

CURRICULUM VITAE

LEMING ZHOU, PhD, DSc

Assistant Professor

CONTACT INFORMATION

Department of Health Information Management
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RESEARCH PROFILE

Large-scale data integration and analysis, dynamic systems modeling, bioinformatics, algorithms and software development, mobile app development, data mining, and information security and privacy

EDUCATION

- D.Sc. Computer Science, The George Washington University, 2008, Washington DC
Dissertation: *Algorithms and Tools for Cross-Species cDNA-to-Genome Sequence Alignment*
Advisor: Dr. Liliana D. Florea
- Ph.D. Physics, The George Washington University, 2004, Washington DC
Dissertation: *Hadron Masses and Polarizabilities from Lattice QCD*
Advisor: Dr. Frank X. Lee
- M.S. Computer Science, The George Washington University, 2002, Washington DC
- B.S. Physics, Nankai University, 1998, Tianjin, China
Thesis: *The Properties of Strange Quark Matter*
Advisor: Dr. Pingzhi Ning

RESEARCH EXPERIENCE

- 9/2008-present Assistant Professor Department of Health Information Management
University of Pittsburgh, Pittsburgh PA
- 1/2010-present Assistant Professor Department of Bioengineering
University of Pittsburgh, Pittsburgh PA
- 9/2008-present Assistant Professor McGowan Institute for Regenerative Medicine
University of Pittsburgh, Pittsburgh PA
- Summer 2007 Research Fellow J. Craig Venter Institute, Rockville MD

8. Department of Veterans Affairs, “*Aphasic comprehension: conflict resolution and short-term memory*”, 12/1/2013 – 11/30/2017, \$1,098,915, Role: **co-investigator**. In this project, I perform data management and create statistical models for collected data. PI: Malcolm McNeil.
9. National Science Foundation, “*A Curriculum for Security Assured Health Informatics*”, 9/1/2014 – 8/31/2017, \$897,055, Role: **Key Personnel**. The major goal of this project is to create a new information security in health informatics track in the Department of Health Information Management and the School of Information Science at the University of Pittsburgh. PI: James Joshi.
10. Howard Hughes Medical Institute and National Science Foundation, “*Genomics Education Partnership*”, 9/2009 – present, Role: **Faculty Participants** of the GEP. The major goal of this project is to provide research experience to undergraduate students in a genomics course. PI: Sarah Elgin at Washington University in St. Louis.

PENDING GRANT APPLICATIONS

- National Science Foundation, “*Developing a research-based undergraduate data analytics curriculum*”, 05/1/2016- 4/30/2019, \$297,058, Role: **Principal Investigator**.
- Central Research Development Fund, Pitt, “Developing and testing a comprehensive health-status assessment system for people in medically underserved communities (MUCs)”, 7/1/2016-6/30/2017, \$16,000, Role: **Principal Investigator**.
- Manners Award, Pitt, invited proposal, “A big data approach on comprehensive well-being evaluation and personalized interventions for people in socioeconomically disadvantaged communities (SDCs)”, 7/1/2016-6/30/2017, \$10,000, Role: **Principal Investigator**.

PEER-REVIEWED PUBLICATIONS

1. Watzlaf, V., DeAlmeida, D., **Zhou, L.**, Hartman, L. (2015), "Protocol for a Systematic Review of Telehealth Privacy and Security Research to Identify Best Practices", *International Journal of Telerehabilitation*, 7(2), 15-22.
2. Leung, W., Shaffer, C.D., Reed, L.K., ..., **Zhou, L.**, ..., Wilson, C., Riddle, N.C., Buhler, J., Mardis, E.R., Elgin, SCR. (2015), "Drosophila Muller F Elements Maintain a Distinct Set of Genomic Properties over 40 Million Years of Evolution", *G3*, 5(5), 719-740.
3. Lopatto, D.,..., **Zhou, L.**, Buhler, J., Mardis, E.R., Leung, W., Shaffer, C.D., Threlfall, J., Elgin, S.C.R. (2014), "A Central Support System Can Facilitate Implementation and Sustainability of a Classroom-Based Undergraduate Research Experience (CURE) in Genomics", *CBE-Life Science Education*, 13(4):711-23.
4. Curtin, A., **Zhou, L.** (2014), "An Agent-Based Model of the Response to Angioplasty and Bare-Metal Stent Deployment in an Atherosclerotic Blood Vessel", *PLoS ONE*, 9(4):e94411.
5. Alzu'bi, A., **Zhou, L.**, Watzlaf, V. (2014), "Personal Genomic Information Management and Personalized Medicine: Challenges, Current Solutions, and Roles of HIM Professionals", *Perspectives in Health Information Management*, 11:1c.
6. Shaff, C.D., ..., **Zhou, L.**, Mardis, E.R., W., Buhler, J., Leung, W., Lopatto, D., Elgin, S.C.R., (2014), “A Course-Based Research Experience: How Benefits Change with Increased Investment in Instructional Time”, *CBE-Life Science Education*, 13:111-130.

