

Curriculum Vitae

1. General Information

Name: Professor Hongji YANG
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EMPLOYMENTS

- 2018 – Professor, Leicester University, UK
- 2014 – 2017: Professor, Bath Spa University, UK
- 2003 -2013: Professor, De Montfort University, UK
- 1993 - 2002: Lecturer, Senior Lecturer, Principal Lecturer and Reader, De Montfort University, UK
- 1989 - 1993: Senior Research Assistant, Durham University, UK.
- 1985 - 1988: Lecturer, Jilin University, China.

SELECETED POSITIONS

- **Deputy Director of Creative Computing, Bath Spa University (2013 – 2017),**
- **Head of Computer Science Department (1st September 2002 – 31st August 2008), De Montfort University, UK and**
- **Deputy Technical Director, Software Technology Research Laboratory, De Montfort University, UK (1995 – 2013).**

QUALIFICATION

- 1994: Ph.D. in Computer Science, Durham University, England
- 1985: M.Phil. in Computer Science, Jilin University, China
- 1982: B.Sc. in Computer Science, Jilin University, China

RESEARCH AREAS

- Creative Computing
- Software Engineering (Maintenance, Evolution, Architecture, Metrics)
- Computer Networking (Distributed Systems, Internet, Cloud Computing)

COURSES TAUGHT

Creativity and Computing, Creative Coding, developmental Computing, Cloud Computing, Semantic Web, Software Engineering, Software Evolution, Software Architecture and Design, System Analysis and Design, Data Communications, Computer Networks, Operating Systems, DistributedSystems, C, Java, Computer Organisation, etc.

2. Postgraduate Supervision and Examination

Supervised 36 PhD students to completion.

Examined more than 100 PhD students.

3 Publications and Projects (Selected)

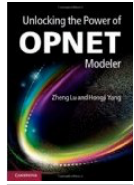
3.1 Books



1. Software Reuse in the Emerging Cloud Computing Era

Hongji Yang and Xiaodong Liu, editor

IGI Global, April 2012



2. Unlocking the Power of OPNET Modeler

Hongji Yang and Dr. Zheng Lu,

Cambridge University Press, February 2012



3. Successful Evolution of Software Systems

H. Yang and M. Ward,

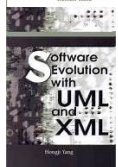
Aartech House, January 2003



4. Advances in UML and XML-based Software Evolution

Hongji Yang, editor

Idea Group, U.S., March 2005



5. Software Evolution with UML and XML

Hongji Yang, editor

Idea Group, U.S., April 2005

3.2 Selected Journal and Conference Papers (from over 450)

- [1] C. Zhao, L. Li, H. Sun, and H. Yang, “Multi-Scenario Evolutionary Game of Rumor-Affected Enterprises under Demand Disruption,” *Sustain.*, vol. 13, no. 1, 2021.
- [2] M. Zhang, H. Yang, *et al.*, “Clonal architecture in mesothelioma is prognostic and shapes the tumour microenvironment,” *Nat. Commun.*, pp. 1–12, 2021.
- [3] C. Zhao, Y. Song, and M. Zuo, “Pricing Decision and Greenness Analysis of Green Food in Dual-Channel Supply Chain with Fairness Concern,” *Int. J. Performability Eng.*, pp. 563–570, 2021.
- [4] T. Wang, X. Hu, and H. Yang, “A Distributed Design of Ripple-Spreading Algorithms for Path Optimization Problems Gong-Peng Zhang,” (*IJCAT*) *IJCAT*, 2021.
- [5] X. Zhao, F. Li, and H. Yang, “Extracting Satisfiability-preserving Modules from the OWL RL Ontology for Efficient Reasoning,” (*IEEE Access*) *IEEE Access*, pp. 1–1, 2021.
- [6] R. Millham, I. E. Agbehadji, and H. Yang, “Parameter Tuning onto Recurrent Neural Network and Long Short-Term Memory (RNN-LSTM) Network for Feature Selection in Classification of High-Dimensional Bioinformatics Datasets,” in (*Book Chapter*) *Bio-inspired Algorithms for Data Streaming and Visualization, Big Data Management, and Fog Computing*, Springer Berlin Heidelberg, 2021, pp. 21–42.
- [7] R. Millham, I. E. Agbehadji, and H. Yang, “Extracting Association Rules: Meta-Heuristic and Closeness Preference Approach,” in (*Book Chapter*) *Bio-inspired Algorithms for Data Streaming and Visualization, Big Data Management, and Fog Computing*, Springer Berlin Heidelberg, 2021, pp. 81–95.

