韓永祥 (Yunghsiang S. Han)

通訊工程研究所
國立台北大學
台北縣三峽鎮大學路 151 號
yshan@mail.ntpu.edu.tw

學歷

雪城大學(Syracuse University) — Syracuse, NY

- 計算機科學博士 (8月 1993)
  - 論文題目: *Efficient Soft-Decision Decoding Algorithms for Linear Block Codes Using Algorithm A**
  - **1994**雪城大學博士論文獎

國立清華大學 — 新竹, 台灣

- 電機工程碩士 (6月 1986)
- 電機工程學士 (6月 1984)

經歷

國立台北大學通訊工程研究所 — 台灣
8月 2004 – 迄今
教授兼所長

國立暨南國際大學資訊工程學系 — 台灣
8月 1998 – 7月 2004
教授

The New York State Center for Advanced Technology in Computer Applications and Software Engineering (CASE)
The Center for Systems Assurance (CSA)
Department of Electrical Engineering and Computer Science
Syracuse University — Syracuse NY, USA
9月 2002 – 7月 2003
SUPRIA (Syracuse University Prototypical Research in Information Assurance)
訪問研究學者

Department of Electrical Engineering
University of Hawaii at Manoa — Honolulu, HI, USA
6月 2001 – 10月 2001
訪問學者

國立暨南國際大學資訊工程學系 — 台灣
8月 1998 – 7月 2001
計算機與網路中心主任

國立暨南國際大學資訊工程學系 — 台灣
8月 1997 – 7月 1998
副教授

華梵人文科技學院電子工程學系 — 台灣
9月 1994 – 7月 1996

計算機中心主任

華梵人文科技學院電子工程學系 台灣
8月 1993 – 7月 1997
副教授

雪城大學資訊科學系 Syracuse, NY
8月 1992 – 8月 1993
Graduate Research Associate

雪城大學資訊科學系 Syracuse, NY
8月 1989 – 7月 1992
Graduate Teaching Assistant

學術服務

REVIEWER: *IEEE Trans. on Information Theory* AND *IEEE Trans. on Communications*

獎勵及榮譽

- 2002-2004, SUPRIA 訪問研究獎勵
- 2000, 八十九年度國科會甲種獎勵
- 2000, 國立暨南國際大學學術績優獎
- 1999, 八十八年度國科會甲種獎勵
- 1998, 八十七年度國科會甲種獎勵
- 1997, 八十六年度國科會甲種獎勵
- **1997**, 一篇論文是 1993 IEEE International Symposium on Information Theory 所選出的 long presentation[1]
- **1994**, 1994雪城大學博士論文獎
- 1994, 八十三年度國科會甲種獎助
- 1993, 八十二年度國科會新進人員獎助
- **1993**, 一篇論文是 1993 IEEE International Symposium on Information Theory 所選出的 long presentation

學術會員

- Member of IEEE – Information Theory and Communication Societies
- Member of SIAM

研究主題

- 無線網路– 特別在感測器網路(sensor network) 及 ad hoc 網路的保密、資料融合 (data fusion) 及能量控制應用
- 資訊安全– 特別在感測器網路及隱私保存相關的問題
- 編碼理論– 特別在解碼理論的發展及有效率的解碼程式之設計
- 無線通訊– 特別在錯誤更正碼的應用
- 互聯網路– 特別在互聯網路距離相關的問題
- 演算法– 特別在應用消息理論於演算法

著作

- 專書論文

[1]被 IEEE International Symposium on Information Theory 選爲 long presentation 的論文皆是 Information Theory 和 Coding Theory 領域的國際著名學者們認爲將對此領域造成重大影響的文章. 每年被此會議接受的論文約 586 篇, 其中僅約有 17 篇爲 long presentation.

1. Y. S. Han and P.-N. Chen, "Sequential Decoding of Convolutional Codes," *Encyclopedia of Telecommunications* (Editor: John Proakis), New York, Wiley, 2002.