7. **Zhou, L.**, Watzlaf, V., Abdelhak, M. (2013), "Flexible Approaches for Teaching Computational Genomics in a Health Information Management Program", *Perspectives in Health Information Management*, 10:1b.
8. Yenerall, P. and **Zhou, L.** (2012) "Identifying the Mechanisms of Intron Gain: Progress and Trends", *Biology Direct*, 7:29.
9. Yenerall P., Krupa, B., **Zhou, L.** (2011) "Mechanisms of Intron Gain and Loss in Drosophila", *BMC Evolutionary Biology*, 11:363.
10. Ludwig, B., **Zhou, L.**, Watzlaf, V., Abdelhak, M. (2010) "Adding a Genomic Healthcare Component to a Health Information Management Curriculum", *Perspectives in Health Information Management*, 7:1b.
11. Solovyev, A., Mikheev, M., **Zhou, L.**, Dutta-Moscato, J., Ziralido, C., An, G., Vodovotz, Y. and Mi, Q., (2010) "SPARK: A Framework for Multi-Scale Agent-based Biomedical Modeling", *International Journal of Agent Technologies and Systems*, 2(3), 18-30.
12. Solovyev, A., Mikheev, M., **Zhou, L.**, Dutta-Moscato, J., Ziralido, C., An, G., Vodovotz Y. and Mi, Q. (2010) "SPARK: A Framework for Multi-Scale Agent-based Biomedical Modeling", *Proceedings of the 2010 Agent-Directed Simulation Symposium (ADS 2010)*, Society for Modeling and Simulation International (SCS), 135-141.
13. **Zhou, L.**, Mihai, I. and Florea, L., (2010), "Spaced seeds for cross-species cDNA-to-genome sequence alignment", *Communications in Information and Systems*, 10(2), 115-136.
14. **Zhou, L.**, Delcher, A., Pertea, M., and Florea, L., (2009), "Sim4cc – A cross-species spliced alignment tool", *Nucleic Acids Research*, 37(11):e80.
15. Mi, Q., Solovyev, A., **Zhou, L.**, Mikheev, M., Dutta-Moscato, J., An, G., and Vodovotz, Y., (2009), "A computer simulation of pressure ulcer formation following spinal cord injury: An application of a novel agent-based biomedical modeling framework", *Proceedings of RESNA 2009 Annual Conference*.
16. **Zhou, L.**, Mihai, I., and Florea, L., (2008), "Effective cluster-based seed design for cross-species sequence comparison", *Bioinformatics*, 24(24), 2926-2927.
17. **Zhou, L.**, Stanton J., and Florea, L., (2008), "Universal seeds for cDNA-to-genome comparison", *BMC Bioinformatics*, 9:36.
18. **Zhou, L.** and Florea, L., (2007), "Designing sensitive and specific spaced seeds for cross-species mRNA-to-genome alignment", *Journal of Computational Biology*. 14(2), 113-130.
19. **Zhou, L.** and Lee, F. X., (2006), "Spin-3/2 baryons from an anisotropic lattice QCD action", *Physical Review D* 74, 034507.
20. Lee, F. X., **Zhou, L.**, Wilcox, W., Christensen, J., (2006), "Magnetic polarizability of hadrons from lattice QCD in the background field method", *Physical Review D* 73, 034503.
21. Lee, F. X., **Zhou, L.**, Wilcox, W., Christensen, J., (2005), "Magnetic polarizability of hadrons in the background field method", *Proceedings of Science*, 031.
22. Lee, F. X., Kelly, R., **Zhou, L.**, Wilcox, W., (2005), "Baryon magnetic moments in the background field method", *Physics Letter B* 627, 71-76.
23. Christensen, J., Wilcox, W., Lee, F. X., **Zhou, L.**, (2005), "Electric polarizability of neutral hadrons from Lattice QCD", *Physical Review D* 72, 034503.
24. Lee, F. X., Kelly, R., **Zhou, L.**, Wilcox, W., (2004), "Baryon magnetic moments in the external field method", *Nuclear Physics B (Proc. Suppl.)* 140:414-416.
25. Christensen, J., Lee, F. X., Wilcox, W., **Zhou, L.**, (2003), "Electric polarizability of hadrons", *Nuclear Physics B (Proc. Suppl.)* 119: 269-271.