- [8] R. Millham, I. E. Agbehadji, and H. Yang, "Pattern Mining Algorithms," in (*Book Chapter*) *Bio-inspired Algorithms for Data Streaming and Visualization, Big Data Management, and Fog Computing*, Springer Berlin Heidelberg, 2021, pp. 67–80.
- [9] I. E. Agbehadji and H. Yang, "Data Visualization Techniques and Algorithms," in (*Book Chapter*) *Bio-inspired Algorithms for Data Streaming and Visualization, Big Data Management, and Fog Computing*, Springer Berlin Heidelberg, 2021, pp. 195–205.
- [10] R. Millham, I. E. Agbehadji, and H. Yang, "The Big Data Approach Using Bio-Inspired Algorithms: Data Imputation," in (*Book Chapter*) *Bio-inspired Algorithms for Data Streaming and Visualization, Big Data Management, and Fog Computing*, Springer Berlin Heidelberg, 2021, pp. 1–19.
- [11] L. Zou, H. Yang, and M. Al-Akaidi, "A Creative Computing Approach to Dimensionalising the Data-Information- Knowledge-Wisdom Model," *American University in Emirates Conference*, 2020.
- [12] F. Dai and H. Yang, "Refactoring business process models with process fragments substitution," *Wirel. Networks*, vol. 3, 2020.
- [13] W. Hou, Y. Xie, Z. Li, H. Yang, and Z. Hu, "Preliminary study on the multispectral measurement simulations of polarized scanning atmospheric corrector image," in (*SPIE Proc. SPIE 11566, AOPC 2020: Optical Spectroscopy and Imaging; and Biomedical Optics*), 2020.
- [14] T. C. Hsu, H. Yang, Y. C. Chung, and C. H. Hsu, "A Creative IoT agriculture platform for cloud fog computing," *Sustain. Comput. Informatics Syst.*, 2020.
- [15] Q. Liu, M. Al-Akaidi, and H. Yang, "A Machine Learning based Associating Degree Predicting Algorithms Applying in Tourism Areas," in (*MESM*) *MESM20*, 2020.
- [16] Y. Wu, H. Yang, Z. Lu, Y. Liu, and C. Zeng, "Measuring Significance of Factors Influencing Effectiveness of Visual Elements in Advertisement and An Approach Proposal," in (*MESM*) *MESM20*, 2020, pp. 1–13.
- [17] C. Li and H. Yang, "Bot-X: An AI-based Virtual Assistant for Intelligent Manufacturing," *Multiagent Grid Syst.*, 2020.
- [18] J. Gai, S. Zheng, H. Yu, and H. Yang, "Software defect prediction based on weighted extreme learning machine," *Multiagent Grid Syst.*, vol. 16, no. 3, pp. 67–82, 2020.
- [19] H. Guan, C. Jia, and H. Yang, "Intelligent recognition of semantic relationships based on antonymy," *Multiagent Grid Syst.*, vol. 16, no. 3, pp. 263–290, 2020.
- [20] A. Balderas, J. Doder, and H. Yang, "End-User development challenges for creative computing," *Interact. Des. Archit. J.*, pp. 177–179, 2020.
- [21] D. Jing, Y. Tian, C. Zhang, C. Yang, and H. Yang, "Knowledge-based semantic reasoning for creativity," *Int. J. Performability Eng.*, vol. 16, no. 5, pp. 800–810, 2020.
- [22] X. Bai, H. Zhou, and H. Yang, "An HVSM-based GRU Approach to Predict Cross-Version Software Defects," *Int. J. Performability Eng.*, vol. 16, no. 6, pp. 979–990, 2020.
- [23] Y. Tian, D. Jing, C. Yang, Y. Chen, and H. Yang, "An Ontological Approach for Architecture Design of a Smart Tourism System-of-Systems," *Int. J. Performability Eng.*, vol. 16, no. 4, pp. 587–598, 2020.