- 期刊論文

1. J. Deng, Y. S. Han, W. B. Heinzelman, and P. K. Varshney, "Balanced-energy Sleep Scheduling Scheme for High Density Cluster-based Sensor Networks," *Computer Communications : special issue on ASWN04*, to appear. **(full paper)**
2. T.-Y. Wang, Y. S. Han, P. K. Varshney, and P.-N. Chen, "Distributed Fault-Tolerant Classification in Wireless Sensor Networks," *IEEE Journal on Selected Areas in Communications (JSAC): special issue on Self-Organizing Distributed Collaborative Sensor Networks*, to appear (April 2005). **(full paper)**
3. W. Du, J. Deng, Y. S. Han, P. K. Varshney, J. Katz, and A. Khalili, "A Pairwise Key Pre-distribution Scheme for Wireless Sensor Networks," *ACM Trans. on Information and System Security (TISSEC)*, to appear. **(full paper)**
4. C.-C. Lee, P.-C. Chung, D.-R. Duh, Y. S. Han, and C.-W. Lin, "A Practice of a Collaborative Multipoint Medical Teleconsultation System on Broadband Network," *Journal of High Speed Networks*, accepted. **(full paper)**
5. J. Deng, Y. S. Han, W. B. Heinzelman, and P. K. Varshney, "Scheduling Sleeping Nodes in High Density Cluster-based Sensor Networks," *the ACM/Kluwer MONET Special Issue on "Energy Constraints and Lifetime Performance in Wireless Sensor Networks,"* to appear (April 2005). **(full paper)**
6. Y. S. Han, P.-N. Chen and H.-B. Wu, "A Maximum-Likelihood Soft-Decision Sequential Decoding Algorithm for Binary Convolutional Codes," *IEEE Trans. on Communications*, pp. 173-178, February, 2002.
7. P.-N. Chen and Y. S. Han, "Asymptotic Minimum Covering Radius of Block Codes," *SIAM Journal on Discrete Mathematics*, pp. 549-564, November, 2001. **(full paper)**
8. P.-N. Chen, T.-Y. Lee, and Y. S. Han, "Distance-Spectrum Formulas on the Largest Minimum Distance of Block Codes, " *IEEE Trans. on Information Theory*, pp. 869-885, May, 2000. **(full paper)**
9. Y. S. Han, "A New Decoding Algorithm for Complete Decoding of Linear Block Codes," *SIAM Journal on Discrete Mathematics*, pp. 664-671, November, 1998. **(full paper)**
10. Y. S. Han, "A New Treatment of Priority-First Search Maximum-Likelihood Soft-Decision Decoding of Linear Block Codes," *IEEE Trans. on Information Theory*, pp. 3091-3096, November, 1998.
11. Y. S. Han, C. R. P. Hartmann, and K. G. Mehrotra, "Decoding Linear Block Codes Using a Priority-First Search: Performance Analysis and Suboptimal Version," *IEEE Trans. on Information Theory*, pp. 1233-1246, May, 1998.
12. Y. S. Han, and C. R. P. Hartmann, "The Zero-Guards Algorithm for General Minimum Distance Decoding Problem," *IEEE Trans. on Information Theory*, pp. 1655-1658, September, 1997.
13. D. L. Tao, C. R. P. Hartmann , and Y. S. Han, "New Encoding/Decoding Methods for Designing Fault-Tolerant Matrix Operations, " *IEEE Trans. on Parallel and Distributed Systems*, pp. 931-938, September, 1996. **(full paper)**
14. Y. S. Han, C. R. P. Hartmann, and C-C. Chen, "Efficient Priority-First Search Maximum-Likelihood Soft-Decision Decoding of Linear Block Codes," *IEEE Trans. on Information Theory*, pp. 1514-1523, September, 1993. **(full paper)**

- 審核會議論文

1. 1. P.-N. Chen, T.-Y. Wang, Y. S. Han, P. K. Varshney and C. Yao, "Asymptotic Performance Analysis for minimum-Hamming-distance fusion", *the IEEE International Conference on Acoustics, Speech, and Signal Processing 2005 (ICASSP'05)*, Philadelphia, USA.