26. **Zhou, L.**, Lee, F. X., Wilcox, W., Christensen, J., (2003), “Magnetic polarizability of hadrons from lattice QCD”, *Nuclear Physics B (Proc. Suppl.)* 119: 272-274.
27. Lee, F. X., Leinweber, D. B., **Zhou, L.**, Zanotti, J., Choe, S., (2002), “N* Masses from an anisotropic lattice QCD action”, *Nuclear Physics B (Proc. Suppl.)* 106: 248-250.
28. **Zhou, L.**, Lee, F. X., (2002), “N* masses from Lattice QCD”, *πN Newsletter* 16: 325-327.
29. Peng, G.X., Jiang, H.Q., Liu Z.J., **Zhou, L.**, Liu, B., Cheng X.G., Li J.H., (2000), “Charge dependence of the critical density of strange quark matter in a new mass scaling”, *Chinese Physics C (Formally High Energy Physics & Nuclear Physics)*, 24(8):732-738.
30. **Zhou, L.**, Peng, G. X., Ning, P. Z., (1999), “Strange quark matter at finite temperature”, *Progress in Physics*, 19(1): 59-71.
31. **Zhou, L.**, Peng, G. X., Ning, P. Z., (1999), “The properties of strange quark matter”, *Chinese Physics C (Formally High Energy Physics & Nuclear Physics)*, 23(4): 360-366.

NON-PEER-REVIEWD PUBLICATIONS

- Valerie Watzlaf, Dilhari DeAlmeida, Ashli Molinero, **Leming Zhou**, Linda Hartman. Protocol for systematic review in privacy and security in telehealth: best practices for healthcare professionals. PROSPERO 2015: CRD42015020552 Available from http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42015020552

MANUSCRIPT UNDER REVIEW

- Amal Alzu’bi and **Zhou, L.**, (2016) “Physicians’ perspectives in integrating genomics into clinical practice”, submitted to International Journal of Genomics, under review.

MANUSCRIPTS IN PREPARATION

- Amal Alzu’bi, Leming Zhou, and Michael Barmada, (2016) “Detecting risk of genetic disease and response to drugs from personal genetic variation analysis”.
- Amal Alzu’bi, Leming Zhou, and Valerie Watzlaf, (2016) “Genetic Variations and Precision Medicine”.
- Leming Zhou, Emily Foldes, Christopher Keener, Dilhari DeAlmeida, Valerie Watzlaf, Gilles Clermont, John Kellum, (2016) “Stage 2 AKI Cost and Risk Factors Analysis AKI Cost Analysis: Their Relationship with the Staging Detection Time”.
- Mohammed Aldhoayan and Leming Zhou, (2016) “A Customizable and Accurate Text Classification Algorithm for Hospital Discharge Data”.
- Erh-hsuan Wang, Leming Zhou, Szu-Han Chen, and Katharine Hill, (2016) “An Integrated Mobile AAC Application with Embedded Training and Real-Time Performance Report”.
- Leming Zhou and Bambang Parmanto, (2016) “Perspectives of Customers on Mobile Health Apps’ Security and Privacy Features: A Review”.
- Mohamed Alkherb and Leming Zhou, (2016) “A Systematic Evaluation on Mobile Health App Security Features”.