- [24] X. Bai, H. Zhou, H. Yang, and D. Wang, "Connecting historical changes for cross-version software defect prediction," *Int. J. Comput. Appl. Technol.*, vol. 63, no. 4, p. 371, 2020.
- [25] H. L. H. Liu and H. Y. E. Yu, "A Creative Computing Approach to Film-story Creation : A Proposed Theoretical Framework," *Int. J. Autom. Comput.*, 2020.
- [26] F. Dai, Q. Mo, Z. Qiang, B. Huang, W. Kou, and H. Yang, "A Choreography Analysis Approach for Microservice Composition in Cyber-Physical-Social Systems," (*IEEE Access*) *IEEE Access*, vol. 8, pp. 53215–53222, 2020.
- [27] T. Ma, H. Liu, and H. Yang, "Interactive Narrative Generation of Aesthetics of Violence in Films," in (*ICCLC*) *2020 IEEE 20th International Conference on Software Quality, Reliability and Security Companion (QRS-C)*, 2020, pp. 656–661.
- [28] T. Liu, H. Yang, and F. Wang, "A Creative Approach to Humour Degree Calculation for Utterances," in (*ICCLC*) *2020 IEEE 20th International Conference on Software Quality, Reliability and Security Companion (QRS-C)*, 2020, pp. 649–655.
- [29] N. Du, Z. Liang, Y. Huang, Z. Guo, H. Yang, and S. Wang, "Performance Optimisation Method of PBFT Consensus for Supply Chain Integration SVM," in (*DSA*) *IEEE Dependable Systems and Their Applications*, 2020.
- [30] H. Xue, H. Zhou, B. Huang, H. Yang, U. Kingdom, and M. Qin, "Edge Computing for Internet of Things : A Survey," in (*CPSCom*) *CPSCom*, 2020, no. 1.
- [31] H. Bi, H. Zhou, J. Yang, H. Yang, U. Kingdom, and Z. Liang, "A Survey on Blockchain : Architecture , Applications , Challenges , and Future Trends," in (*CPSCom*) *CPSCom*, 2020.
- [32] F. Ma and H. Yang, "An Intelligent Health Analysis Approach to Detecting Potential Threats with Health Data Reuse," in (*COMPSAC*) *Computer Software and Applications Conference, 2000. COMPSAC 2000, the 24th Annual International, 25-27 Oct. 2000 Pages: 223 - 227*, 2020, pp. 1546–1551.
- [33] R. Wu, Q. Duan, F. Dai, H. Yang, Y. Zhang, and B. Xie, "Research on the realizability of microservice interaction contract based on CSP#," *Proc. - Int. Comput. Softw. Appl. Conf.*, vol. 2, pp. 622–627, 2019.
- [34] D.-M. Chang, T.-C. Hsu, H. Yang, and Y.-H. Tsai, "An M2M computing model for improving the performance among devices," *Microsyst. Technol.*, vol. 7, 2019.
- [35] I. E. Agbehadji, R. C. Millham, S. J. Fong, and H. Yang, "Integration of Kestrel-based search algorithm with artificial neural network for feature subset selection," *Int. J. Bio-Inspired Comput.*, vol. 13, no. 4, pp. 222–233, 2019.
- [36] X. W. Wu, C. Li, X. Wang, and H. J. Yang, "A creative approach to reducing ambiguity in scenario-based software architecture analysis," *Int. J. Autom. Comput.*, vol. 16, no. April, pp. 1–13, 2019.
- [37] M. A. Shah, S.-J. Zhang, and H.-J. Yang, "A reliability aware protocol for cooperative communication in cognitive radio networks," *Int. J. Autom. Comput.*, 2019.
- [38] C. Li, J. Ge, Z. Li, L. Huang, H. Yang, and B. Luo, "Monitoring Interactions across Multi Business Processes with Token Carried Data," *IEEE Trans. Serv. Comput.*, vol. 12, no. 6, pp. 941–954, 2019.