2. S.-L. Shieh, P.-N. Chen, and Y. S. Han,"A Novel Modification of Cyclic Redundancy Check for Message Length Detection," *the 2004 IEEE International Symposium on Information Theory and its Applications (ISITA2004)*, Parma, Italy, October, 2004.
3. C.-W. Chang, P.-N. Chen, and Y. S. Han, "Realization of a Systematic Bit-wise Decomposition Metric," *the 2004 IEEE Asia-Pacific Conference on Circuits and Systems (APCCAS'04)*, Tainan, Taiwan, December, 2004.
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5. Y.-J. Chen, D.-R. Duh, and Y. S. Han, "A New Modulo (2^n+1) Multiplier for IDEA," *the 2004 International Conference on Security and Management (SAM'04)*, Las Vegas, Nevada, June, 2004, pp. 318-324.
6. T.-Y. Wang, Y. S. Han, and P. K. Varshney, "A Combined Decision Fusion and Channel Coding Scheme for Fault-Tolerant Classification in Wireless Sensor Networks," *the 2004 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2004)*, Montreal, Quebec, Canada, May, 2004, pp. 1073-1076.
7. J. Deng, Y. S. Han, P.-N. Chen, and P. K. Varshney, "Optimum Transmission Range for Wireless Ad Hoc Networks," *the IEEE Wireless Communications and Networking Conference 2004 (WCNC04)*, Atlanta, GA, March, 2004, pp. 1024-1029.
8. W. Du, Y. S. Han, and S. Chen "Privacy-Preserving Multivariate Statistical Analysis: Linear Regression and Classification," *the 2004 SIAM International Conference on Data Mining (SDM04)*, Lake Buena Vista, FL, April, 2004. (Regular paper)
9. T.-Y. Wang, Y. S. Han, and P. K. Varshney, "Further Results on Fault-Tolerant Distributed Classification Using Error Correcting Codes," *the SPIE's Aerosense conference on Multisensor, Multisource Information Fusion: Architectures, Algorithms, and Applications*, Orlando, FL, April, 2004.
10. W. Du, J. Deng, Y. S. Han, S. Chen and P. K. Varshney "A Key Management Scheme for Wireless Sensor Networks Using Deployment Knowledge," the *IEEE INFOCOM 2004*, Hong Kong, March 2004, pp.586-597.
11. W. Du, J. Deng, Y. S. Han, and P. K. Varshney, "A Pairwise Key Pre-distribution Scheme for Wireless Sensor Networks," *Proceedings of 10th ACM Conference on Computer and Communications Security (CCS2003)*, Washington DC, October, 2003, pp. 42-51.
12. J. Deng, Y. S. Han, and Z. J. Haas, "Analyzing Split Channel Medium Access Control Schemes with ALOHA Reservation," in *Ad-Hoc, Mobile, and Wireless Networks – ADHOC-NOW '03*, S. Pierre, M. Barbeau, and E. Kranakis, Eds. 2003, vol. 2865 of Lecture Notes in Computer Science (LNCS), pp. 128-139, Springer-Verlag.
13. W. Du, J. Deng, Y. S. Han, and P. K. Varshney, "A Witness-Based Approach for Data Fusion Assurance in Wireless Sensor Networks," *Proceedings of IEEE 2003 Global Communications Conference (Globecom'2003)*, San Francisco, CA, December, 2003, pp.1435-1439.
14. T.-Y. Wang, Y. S. Han, and P. K. Varshney, "Fault-Tolerant Classification in Multisensor Networks Using Coding Theory," *Proceedings of the 6th International Conference on Information Fusion (Fusion'2003)*, Cairns, Australia, July, 2003, pp. 772-779. **(invited paper)**
15. T.-Y. Wang, P. K. Varshney, and Y. S. Han, "Distribution Classification Fusion Using Error Correcting Codes," *Proceedings of the SPIE's Aerosense conference on Multisensor, Multisource Information Fusion: Architectures, Algorithms, and Applications*, Orlando, FL, April, 2003, pp. 47-57.

