Katherine Grace Herbert-Berger
Associate Professor of Computer Science
Mon-tnmch

- Co-PI, PSE&G Institute for Sustainability Studies, "Towards a Mobile Exploratory Research and Data Analytics Platform for Environmental & Ecological Sustainability", with Dr. Emily Hill and Dr. Jennifer Bragger, December 2012-December 2013, $30,000.
- Co-Principal PI, Margaret and Herman Sokol Institute for Pharmaceutical Life Sciences Faculty Fellow. Project: Predicting drug-target relationships for dihydrofolate reductase homologs through phylogenetic analysis", with Dr. Nina Goodey, Summer 2008 – Summer 2010, $50,000 ($25,000 per PI).
- PI, Sokol Faculty-Student Research Award,

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2. Katherine G. Herbert, Junilda Spirollari, Jason T.L. Wang, William H. Piel, John Westbrook, Winona Barker, Zhang-Zhi Hu, Cathy H. Wu. Biological Databases, pp 307-317, **The Encyclopedia of Computer Science and Engineering**, Wiley & Sons, electronic publication, June 12, 2008, hardbound publication, January 2009.

3. Katherine G. Herbert, Jason T.L. Wang, Jianghui Lui. Information Retrieval and Data Mining, **The Computer Science and Engineering Handbook**, pp. 75-1 to 75-16, Second Edition (ed. A. Tucker), CRC Press, June 2004.

4. Jason T. L. Wang, Qicheng 75

5.

18. Katherine G. Herbert, Huiyuan Shan and Jason T.L. Wang. "Approximate Searching in Phylogenetic Databases," in Proceedings of the Atlantic Symposium on Computational Biology and Genome Information Systems & Technology, pp. 140-143

ACM SIGCSE International Conference on Innovation and Technology in Computer Science Education, Bologna, Italy, June 2006, pp 366. Paper was a winner of a best student paper award at the conference.

WHITE PAPERS

1. "MachineLearning in Heliophysics and Space Weather Forecasting: A White Paper of Findings and Recommendations"Gelu Nita, Manolis Georgoulis, Irina Kitiashvili, Viacheslav Sadykov, Enrico Camporeale, Alexander Kosovichev, H

4. "Scientific Data Infrastructure for Sustainability Science Mobile Applications", IEEE 3rd International Congress on Big Data, June 27-July 2, 2014, Anchorage, Alaska, USA.

5. "DrugTree: A phylogenetic platform to study protein-ligand binding relationships in the drug discovery process", The International Society of Computational Biologist's Conference on Semantics in Healthcare and Life Sciences, Boston, MA., February 23-25, 2011

6. "Algorithms and Software for Calculating and Visualizing the Cardinality of the Grand Bou9 (e)4.2 (rC)-1.6 (a7049r)-22(J)-14.-7.

21. "A Structure-Based Search Engine for Phylogenetic Databases", IEEE 14th International Conference on Scientific and Statistical Database Management, July 24, 2002, University of Edinburgh, Edinburgh, Scotland.

22. "ATreeGrep: Approximate Searching in Unordered Trees", IEEE 14th International Conference on Scientific and Statistical Database Management, July 24, 2002, University of Edinburgh, Edinburgh, Scotland.

23. "Approximate Searching in Phylogenetic Databases", Atlantic Symposium on Computational Biology and Genome Information Systems & Technology, Durham, North Carolina, March 16, 2001.

COLLOQUIA, SEMINARS, AND CAMPUS PRESENTATIONS

1. "GeoTagger and DrugTree: An overview of two science applications of data science," colloquium presentation, Department of Mathematics and Computer Science, Seton Hall University, March 2014.

2. "Insights into Computer Science Graduate Studies", Workshop for Montclair State University NSF iMagine REU Students, July 1, 2008.

3. "Insights into Computer Science Graduate Studies", Workshop for Montclair State University NSF iMagine REU students, July 11, 2007.

4. "Bioinformatics Activities in Computer Science", Outreach Workshop for High School students participating in an admission day at Montclair State University, December 8, 2006.

5. "Evolutionary Data Analysis and Data Management Issues", invited presentation, Saint Peter's College Pi Mu Epsilon annual meeting, Jersey City, New Jersey, April 25, 2005.

6. Multiple departmental and interdisciplinary seminars and presentations, Montclair State University Department of Computer Science, and College of Science and Medicine.

STUDENT RESEARCH MENTORING

1. Diane Liporace, "Object Oriented Programming- A Survey of Experiences with Language Choice", Master's Project, November 2018.
2. Maxim Antov "Drone Connectivity to Geotagger App", Undergraduate Student Project, April 2017 and December 2018.
3. Jessica Miller, "Cybersecurity Threats in Higher Education", Master's Literature Survey, May 2018.
4. Kevin Phelan, "A Web Application for Municipal Arborists", Undergraduate Student Project, August 2018.
5. Ryan Nicolosi, "MATCH: A mobile application for mainstream society interested in helping autistic individuals", Underg   .   8 (1

SCIF 253   Colloquium in Science Informatics III
SCIF 491   Research Experience in Science Informatics I
SCIF 492   Research Experience in Science Informatics II

New Jersey Institute of Technology (100-499 Undergraduate, 500 and above Graduate)

CIS 113 Introduction to Computer Science I, Summer 2002, Fall 2002 (C++ Programming)
CIS 114 Introduction to Computer Science II, Summer 2002, Summer 2004 (C++ Programming)
CIS 350 Computers and Society, Summer 2000.
CIS 601 Object Oriented Programming, Summer 2004 (C++ Programming)

Hybrid Classes (Taught with a Combination of On-Line and On-Campus Requirements)

HERBERT

- The 28th Australasian Computer Science Conference 2005 (ACSC 2005)
- Information Sciences (Journal Published by Elsevier Publishing), Fall 2004
- 28th Australasian Computer Science Conference-2005, (ACSC2005)
- 2004 SIAM International Conference on Data Mining
- The Internet Encyclopedia, 2004
- The 14th International Conference for Intelligent Systems for Molecular Biology (ISMB 2003)
- Information Systems: Special Issue on Bioinformatics and Biological Data Management, June 2003
- The International Conference on Information Technology: Research and Education (ITRE 2003), August 2003
- The International Conference on Intelligent Systems for Molecular Biology, July 2003
- The 3rd SIAM International Conference on Data Mining, May 2003
- The IEEE International Conference on Data Mining, December 2002
- The IEEE 4th International Symposium on Multimedia Software Engineering, December 2002