Dr. Prof. Curriculum Vitae

● **Name:** Dong Hwa Kim

⚑ Current situation

- Hanbat National Univ. S. Korea (Emeritus Prof.)
- Daeduck Science and Technology Social Cooperatives, Executive
  * Home page: www.worldhumancare.wixsite.com/kimsite
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  * Research citations: https://www.researchgate.net/profile/Dong_Kim53
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● Education

- Daeion technical college (Electrical engineering): 1968-1972 (5-years, High school 3+College 2 system)

- Myong Jin University (Electrical engineering): 1977-1978 (2-years)

- Ph. D-1: Dept. of Electronics Eng., Ajou University, Korea (Robust state feedback controller design of multivariable turbo generator system), 1985-1993.

- Ph. D-2: Dept. of Computational Intelligence and Systems Science, Interdisciplinary Graduate School of Science and Engineering (Genetic Algorithm Combined with Particle Swarm Optimization/Bacterial Foraging and Its Application to PID Controller Tuning), TIT (Tokyo Institute of Technology), Tokyo, Japan, 1997-2006.

- Ph. D-3 course, A study of foreign affairs, Graduate school of Korea University, 2008-2012.

- Advanced Program for International Cooperation, Hallym Institute of Advanced International Studies, 2006-2018.

● Work Experience

- Kathmandu University, Nepal, Master course AI lecture, 21-2025.

- Wha-AI Venture company, 2024

- Seoul National University of S&T, Researcher, 2021-2022

- Full professor, Adama Science and Technology University, Ethiopia, April 19, 2019-Feb. 28, 2021.

- Full professor, Director, Korean Experts Center of TDT University, Vietnam

- Dean, Graduate school of Huree University, Mongolia, 2015.

- Prof., Dept. of Control Eng., Hanbat National University, March 2, 1993-Feb. 2015

- Honorary Prof. Hanbat National University (Feb 28, 2015-)

- Associate fellow researcher, University Malaysia Sabah (Aug. 6, 2014 – Aug. 5, 2016)

- Visiting Professor, Mechanical, Optic, Engineering Informatics, Budapest University of Technology and Economics, March 2012–Feb 2013.

- Header of Admission office, Hanbat National University, Aug.1, 2010-July. 28,2011.

- President, Korea Institute HuCARE (President of Hu-CARE (Human-Centered Advanced Technology Research/Education), Nov. 2009-

- EU-FP7 (EU- Framework Program) NCP (ICT) in Korea, April 29, 2011-2015

- Director, KNRF (Korea National Research Foundation), 2006-2008.

- Visiting Prof., University of Alberta, Canada, March 1, 1999-March 1, 2000.

- Inviting researcher, ANL (Argonne National Lab.), USA, Aug. 1988-Dec. 1988.

- Inviting Researcher, AECL (Atomic Energy Canada Lab.), Canada, Nov. 1985-Nov.1986.
- Korea Atomic Energy Research Institute, Nov. 1977-March, 1993.
- Korea-Hungary Joint Work: Aug. 1, 2010-Feb. 28, 2011, 'EU project (Robot motion-related ETOCOM) consultation with research staff members and lectures.
- President, Daedeok Korea-India Forum, March 1, 2010–2015
- Vice President, Daedeok Korea-Japan Forum, March 1, 2010–2015
- Director of Science Culture Research Institute, Korea Science Foundation, Sept. 8, 2006 - Jan. 31, 2008.
- Vice-president of the recognition board of the world congress of arts, sciences and communications, IBC, Sept. 1, 2007-2010, UK.

- **Strategy Research Paper**

  - S&T HRD and S&T activity, J of Strategy of S&T, Oct/Sept 2007, pp. 71-84.

  - S&T Education for the Knowledge Society, J of Strategy of S&T, Oct/Sept 2007, pp. 47-60.