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19. Y. S. Han and P.-N. Chen, "Asymptotic Covering Radius of Block Codes ," *Proceedings of the International Symposium on Information theory and Its Applications*, Honolulu, Hawaii, November, 2000, pp. 521-524.
20. T.-Y. Lee, P.-N. Chen and Y. S. Han, "Determination of the Asymptotic Largest Minimum Distance of Block Codes," *Proceedings of the IEEE International Symposium on Information Theory*, Sorrento, Italy, June, 2000, p. 227.
21. H.-B. Wu, P.-N. Chen, and Y. S. Han,"Investigation of the Maximum-Likelihood Soft-Decision Sequential Decoding algorithms for convolutional Codes," *Proceedings of the International Symposium on Communications*, Kaohsiung, Taiwan, November, 1999, pp. 82-86.
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23. Y. S. Han, "An Optimal Gradient Decoding Algorithm for Hard-Decision Decoding of Linear Block Codes," *Proceedings of the International Conference on Combinatorics, Information Theory and Statistics*, Portland, Maine, July, 1997, p. 36. **(invited speaker)**
24. Y. S. Han, "A New Treatment of Priority-First Search Maximum-Likelihood Soft-Decision Decoding for Linear Block Codes," *Proceedings of the IEEE International Symposium on Information Theory*, Ulm, Germany, June, 1997, p. 394. **(honored as long presentation)**
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26. Y. S. Han, "The Effect of Heuristic Information on the Soft-Decision Decoding for Linear Block Codes,"*Proceedings of the Seventh IEEE International Symposium on Personal, Indoor and Mobile Radio Communications*, Taipei, Taiwan, October, 1996. pp. 309-311.
27. Y. S. Han, C. R. P. Hartmann, C.-T. Chin, and C. K. Mohan, "Efficient Suboptimal Decoding of Linear Block Codes ," *Proceedings of the 32nd Allerton Conference on Communication, Control, and Computing*, University of Illinois, Urbana-Champaign, September, 1994, pp. 93-102. **(invited paper)**
28. Y. S. Han, C. R. P. Hartmann, and K. G. Mehrotra, "Further Results on Decoding Linear Block Codes Using a Generalized Dijkstra's Algorithm," *Proceedings of the 1994 IEEE International Symposium on Information Theory*, Trondheim, Norway, June, 1994, p. 342.
29. Y. S. Han, C. R. P. Hartmann, and C-C. Chen, "Efficient Maximum-Likelihood Soft-Decision Decoding of Linear Block Codes Using Algorithm A*, " *Proceedings of the 1993 IEEE International Symposium on Information Theory*, San Antonio, Texas, January 1993, p. 27. **(honored as long presentation)**
30. D. L. Tao, Y. S. Han, and C. R. P. Hartmann, "New Encoding/Decoding Methods for Designing Fault-Tolerant Matrix Operations," *Proceedings of SPIE, Vol. 1770,*

Advanced Signal Processing, Algorithms, Architectures, and Implementations III, pp. 72-83, July 1992.

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1. Y. S. Han, and C. R. P. Hartmann, "Designing Efficient Maximum-Likelihood Soft-Decision Decoding of Linear Block Codes Using Algorithm A*," Technical Report SU-CIS-92-10, School of Computer and Information Science, Syracuse University, Syracuse, NY, June 1992.
2. Y. S. Han, C. R. P. Hartmann, and C-C Chen, "Efficient Maximum-Likelihood Soft-Decision Decoding of Linear Block Codes Using Algorithm A*," Technical Report SU-CIS-91-42, School of Computer and Information Science, Syracuse University, Syracuse, NY, December 1991.