CONFERENCE PRESENTATIONS/POSTERS/PAPERS/ABSTRACTS

32. **Zhou, L.**, B. Parmanto, A. Saptono, D. DeAlmeida, (2016), "A New Security Assured Healthcare Information Track: One Year Experience", Assembly on Education Symposium, Denver, CO. (July 23-27, 2016)
33. **Zhou, L.** and B. Parmanto, (2015), "A New Security Assured Healthcare Information Track", Assembly on Education Symposium, Austin, TX. (July 19-22, 2015)
34. K. Saville, C. Jones, A. Rosenwald, **Zhou, L.**, W. Leung, C. Shaffer, S.C.R. Elgin, (2015), "The Genomics Education Partnership: Assessing and improving a research-based genomics project for undergraduates", Fourth Bi-Annual Undergraduate Bioinformatics Education Conference, Latrobe, PA. (May 28-29, 2015)
35. J. Braverman, M. Burg, C. Jones, N. Kokan, **Zhou, L.**, D. Paetkau, J. Stamm, C. Shaffer, W. Leung, S.C.R. Elgin, (2015), "Comparative genomics of the Muller F element among four species", 56th Annual Drosophila Research Conference, Chicago, IL. (March 4-8, 2015)
36. D.W. Paetkau, J. Braverman, M. Burg, J. DiAngelo, C. Jones, K. Jones, L. Kadlec, N. Kokan, M. Manier, A. Nagengast, J. Sanford, K. Saville, C. Small, R. Spokony, J. Stamm, C. Ting, M. Wawersik, **Zhou, L.**, W. Leung, C.D. Shaffer, S.C.R. Elgin, (2015), "The Genomics Education Partnership: Assessing and improving a research-based genomics project for undergraduates", 56th Annual Drosophila Research Conference, Chicago, IL. (March 4-8, 2015)
37. M.M. Laakso, C. Arrigo, J.R. DiAngelo, D. Dunbar, C.E. Howell, A. Kleinschmit, L.V. Paliulis, J. Porter-Kelley, J. Roecklein-Canfield, A. Rosenwald, M.J. Wolyniak, **L. Zhou**, W. Leung, C.D. Shaffer, and S.C.R. Elgin, (2014), "The Genomics Education Partnership (GEP): An undergraduate bioinformatics research network providing transformative course-based research experiences", 2014 ASCB meeting, Philadelphia, PA. (December 6-10).
38. Elgin, S.C.R., C. Bazinet, J. Bedard, M. Burg, J. DiAngelo, C. Jones, L. Kadlec, J. Leatherman, H. Mistry, A. Nagengast, L. Reed, N.L. Reeves, J. Sanford, C. Small, S. Smith, **L. Zhou**, C. Shaffer, W. Leung, D. Lopatto, (2014), "The Genomics Education Partnership: Implementing a Research-Based Genomics Project for Undergraduates", 55th Annual Drosophila Research Conference, San Diego, CA. (March 26-30, 2014)
39. W. Leung, Faculty and Students of the Genomics Education Partnership, L.K. Reed, S.T. Smith, **L. Zhou**, C.D. Shaffer, J. Buhler, S.C.R. Elgin, (2014), "Muller F elements maintain a distinctive pattern of gene structure over 40 million years of evolution", 55th Annual Drosophila Research Conference, San Diego, CA. (March 26-30, 2014)
40. Wang, E-H., Chen, S-H., Zhou, L., Hill, K., (2013), "EuTalk: A Virtual Therapist and Speech Assistant for People with Communication Disabilities", Pitt SDA Conference, University of Pittsburgh, Pittsburgh, PA (October 31-November 1, 2013)
41. Elgin, S.C.R., Burg, M., DiAngelo, J., Haberman, A., Jones, C., Kadlec, L., Key, S.C.S., Leatherman, J., McNeil, G.P., Mistry, H., Nagengast, A., Paetkau, D.W., Parrish, S., Reed, L., Schroeder, S., Smith, S., Wawersik, M., **Zhou, L.**, Lopatto, D., (2013), "The Genomics Education Partnership (GEP): Bringing Genomics Research into Undergraduate Classrooms", 54th Annual Drosophila Research Conference, Washington DC. (April 3-7, 2013)
42. Elgin, S.C.R., Burg, M., DiAngelo, J., Haberman, A., Jones, C., Kadlec, L., Key, S.C.S., Leatherman, J., McNeil, G.P., Mistry, H., Nagengast, A., Paetkau, D.W., Parrish, S., Reed, L., Schroeder, S., Smith, S., Wawersik, M., **Zhou, L.**, Shaffer, C.D., Leung, W., (2013), "Evolution of a Heterochromatic Domain, the Muller F Element, in Drosophila/Sophophora", poster presentation, 54th Annual Drosophila Research Conference, Washington, DC. (April 3-7, 2013)