- [39] H. Zhao, Junfeng, Zhang, Minjia, Yang, "Code Refactoring from OpenMP to MapReduce Model for Big Data Processing," in *IEEE Smart World*, 2019.
- [40] S. Miao, H. Zhou, and H. Yang, "Interference location using an improved TDOA algorithm with antenna array and beamforming," *Adv. Intell. Syst. Comput.*, vol. 752, pp. 143–149, 2019.
- [41] J. Zhao, Z. Qin, and H. Yang, "Distributed Parallelizability Analysis and Optimization of Legacy Code in Cloud Migration," in (*ICPDPA*), 2019, pp. 679–684.
- [42] R. Millham and H. Yang, "Visualisation of Frequently Changed Patterns based on the Behaviour of Dung Beetles," in *SCDS*, 2018.
- [43] I. E. Azbehadji, R. Millham, S. J. Fong, and H. Yang, "Kestrel-Based Search Algorithm (KSA) for parameter tuning unto Long Short Term Memory (LSTM) Network for feature selection in classification of high-dimensional bioinformatics datasets," *Proc. 2018 Fed. Conf. Comput. Sci. Inf. Syst. FedCSIS 2018*, vol. 15, pp. 15–20, 2018.
- [44] S. Ma, H. Yang, and M. Shi, "Utilising Abstraction Techniques and Gaming Theory for Developing Intangible Cultural Heritage," *Proc. - Int. Comput. Softw. Appl. Conf.*, vol. 2, pp. 750–755, 2018.
- [45] Q. Liu, L. Zou, H. Zhou, and H. Yang, "An Approach to Proposing New Business Models Basing on Association Rule Learning, BP Neural Network and Creative Computing," *Proc. - Int. Comput. Softw. Appl. Conf.*, vol. 2, pp. 122–125, 2018.
- [46] X. Liu and H. Yang, "Message from the QUORS 2018 Workshop Organizers," *Proc. - Int. Comput. Softw. Appl. Conf.*, vol. 2, p. 737, 2018.
- [47] L. Zhang, H. Yang, C. Zhang, and N. Li, "A New Way of Being Smart? Creative Computing and Its Applications in Tourism," *Proc. - Int. Comput. Softw. Appl. Conf.*, vol. 2, pp. 45–50, 2018.
- [48] Q. Liu, Q. Duan, H. Yang, and W. C. C. Chu, "A Hybrid Business Outlier Detection Algorithm Basing on Creative Computing Methods," *Proc. - 20th Int. Conf. High Perform. Comput. Commun. 16th Int. Conf. Smart City 4th Int. Conf. Data Sci. Syst. HPCC/SmartCity/DSS 2018*, pp. 836–841, 2018.
- [49] J. Zhao, W. Wang, and H. Yang, "Code refactoring based on mapreduce in cloud migration," *Proc. - 16th IEEE Int. Symp. Parallel Distrib. Process. with Appl. 17th IEEE Int. Conf. Ubiquitous Comput. Commun. 8th IEEE Int. Conf. Big Data Cloud Comput. 11t*, no. 61462066, pp. 1042–1043, 2018.
- [50] J. Zhao, Z. Zhao, and H. Yang, "Distributed parallelizability analysis of legacy code," *Proc. - 16th IEEE Int. Symp. Parallel Distrib. Process. with Appl. 17th IEEE Int. Conf. Ubiquitous Comput. Commun. 8th IEEE Int. Conf. Big Data Cloud Comput. 11t*, pp. 103–110, 2018.
- [51] H. Guan, H. Yang, Z. Wen, and Y. Li, "A dynamic model slicing approach for system comprehension during software evolution," *Multiagent Grid Syst.*, vol. 14, no. 1, pp. 1–29, 2018.
- [52] I. Agbehadji, R. Millham, S. Fong, and H. Yang, "Bioinspired Computational Approach to Missing Value Estimation," *Math. Probl. Eng. Hindawi Publ.*, 2018.
- [53] X. Wu, C. Li, X. Wang, and H. Yang, "A Creative Approach to Reducing Ambiguity in Scenario-based Software Architecture Analysis," *Internnational J. Autom. Comput.*, 2018.
- [54] Q. Liu and H. Yang, "Solution Generation through Hybrid Intelligence and Creativity based on Investment Portfolio," *Int. J. Performability Eng.*, vol. 14, no. 7, pp. 1641–1650, 2018.

