022

### **Committee Member**

- Abdullah Al-Mamun (Spring 2022 – present)
  - PhD Candidate in Computer Science and Engineering
  - Advisor: Dongfang Zhao
  - Defended dissertation proposal in April 2022
- Brian Prince (Spring 2022 – present)
  - PhD Candidate in Biochemistry
  - Advisor: Claudia Rueckert
  - Defended dissertation proposal in April 2022
- Amruta Kale (Spring 2022 – present)
  - PhD Candidate in Computer Science, University of Idaho
  - Advisor: Xiaogang Ma, University of Idaho
  - Defended dissertation proposal in April 2022
- Jun Yi (Fall 2021 – present)
  - PhD Candidate in Computer Science and Engineering
  - Advisor: Feng Yan
  - Defended dissertation proposal in January 2022
- Mustafa Solmaz (Spring 2020 – present)
  - PhD Candidate in Computer Science and Engineering
  - Advisor: Mehmet Gunes
  - Defended dissertation proposal in May 2020
- Ahmed Alhussen (Spring 2020 – Fall 2020)
  - PhD in Computer Science and Engineering
  - Advisor: Engin Arslan
  - Graduated in December 2020
- Ashutosh Singandhupe (Spring 2019 – Fall 2021)
  - PhD in Computer Science and Engineering
  - Advisor: Hung La
  - Graduated in December 2021
- Yan Yan (Fall 2017 – Spring 2019)
  - PhD in Computer Science and Engineering
  - Advisor: Frederick Harris, Jr.
  - Graduated in December 2022
- David Gabriel (Spring 2021 – Spring 2022)
  - MS in Computer Science and Engineering
  - Advisor: Engin Arslan
  - Graduated in May 2022
- Benjamin Caswell (Spring 2021 – Spring 2022)
  - MS in Computer Science and Engineering
  - Advisor: David Cantu

- Graduated in April 2022
- Sharif Kamran (Spring 2020 – Fall 2020)
  - MS in Computer Science and Engineering
  - Advisor: Alireza Tavakkoli
  - Graduated in December 2020
- Amr Abdelhady (Fall 2019 – Summer 2020)
  - MS in Computer Science and Engineering
  - Advisor: Sergiu Dascalu
  - Graduated in August 2020

***Undergraduate student*** (Senior projects and/or research)

- Erik Marsh (Fall 2021 – Spring 2022)
- Ellas Brezine (Fall 2021 – Spring 2022)
- Monte McRae (Spring 2020 – Spring 2022)
- Jesus Casillas (Spring 2020 – Spring 2021)
- Shawn Ray (Spring 2020 – Spring 2021)
- Nicholas Mason (Fall 2019 – Spring 2020)
- Brian Marks (Fall 2017 – Spring 2019)
- Nina Hees (Fall 2017 – Fall 2018)
- Adam Montano (Fall 2017 – Spring 2018)
- Joshua Pike (Fall 2017 – Fall 2018)
- Dalton Navalta (Fall 2017 – Fall 2018)

UNIVERSITY SERVICE

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***Department***

- Cyber Security Faculty Search Committee, Spring 2022
- Member, CSE Graduate Committee, 2017 – present
- Member, Colloquium Committee, 2017 – present
- CSE Representative, Nevada Bound tour, 2017 – present
- Undergraduate Academic Advisor

***College & University***

- Bioinformatics Analyst Search Committee, Spring 2022
- Research Grant Coordinator Search Committee, Fall 2021
- Bioinformatics Analyst Search Committee, Fall 2020
- Judge, Graduate Student Association Poster Symposium, Fall 2017
- Judge, Graduate Student Association Paper Competition, Spring 2018
- CSE Representative, Engineering Recruitment Reception, Spring 2018

PROFESSIONAL SERVICE

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- NIH BDMA Review Panel, 2021

- NSF CISE IIS Review Panel, 2020.
- Conference Program Committee
  - BICOB (2019 – present)
  - ISMCO (2019 – present)
  - SEDE (2019 – present)
  - ITNG HCI (2022 – present)
- Bioinformatics Session Chair, KSE (2019 – present)
- Local Arrangement Chair, ISMCO (2019 – present)
- Member of the Board of Trustees of Coral Academy of Science, K-12 Charter School in Reno (2018 - present)
- Organizer, Bioinformatics Workshops for Nevada’s Undergraduates (2021 – present)
- Vice president (2015 – 2016), ACM-W student chapter, Wayne State University
- Member, Engineering Student Faculty Board (2015 – 2016), ACM and ACM-W student chapter, Wayne State University
- Journal Reviewer
  - Nature Portfolio Journals: Nature Reviews Molecular Cell Biology, Nature Communications, Scientific Reports, Communications Biology
  - Oxford Press Journals: Nucleic Acids Research, Bioinformatics, Briefings in Bioinformatics, Bioinformatics Advances, Briefings in Functional Genomics
  - BioMed Central Journals: Genome Biology, Journal of Translational Medicine, BMC Bioinformatics
  - Frontiers Journals: Frontiers in Genetics, Frontiers in Cell and Developmental Biology, Frontiers in Immunology, Frontiers in Oncology, Frontiers in Artificial Intelligence
  - MDPI Journals: Cells, Data, Applied Sciences, Diagnostics
  - Cell Reports
  - Neural Processing Letters
  - IEEE/ACM Transactions on Computational Biology and Bioinformatics
  - Cancer Research
  - PLOS Journals: PLOS One, PLOS Computational Biology
  - Balkan Journal of Medical Genetics
  - F1000Research
- Conference Reviewer:
  - BICOB (2019 – present),
  - KSE (2019 – present)
  - SEDE (2019 – present)
  - ISMCO (2019 – present)
  - ICIT (2017 – present)
  - BIBM (2012 – present)
- NSF I-Corps program (Spring 2015): an intensive training program to help researchers transform research ideas and technical innovations into commercializable and marketable

opportunities. Through extensive customer engagement, researchers are able to validate the sustainability of their start-up business.