43. Curtin, A. and **Zhou, L.**, (2012), "Development of an Agent-Based Model Simulating the Effects of Angioplasty and Bare-Metal Stent Implantation in an Atherosclerotic Blood Vessel", poster presentation, 2012 Biomedical Engineering Society Annual Meeting (BMES 2012), Atlanta, GA. (October 24-27, 2012)
44. Wang, Y., Trahan, K., Tananis, C., **Zhou, L.** (2012), "The Role of Integrated Computational Thinking into Health Science Education: A Case Study of the Mixed-Methods Evaluation of CPATH", poster presentation, The Annual American Evaluation Association (AEA) Conference, Minneapolis, MN. (October 22-27, 2012)
45. Hauser, C., Jones, C., **Zhou, L.**, Leung, W., Shaffer, C., Lopatto, D., Elgin, SCR. (2012), "The Genomics Education Partnership (GEP): Comparative Analysis of the Drosophila Dot Chromosome by Undergraduate Students", poster presentation, Undergraduate Bioinformatics Education Conference, St. Vincent College, PA. (May 31 - June 1, 2012).
46. Watzlaf, V., **Zhou, L.**, Abdelhak, M., Mi, Q., (2012), "Computational Thinking in HIM Courses: A Dream to Reality", platform presentation, The AHIMA Assembly on Education (AOE) Summer Symposium, Orlando, FL. (July 21-25, 2012)
47. Yenerall, P., Jiang, Y, **Zhou, L.**, (2012), "MIGL: A Database for Identifying the Mechanisms of Intron Gain and Loss", Poster Presentation, 2nd IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS), Las Vegas, NV. (February 23-25, 2012).
48. Yenerall, P., **Zhou, L.**, (2012), "Insights into the Mechanisms of Intron Gain and Loss Using Drosophila Genomes", Poster Presentation, 53rd Annual Drosophila Research Conference, Chicago, IL. (March 7-11, 2012).
49. Elgin, S.C.R., Barshop, W., Yuan, H., Burg, M., Coyle-Thompson, C., DiAngelo, J., Johnson, D., Jones, C., Kadlec, L., Silver-Key, S.C., Kokan, N.P., McNeil, G., Nagengast, A., Paetkau, D.W., Saville, K., Smith, S., Stamm, J., Wawersik, M., **Zhou, L.**, Leung, W., Shaffer, C., Lopatto, D., (2012), "The Genomics Education Partnership (GEP): Comparative Analysis of the Drosophila Genome by Undergraduate Students", Poster Presentation, 53rd Annual Drosophila Research Conference, Chicago, IL. (March 7-11, 2012)
50. Yenerall, P. and **Zhou, L.**, (2011), "Transposons: A Source of Novel Introns", Poster, Science 2011, University of Pittsburgh, Pittsburgh PA. (October 6-7, 2010)
51. Karim, H. and **Zhou, L.** (2011), "Atherosclerotic Plaque Rupture and Thrombosis Formation: An Investigation Using Agent-Based Modeling Approach", Poster Presentation, 2011 Biomedical Engineering Society Annual Meeting (BMES 2011), Hartford, CT. (October 12-15, 2011)
52. Mi, Q., Watzlaf, V., **Zhou, L.** (2011), "Integrating Computational Modeling Component into the Health Information Management Curriculum", Oral Presentation, The AHIMA Assembly on Education (AOE) Summer Symposium, San Antonio, TX. (July 23-27, 2011)
53. **Zhou, L.**, Watzlaf, V., Abdelhak, M. (2011), "Teaching Genomics in the HealthInformation Management Department", Oral Presentation, The AHIMA Assembly on Education (AOE) Summer Symposium, San Antonio, TX. (July 23-27, 2011)
54. Kumar, S., Abdelhak, M., **Zhou, L.** (2011), "Integrating Telemedicine into the Health Information Management Curriculum", Oral Presentation, The AHIMA Assembly on Education (AOE) Summer Symposium, San Antonio, TX. (July 23-27, 2011)
55. Shaffer, C., Leung, W., Bedard, J., Bhalla, S., Burg, M., Chandrasekaran, V., Coyle-Thompson, C., DiAngelo, J., Jones, C., Kadlec, L., McNeil, G., Nagengast, A., Paetkau, D., Saville, K.,