- [55] J. Zhao, J. Zhou, and H. Yang, "A matching approach to business services and software services," *Int. J. Comput. Sci. Eng.*, vol. 16, no. 2, pp. 123–131, 2018.
- [56] Y. Jin, H. Zhou, H. Yang, S. Zhang, and J. Ge, "An approach to locating delayed activities in software processes," *Int. J. Autom. Comput.*, vol. 15, no. February, pp. 1–10, 2018.
- [57] S. Zheng and H. Yang, "A deep Learning Approach to Software Evolution," *IJCAT*, vol. 58, no. 3, 2018.
- [58] Y. Liu, L. Liu, H. Liu, and H. Yang, "Verification of Program by Inspecting Internal Relations Relying on User Requirements," *IEEE Access*, 2018.
- [59] L. Zou and Q. Liu, "Creative Computing: A Computational Framework to Support Users Working in Knowledge Environments Based on A 4D-Knowledge Coordinate System," in *ICAC*, 2018.
- [60] X. Zhang, "Scale Detection Based on Maximum Entropy Principle," in *ICAC*, 2018.
- [61] H. Yang, L. Zou, Q. Liu, and S. Ma, "A Wisdom Search Engine," *2018 IEEE 42nd Annu. Comput. Softw. Appl. Conf.*, pp. 51–56, 2018.
- [62] Y. Fan, X. Cao, J. Xu, S. Xu, and H. Yang, "High-Frequency Keywords to Predict Defects for Android Applications," *2018 IEEE 42nd Annu. Comput. Softw. Appl. Conf.*, pp. 442–447, 2018.
- [63] T. C. Hsu, H. Yang, Y. C. Chung, and C. H. Hsu, "A Creative IoT agriculture platform for cloud fog computing," *Sustain. Comput. Informatics Syst.*, vol. 28, p. 100285, 2018.

3.3 Selected Projects

- **Museum and Library Improvement with Creative Computing**
- **Brain Wave Data Processing for Creativity**

4. Conference Organisation (selected)

1. Program Chair for IEEE Computer Software and Application Conference 2002 (COMPSAC2002).
2. Program Co-Chair for IEEE Workshop of Future Trends in Distributed Computing Systems 2001 (FTDCS2001).
3. Program Co-Chair, Organisation Chair and Conference Treasurer for IEEE International Conference on Software Maintenance (IEEE ICSM'99).
4. Proceedings Chair, IEEE Conference on Software Maintenance and Reengineering (CSMR2005).
5. Programme Co-Chair, AOSDM, Co-Located with SEKE 2006.
6. IEEE COMPSAC Steering Committee member, 2009.

5. Journal Editorships

1. Editor in Chief, International Journal of Creative Computing, Inderscience, (2013-2020).
2. Editorial Board member, Multiagent and Grid Systems, IOS Press (2006).
3. Member of Editorial Board and Associate Editor of International Journal of Automation and Computing IJAC (2004 --), ISSS 1476-8186).
4. Member of Editorial Board for International Journal of Advanced Computing Engineering.
5. Associate Editor, International Journal of Computer Applications in Technology (IJCAT), InderScience, 2009-.
6. Editorial board member, International Journal of E-Business Research (IJEBR), 2006 -.