Xiuzhen Huang
(870)680-8116
xhuang@astate.edu

Current Position

Position Title:
Current Academic Rank: Associate Professor
Rank Since: Fall 2010

Scholarly Contributions and Creative Productions

Grants

Huang, X. (2010). Computational and biological co-design ➤ cracking UGT structure-function relationships. NIH INBRE - 620800.

Huang, X., & Hood, E. (2009). Determination of Factors Affecting High-Level Protein Accumulation in Transgenic Maize Seed. NSF ESPCoR P3 - 150000.

Cramer, C.L., Huang, X., & Jennings, S. (2009). Efficient Algorithms for Protein Structure Prediction and Applications in RTB Binding Occupancy Determination, Year 3 of 3. NSF EPSCoR P3 - 56287.

Cramer, C.L., Huang, X., & Jennings, S. (2008). Efficient Algorithms for Protein Structure Prediction and Applications in RTB Binding Occupancy Determination, Year 1 of 3. NSF EPSCoR P3 - 33688.

Cramer, C.L., Huang, X., & Jennings, S. (2008). Efficient Algorithms for Protein Structure Prediction and Applications in RTB Binding Occupancy Determination, Year 2 of 3. NSF EPSCoR P3 - 91520.

Huang, X., Cramer, C.L., & Jennings, S. (2008). Efficient algorithms for protein structure prediction and applications in RTB binding ocupancy determination. NSF EPSCoR P3 - 250000.

Huang, X., Wang, H., Grace, S., & Ali, N. (2008). Metabolomic and Genomics Empowered Platform for Phytochemical and Gene Network Discovery in Medicago Truncatula. NSF ESPCoR P3 - 222584.

Journal Publications

Cai, L., & Huang, X. (2010). Fixed-parameter approximation: conceptual framework and approximability results. Algorithmica, 57(2), 398-412.

Presentations

Teoh, K., Johnson, D., Huang, X., & Hood, E. (2011). Transcriptome Analysis of Maize Embryos. Arkansas Biociences Institute Plant Biotechnology Group Meeting.

Huang, X. (2010). Bioinformatics in Plant-Based Bioproduction.

Johnson, D., Teoh, K., Ashby, C., Hood, E., & Huang, X. (2010). Determination of factors affecting high-level protein accumulation in transgenic maize seed. The Seventh Annual Conference of the MidSouth Computational Biology and Bioinformatics Society.

Huang, X. (2010). Efficient Parameterized Algorithms and Applications in Protein Structure-Function Relationship.

Ayala, J., Acosta, W., Ashby, C., Johnson, D., Reidy, M.J., Fergus, M.R., Dolan, M.C., Huang, X., & Cramer, C.L. (2010). Engineering the RTB lectin to impact bioproduction, trafficking, and delivery of associated fusion proteins into mammalian cells.. 12th Annual IAPB/SIVB Conference.

Huang, X. (2010). Parameterized Computation and Bioinformatics Applications.

Medrano, G., Dolan, M.C., Ayala, J., Rubio, N., Stephens, N.T., Radin, D., Huang, X., & Cramer, C.L. (2010). Plant-based vaccine components targeting immune presentation and response. Immune Correlates of Protection Against Influenza: Challenges for Licensure of Seasonal and Pandemic Influenza Vaccines.

Ashby, C., Ayala, J., Johnson, D., Jennings, S.F., Cramer, C.L., & Huang, X. (2010). Protein Structure Prediction Based on Efficient Sequence-Structure Alignment. The Seventh Annual Conference of the MidSouth Computational Biology and Bioinformatics Society.

Ashby, C., Ayala, J., Johnson, D., Jennings, S.F., Cramer, C.L., & Huang, X. (2009). Efficient Algorithms for Protein Structure Prediction and Applications in RTB Binding Occupancy Determination. 2nd NSF EPSCoR Annual Conference.

Huang, X. (2009). Efficient parameterized algorithms for structure-sequence alignment and applications in protein structure-function relationship study. Dagstuhl Seminar.

Huang, X. (2008). Addressing bio-sequence and bio-structure problems. Symposium of Computations in Bioinformatics and Bioscience.

Jenness, J., Huang, X., & Ashby, C. (2008). A Relational Approach for Pathway Analysis. Symposium of Computation in Bioinformatics and Biosciences 2008.