- Stamm, J., Wawersik, M., **Zhou, L.**, Elgin, SCR. (2011), "Exploring Genome Organization and Chromatin Structure in Drosophila, a Distributed Undergraduate Research Project", Poster, 52nd Annual Drosophila Research Conference, San Diego, CA. (March 30-April 3, 2011).
56. Yenerall, P., **Zhou, L.**, Krupa, B., Wang, M. (2011), "Mechanisms of Spliceosomal Intron Gain and Loss: An Investigation and Review Using 12 Drosophila Species", Poster, 52nd Annual Drosophila Research Conference, San Diego, CA. (March 30-April 3, 2011).
57. Karim, H., **Zhou, L.**, (2010), "Investigating Relationships between Obesity and the Built Environment Using Agent-Based Modeling", Platform Presentation and Poster, Rocky 2010, 8th Annual Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, Colorado. (December 9-11, 2010)
58. Karim, H., Yenerall, P., **Zhou, L.**, (2010), "Manually Annotating Genes in Multiple Drosophila Genomes Using Evidence-Based Approach", Poster, Science 2010, University of Pittsburgh, Pittsburgh PA. (October 7-8, 2010)
59. Abdelhak, M., **Zhou, L.**, (2010), "Computational Thinking and Genomics - Emerging Topics in Health Information Education", Oral Presentation, International Federation of Health Records Organizations (IFHRO) 2010, Educators Special Session, Milan, Italy. (November 15-19, 2010)
60. Abdelhak, M., **Zhou, L.**, Watzlaf, V., (2010), "Ways to Integrate Computational Thinking Into the Health Information Management Curriculum", Oral Presentation, The AHIMA Assembly on Education (AOE) Summer Symposium, New Orleans, LA. (July 26-28, 2010)
61. **Zhou, L.**, Solovyev, A., Mi, Q., and Vodovotz, Y., (2010), "An Agent-based Simulation of Arterial Restenosis Following Percutaneous Coronary Intervention", Abstract and Oral Presentation, FDA & NHLBI Third Annual Workshop on Cardiovascular Device Modeling, Washington DC. (June 10-11, 2010)
62. Elgin, SCR, Burg, M., Chandrasekaran, V., Chung, HM, Dorer, D., Johnson, D., Jones, CJ, Kadlec, L., McNeil, G., Nagengast, A., Paetkau, DW, Parrish, S., Silver-Key, SC, Smith, S., Stamm, J., Wawersik, M., **Zhou, L.**, W Leung, W., Shaffer, C., Lopatto, D., (2010), "The Genomics Education Partnership: Bringing Genomics into the Undergraduate Curriculum in Diverse Settings", Poster, 51st Annual Drosophila Research Conference, Washington, DC. (April 7-11, 2010)
63. **Zhou, L.**, Pertea M., Florea, L., (2009), "Predicting Coding Regions in Sequence Alignments With Spaced Seeds", Poster, 9th Annual Science and Technology Meeting (SCIENCE 2009 UNPLUGGED) of University of Pittsburgh, Pittsburgh, PA. (October 15-16, 2009).
64. **Zhou, L.**, Pertea M., Florea, L., (2009), "Predicting Coding Regions in Sequence Alignments With Spaced Seeds", Poster, 9th Workshop on Algorithms in Bioinformatics (WABI 2009), University of Pennsylvania, PA. (September 12-13, 2009).
65. Mi, Q., Solovyev, A., **Zhou, L.**, Mikheev, M., Dutta-Moscato, J., An, G., and Vodovotz, Y., (2009), "A computer simulation of pressure ulcer formation following spinal cord injury: An application of a novel agent-based biomedical modeling framework", RESNA 2009 Annual Conference, Presented by Qi Mi. New Orleans, Louisiana. (June 23-27, 2009).
66. Solovyev, A., **Zhou, L.**, Mikheev, M., Dutta-Moscato, J., An, G., Vodovotz, Y., and Mi, Q., (2009), "SPARK: A Systems Biology Framework for Agent-based Biomedical Modeling", Poster and abstract, Computational Cell Biology, 2009, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, NY. (March 24-27, 2009).

68. **Zhou, L.**, Florea, L., (2008), “Sensitive and specific cross-species cDNA-to-genome alignment with spaced seeds”, Platform presentation and abstract, Rocky 2008, 6th Annual Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, Colorado. (December 4-7, 2008).
69. **Zhou, L.**, Delcher, A., Pertea, M., Florea, L. (2007), "Universal spaced seeds: Improving the accuracy of cross-species cDNA-to-genome alignment", Poster and abstract, 16th Annual International Conference on Intelligent Systems for Molecular Biology - ISMB 2008, Presented by Liliana Florea. Toronto, CA.
70. **Zhou, L.**, Delcher, A., Pertea, M., and Florea, L., (2007), “Universal spaced seeds – improving the accuracy of cross-species cDNA-to-genome alignment”, Poster and abstract, Genome Informatics 2007, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, NY. (November 1-5, 2007).
71. **Zhou, L.**, Florea, L., (2007), “Good spaced seeds for cross-species cDNA-to-genome alignment”, Poster and abstract, BIBI 2007 - 7th IEEE International Conference on Bioinformatics and BioEngineering, Harvard Medical School, Boston, MA. (October 14-17, 2007).
72. **Zhou, L.**, Florea, L., (2006), “Designing spaced seeds for accurate cross-species cDNA-to-genome alignment with varying evolutionary distances”, Platform presentation and abstract, SMBE 2006 - Genomes, Evolution and Bioinformatics, Arizona State University, Tempe, AZ. (May 24-28, 2006).
73. **Zhou, L.**, Lee, F. X., (2003), “Hadron polarizabilities from Lattice QCD”, Platform presentation and abstract, Hypernuclear and Strange Particle Physics 2003 (HYP2003), Jefferson Lab, Newport News, VA (October 14-18, 2003).
74. **Zhou, L.**, Lee, F. X., (2003), “Hadron Electric and Magnetic Polarizabilities from Lattice QCD”, Platform presentation and abstract, APS April meeting 2003, Philadelphia, PA (April 5-8, 2003).
75. **Zhou, L.**, Lee, F. X., (2002), “Magnetic polarizability of hadrons from lattice QCD”, Poster and abstract, 20th International Symposium on Lattice Field Theory (LATTICE 2002), MIT, Cambridge, MA (June 24-29, 2002).
76. **Zhou, L.**, Lee, F. X., (2002), “N* masses from Lattice QCD”, Platform presentation and abstract, 9th International Symposium on Meson-Nucleon Physics and the Structure of the Nucleon (MENU 2001), The George Washington University, Washington, DC (July 26-31, 2001).
77. **Zhou, L.**, Lee, F. X., (2001), “N* masses from Lattice QCD”, Platform presentation and abstract, APS April meeting 2001, Washington DC (April 28 - May 1, 2001).

PROFESSIONAL SERVICES

- Proposal Reviewer
 - National Science Foundation panelist, 2009, 2013, 2014, 2015, 2016
 - Out state reviewer for a proposal submitted to Louisiana Board of Regents Support Fund, Research Competitiveness Subprogram (RCS)
 - School of Health and Rehabilitation Sciences, University of Pittsburgh
 - Clinical and Translational Science Institute, Basic to Clinical Collaboration Research Pilot Program, University of Pittsburgh

- Book Reviewer
 - One chapter, Elements of Computational Systems Biology, Wiley Book Series on Bioinformatics: Computational Techniques and Engineering.
 - First edition of “Computer Security: Principles and Practice”, Prentice Hall
 - "Multiple Biological Sequence Alignment", Wiley Book Series on Bioinformatics
- Paper Reviewer
 - Bioinformatics
 - BMC Bioinformatics
 - Chinese Medicine
 - IEEE Transactions on Information Technology in BioMedicine
 - IEEE Transactions on NanoBioscience
 - Journal of Biomedicine and Biotechnology
 - PLoS ONE
 - GENE
 - Communicative and Integrative Biology
 - Journal of Supercomputing
 - Computational Biology and Chemistry
- Program Committee Member
 - International Conference on Bioinformatics Models, Methods and Algorithms (BIOINFORMATICS 2011-2016)
 - The First International Conference on Computational and Systems Biology and Microbiology (BIOSYSCOM 2010)
 - International Conference on Bioinformatics, Computational Biology, Genomics and Chemoinformatics (BCBGC-09, 10)
 - 2009 International Conference on Bioinformatics and Computational Biology (BIOCOMP'09)
 - 2009 ISIBM International Joint Conferences on Bioinformatics, Systems Biology and Intelligent Computing
 - International Symposium on Bioinformatics Research and Applications (ISBRA 2008-2016)
 - The International Symposium on Big Data and BioComputation (BioComputation 2016)
 - The 23rd International Conference on Genome Informatics (GIW 2012)
 - Program Committee Member, International Symposium on Network Enabled Health Informatics, Biomedicine and Bioinformatics (HI-BI-BI 2013, 2014, 2015).
 - Program Committee Member, International Symposium on Network Analysis and Mining for Health Informatics, Biomedicine and Bioinformatics (Net-HI-BI-BI 2013), December 18-21, Shanghai, China
 - Program Committee Member, International Conference on Physiological Computing Systems (PhyCS 2014, 2016)
- Special Award Judge, Intel International Science and Engineering Fair 2012, 2015 (ISEF 2012, 2015) , David L. Lawrence Convention Center, Pittsburgh, PA

TEACHING EXPERIENCE

- Spring 2010, 2011, 2012, 2014, 2015, *Genomics and Personalized Care in Health Systems*, University of Pittsburgh
- Spring 2016, *Data Analytics and Its Application in Genomics and Personalized Care*, University of Pittsburgh
- Spring 2010, 2011, 2012, Fall 2014, 2015 *Legal, Security & Privacy Issues in Health Information Systems*, University of Pittsburgh
- Spring 2009, 2011, 2013, *Object-Oriented and Web Programming*, University of Pittsburgh
- Spring 2014, 2016, *Computer Programming for Health Informatics*, University of Pittsburgh

TEACHING INNOVATIONS

- Health-Computing project: With the grant funding support from National Science Foundation, I have led the development of a new undergraduate health science education program, including six new courses and new teaching strategies. More than ten faculty members from University of Pittsburgh and other universities will be involved in this program.
- Security Assured Healthcare Information Track: With the grant funding support from National Science Foundation, and the collaboration with faculty members from School of Information Science (SIS) at Pitt, we create a new security assured healthcare information track in the Department of Health Information Management (HIM). Students in this track can take well-designed courses, labs, and seminars in both HIM and SIS.
- Member of Genomics Education Partnership (<http://gep.wustl.edu>): This partnership encourages faculty members to integrate genomics research into undergraduate course so that undergraduate students have the opportunities of conducting novel scientific research. This program is sponsored by Washington University in St. Louis and Howard Hughes Medical Institute (HHMI).