Ashby, C., Ayala, J., Huang, X., Cramer, C.L., & Jennings, S.F. (2008). Efficient Algorithms for Protein Structure Prediction and Applications in RTB Binding Occupancy Determination. 1st NSF EPSCoR Annual Conference.

Proceedings Publications

Johnson, D., Wang, K., Cramer, C.L., & Huang, X. (2012). Graph-Based Approach for Gene Markers and Applications in Next-Generation Sequencing Data Analysis. ACM Conference on Bioinformatics, Computational Biology and Biomedicine,

Ashby, C., Wang, K., & Huang, X. (2012). Protein Structure-Structure Alignment Based on Maximum Common Subgraph. ACM Conference on Bioinformatics, Computational Biology and Biomedicine,

Walker, K., Cramer, C.L., Jennings, S.F., & Huang, X. (2012). TERPRED: A dynamic structural data analysis tool. Proceedings of the 2nd World Congress on Computer Science and Information Engineering,

Johnson, D., Teoh, K., Ashby, C., Hood, E., & Huang, X. (2010). Analyzing genetic factors involved in recombinant protein expression enhancement. Proceedings of IEEE BIBM Workshop of Integrative Data Analysis in Systems Biology,

Huang, X. (2008). Addressing bio-sequence and bio-structure problems,. IEEE Computer Society, 8.

Ashby, C., Huang, X., Jenness, J., & Kerby, J. (2008). A relational approach for pathway analysis. IEEE Computer Society, 6.

Other

Huang, X. (2012). Efficient parameterized algorithms for structure-sequence alignment and applications in protein structure-function relationship study. Dagstuhl Seminar Proceedings.

Other Institutional Service

() BEST Award Presentation Judge (University) Summer 2012 - Fall 2009

() BEST Award Presentation Judge (University) Summer 2012 - Fall 2010

(Committee Member) Faculty search committee (University) Fall 2010 - Summer 2012

(Committee Chair) PRT committee (University) Summer 2010 - Fall 2010

(Committee Member) PRT committee (University) Summer 2010 - Fall 2010

(Committee Member) Member of curriculum committee (University) Fall 2009

(Committee Member) Member of curriculum committee (University) Fall 2009 - Fall 2010

(Faculty Advisor) Graduate faculty of the MBS PhD program (University) Fall 2009 - Fall 2010

(Committee Member) committee for Master comprehensive exam (University) Fall 2009 - Fall 2010

(Faculty Advisor) Graduate Faculty of Computer Science Department (University) Fall 2009 - Fall 2010

(Committee Member) Member of accreditation committee (University) Fall 2009 - Fall 2010

(Committee Member) committee for Master comprehensive exam (University) Fall 2008 - Fall 2009

(Faculty Advisor) Graduate Faculty of Computer Science Department (University) Fall 2008 - Fall 2009

(Committee Member) Member of accreditation committee (University) Fall 2008 - Fall 2009

(Faculty Advisor) Graduate faculty of the MBS PhD program (University) Fall 2008 - Fall 2009

(Faculty Advisor) Graduate Faculty of the ASU Molecular Bioscience PhD Program (University) Fall 2008 - Fall 2009

(Faculty Advisor) Graduate Faculty of the UALR/UAMS Joint Graduate Program in Bioinformatics (University) Fall 2008 - Fall 2009

Professional Service

Member, ACM Special Interest Group on Algorithms and Computation Theory (ACM SIGACT) Summer 2012

Member, Association for Computing Machinery (ACM) Summer 2012

Member, International Society for Computational Biology Summer 2012

Member, Society for Industrial and Applied Mathematics (SIAM) Summer 2012

Member, Society of Woman Engineers (SWE) Summer 2012

, Adjunct Faculty, Information Science Department, University of Arkansas at Little Rock (UALR) Fall 2009 - Fall 2010

, graduate faculty of Joint Graduate Program in Bioinformatics of UALR/UAMS Fall 2009 - Fall 2010

, Adjunct Faculty, Information Science Department, University of Arkansas at Little Rock (UALR) Fall 2008 - Fall 2009

, graduate faculty of Joint Graduate Program in Bioinformatics of UALR/UAMS Fall 2008 - Fall 2009

Teaching

Fall 2006 Courses:

CS 4703 1 - ANALYSIS OF ALGORITHMS

CS 6853 1 - SPECIAL TOPICS

Spring 2007 Courses:

CS 3543 1 - PROGRAMMING LANGUAGES

CS 6703 1 - ADV ANALYSIS OF ALGORITHMS

CS 689V 1 - THESIS PARAMETERIZED COMPUTAT

Fall 2007 Courses:

CS 5483 1 - ARTIFICIAL INTELLIGENCE

CS 6783 1 - COMPUTABILITY THEORY

Spring 2008 Courses:

CS 2181 1 - STRUCTURED PROGRAMMING LAB

CS 2183 1 - STRUCTURED PROGRAMMING

CS 5393 1 - AUTOMATA THEORY

MBS 6251 2 - TECHNIQUES IN MBS

Fall 2008 Courses:

CS 5713 1 - ANALYSIS OF ALGORITHMS
CS 6823 2 - SP TOPICS IN BIOINFORMATICS
MBS 713V 11 - INDST RSRCH BIOINFORMATICS II

Spring 2009 Courses:

CS 6703 1 - ADV ANALYSIS OF ALGORITHMS
CS 6853 1 - SP TOP BIOINFORMATICS APPLICAT
MBS 713V 4 - IND ST RES IN BIOINFORMATICS 3

Summer 2009 Courses:

MBS 713V 8 - IND STY RES IN BIOINFORM PRT 4

Fall 2009 Courses:

CS 2114 001 - Structured Programming
CS 6783 1 - COMPUTABILITY THEORY
MBS 713V 4 - IND STY RES IN BIOINFORM PT 1
MBS 713V 8 - IND STY BIOINFORMTICS PART 5

Spring 2010 Courses:

CS 5123 1 - SOFTWARE ENGINEERING II
CS 5723 1 - AUTOMATA THEORY
MBS 713V 3 - IND STY RES IN BIOINFORMAT PT2
MBS 713V 8 - IND STY RES IN BIOINFORMAT PT6

Summer 2010 Courses:

MBS 713V 2 - IND STUDY BIOINFORMATICS PT 3
MBS 713V 3 - IND STUDY BIOINFORMATICS PT 3
MBS 713V 7 - IND STY RES IN BIOINFORMAT PT7

Fall 2010 Courses:

CS 5113 1 - SOFTWARE ENGINEERING I
CS 5713 1 - ANALYSIS OF ALGORITHMS
CS 689V 1 - THESIS RES IN PARAMET COMPU
MBS 713V 2 - IND STY RES IN BIOINFORMAT PT4

MBS 713V 7 - BIOINFORMATICS, PT8

Spring 2011 Courses:

CS 6823 1 - SPECIAL TOPICS BIOINFORMATICS
MBS 713V 2 - IND ST RES IN BIOINFORMAT PT 5
MBS 713V 7 - INDST BIOINFORMATICS PART 9

Summer 2011 Courses:

CS 689V 1 - THES PARAMETERIZED COMPUTATION
MBS 713V 3 - IND ST BIOINFORMATICS PART 10
MBS 713V 4 - IND ST BIOINFORMATICS PART 11
MBS 713V 5 - IND ST BIOINFORMATICS PART 6
MBS 713V 6 - IND ST BIOINFORMATICS PART 7

Fall 2011 Courses:

CS 5713 1 - ANALYSIS OF ALGORITHMS
MBS 713V 1 - IND ST BIOINFORMATICS PART 8
MBS 889V 4 - DIS RESEARCH IN BIOINFORMATICS

Spring 2012 Courses:

CS 6783 1 - COMPUTABILITY THEORY
MBS 6251 1 - TECHNIQUES IN MBS
MBS 713V 4 - IND ST BIOINFORMATICS
MBS 889V 5 - DIS RESEARCH IN BIOINFORMATICS

Summer 2012 Courses:

MBS 713V 10 - RESEARCH IN BIOINFORMATICS I
MBS 713V 2 - IND ST IN BIOINFORMATICS
MBS 713V 3 - IND ST IN BIOINFORMATICS
MBS 889V 3 - DIS RESEARCH IN BIOINFORMATICS
MBS 889V 4 - DIS RESEARCH IN BIOINFORMATICS

Fall 2012 Courses:

CS 4713 001 - ANALYSIS OF ALGORITHMS
CS 5713 001 - ANALYSIS OF ALGORITHMS
CS 5713 002 - ANALYSIS OF ALGORITHMS
MBS 713V 005 - IND ST BIOINFORMATICS
MBS 713V 014 - IND ST RES IN BIOINFORMATICS