MENTORING AND ADVISING ACTIVITIES

- 2010-present, serve as an academic advisor to graduate students, Department of Health Information Management, University of Pittsburgh.
- Since Spring 2010, the following students have worked with me on research projects.
 - PhD students from HIM: Thamer Al-Edresee, Amal Alzu'bi, Erh-Hsuan Wang, Mohammed Aldhoayan
 - Graduate students from HIM: Nazanin Ghavam; Peijun Ren; Gayathri Hebbar; Mohamed Alkherb; Sylvain Shimamana
 - Graduate students from SIS: Sundeep Nallamilli; Yuanyuan Jiang; Hsiang-Jou Cheng; Dalun Bian; Mou-Chun Wang; Keran Zhao; Hao Wang; Weiyi He
 - Graduate students from EE: Wenchao Xi
 - Graduate students from biostatistics: Yingda Jiang
 - Undergraduate students from bioengineering: Rebecca Gerth; Hunter Eason; Cynthia Wong; Cedric Brown; Bei Zhao; Antonia Curtin; Anthony Pulleo, Ma Luo; Isaac Wong, Yutong Zhang, Le Huang, Andrew Sweet, Tyler Martin, Gregg Karanovich
 - Undergraduate students from physics department: Sean Young
 - Undergraduate students from biology department: Helmet Karim; Paul Yenerall
 - Undergraduate students from CS: Bradlee Krupa

GUEST LECTURES

- “Computational Biology in Health Information Management”, October 2008, Department of Health Information Management, University of Pittsburgh, Pittsburgh PA. Course instructor: Dr. Mervat Abdelhak. Course name: “Introduce to Health Information Systems” (graduate).
- “A tutorial to genomics data sources and data mining tools”, October 29, 2009, November 19, 2009, and December 4, 2009, Department of Health Information Management, University of Pittsburgh, Pittsburgh PA. Course instructor: Patricia Anania Firouzan. Course Name: “Clinical Education 3”.
- “Genomics and Personalized Care”, July 2010/2011, University of Pittsburgh Health Career Scholars Academy (UPHCSA) for high school students. Course director: Karen Narkevic.
- “Genomics and Personalized Care”, October 2010, Department of Health Information Management, University of Pittsburgh, Pittsburgh PA. Course instructor: Rebecca Harmon. Course Name: “Data Management & Analysis for HIM Professionals”.
- “Genomics and Healthcare Data”, Spring 2010-2016, Department of Health Information Management, University of Pittsburgh, Pittsburgh PA. Course instructor: Valerie Watzlaf. Course Name: “Quality Management”
- “Computer Programming in Statistics”, Spring 2010-2016, Department of Health Information Management, University of Pittsburgh, Pittsburgh PA. Course instructor: Valerie Watzlaf. Course Name: “Application of Statistical Concepts in HIM”
- “Python Programming: Basics”, Summer 2015, Department of Health Information Management, University of Pittsburgh, Pittsburgh PA. Course instructor: Patti Firouzan. Course Name: “Clinical Education 2”
- “Information Security”, Fall 2015, Department of Health Information Management, University of Pittsburgh, Pittsburgh PA. Course instructor: Dilhari DeAlmeida. Course Name: “Issues in Health Systems”

PROFESSIONAL MEMBERSHIPS

- Association for Computing Machinery (ACM), 2009 - 2016
- American Health Information Management Association (AHIMA), 2009 - 2016
- International Society for Computational Biology (ISCB), 2007 - 2012
- Institute of Electrical and Electronics Engineers (IEEE), 2007 – 2016

HONORS AND AWARDS

- 2010, IGI Global Best Article Award
- 2008, 2014, Bruce Baker Education Travel Award, University of Pittsburgh
- 2007-2008, Research Fellowship, The George Washington University
- Summer 2007, Summer Fellowship, J. Craig Venter Institute
- 2000-2007, University Fellowship, The George Washington University
- 1994-1998, Y. S. Chow Fellowship
- 1997, P & G Fellowship
- 1998, Cheng Jing Theoretical Physics Award