- **Research Paper**

  1. Dong Hwa Kim, "Tuning of 2-DOF PID controller using fuzzy neural network," 1996, Journal of Daejeon National University of Technology.
  2. Dong Hwa Kim, "Tuning of 2-DOF PID controller for the multivariable system," 1997, Journal of Daejeon National University of Technology.
  3. Dong Hwa Kim, "A study on characteristics of intelligent control for level control of steam generator for nuclear power plant," 1997, Journal of Daejeon National Institute of Technology.
  4. Dong Hwa Kim, "Flow control using neural network," 1997, Journal of Daejeon National Institute of Technology.
  5. Dong Hwa Kim, "Comparison of the output of 2-DOF PID controller for the Gas turbine," 1998, Journal of Hanbat National Institute.
  6. Dong Hwa Kim, "Comparison of 2-DOF PID controllers for a multivariable flow control system with delay time," ICASE, Vol. 4, No. 5, pp. 13-19, Aug. 1998.
  7. Dong Hwa Kim, "Level control of nuclear power plant steam generator using neural network-based PI controller tuning," Proceeding of KIIEIE, Vol. 12, No. 4, pp. 6-13, Nov. 1998.
  8. Dong Hwa Kim, "Level control of nuclear power plant steam generator using neural network-based 2-DOF PID controller tuning," ICASE, Vol. 4, No. 3, pp. 321-328, June 1998.
  9. Dong Hwa Kim, "Level control of nuclear power plant steam generator using 2-DOF PID controller," Trans. KIEE, Vol. 10, 46D, No.2, pp. 33-39, May 1998.
  10. Dong Hwa Kim, "Design of 2-DOF PID controller for flow power control using neural network-based tuning approach," Proceeding of KIIEIE, Vol. 12, No. 1, pp. 78-84, February 1998.
  11. Dong Hwa Kim, "Optimal control of 2-DOF PID Controller for Gas Turbine by Neural Network and Operating Data," March 1999, Journal of Hanbat National University.
  12. Dong Hwa Kim, "A feasibility study development of process control S/W cost estimation model by fuzzy neural network approach," March 2001, Journal of Hanbat National University.
  13. Dong Hwa Kim, "Tuning comparison of PID controller on the experimental equipment for a complex process control system," March 2001, J. of Hanbat National University.
  14. Dong Hwa Kim, "Tuning of New 2-DOF PID Controller for Gun-san Gas turbine by Adaptive Neural Fuzzy Inference System," JACI, Vol. 5, No. 5, April 2001.
  15. Dong Hwa Kim, "The Comparison of Characteristics of 2-DOF PID Controller for a Gas Turbine Generating Plant," KIEE International Trans. on system and control, Vol. 11-D, No. 3, 2001.

16. Dong Hwa Kim, "Neural Network Tuning of the 2-DOF PID Controller with a Combined 2-DOF Parameter for a Gas Turbine Generating Plant," International Trans. of KFLIS, June 2001.

17. Dong Hwa Kim, "Speed control of 2 inertia systems using optimal pole allocation," Trans. KIEE, Vol. 49D, No.1, Jan. 2001.

18. Dong Hwa Kim, "Design of New 2-DOF PID Controller for Gas Turbine Generation Unit," Trans. KIEE, Vol. 10, No. 1, pp.16-22, Jan. 2001.

19. Dong Hwa Kim, "Modeling and 2-DOF PID control of gas turbine generating system using adaptive fuzzy-neural network," Proceeding of KIIEIE, Vol. 14, No. 1. pp. 30-37, Jan. 2001.

20. Dong Hwa Kim, "Intelligent Tuning of a PID Controller for Nonlinear Plant Using an Artificial Immune Model and Local Fuzzy Set," Jan. 2002, Journal of Hanbat national university.

21. Dong Hwa Kim, "Tuning of a PID Controller for Using Immune Algorithm," Jan. 2002, Journal of Hanbat National Institute.

22. Dong Hwa Kim, "Intelligent tuning of the two degrees-of-freedom Proportional-Integral-Derivative controller on the Distribute control system for steam temperature control of thermal power plant," KIEE International Trans. on system and control, Vol.2D, No.2 pp. 78-91, 2002.

23. Dong Hwa Kim, "Membership function tuning of fuzzy neural networks by immune algorithm," KFLIS, Vol. 12, No. 3, pp.261-268, 2002.

24. Dong Hwa Kim, "Auto-tuning of Reference Model-Based PID controller using Immune Algorithm," KFLIS, Vol. 12, No. 3, pp.246-254, 2002.

25. Dong Hwa Kim, "Intelligent tuning of a PID controller using an immune algorithm," Trans. KIEE, Vol.51, No.1, pp.8-16, 2002.

26. Dong Hwa Kim, "Multiobjective PI controller tuning of a multivariable boiler control system using an immune algorithm," KFIS, Vol. 3, No. 1, pp.78-86, 2003.

27. Dong Hwa Kim, "Intelligent control of nonlinear dynamic systems using immune fuzzy fusion," JACI (Japan), Vol. 7, No.3, December 2003.

28. Dong Hwa Kim, "Intelligent PID control by immune algorithm based fuzzy rule auto-tuning," IFSA Proceeding (SCI), June 29-July 2, 2003.

29. Dong Hwa Kim, etc.(3 Author), "The Genetic design of hybrid fuzzy controllers," Cybernetics and Systems: An International Journal (SCI), Vol. 35, No. 4, pp. 1-29, 2003.

30. Keun-Chang KWAK, Dong-Hwa KIM, "Adaptive Neuro-Fuzzy Networks with the Aid of Fuzzy Granulation," IEICE TRANS. INFORMATION & SYSTEMS (SCI, Japan), VOL. E88-D, pp. 2189-2196, No. 9 September 2005.

31. Dong Hwa Kim, "PID Controller Tuning of a Boiler Control System Using Immune Algorithm Typed Neural Network," Lecture Notes in Computer Science Proceeding of Springer (SCI) June 7-9 2004.

32. Dong Hwa Kim, Jae Hoon Cho, "Disturbance Rejection Control of Thermal Power Plant Using Immune Algorithm," Lecture Notes in Computer Science Proceeding of Springer (SCI) June 7-9 2004.

33. Dong Hwa Kim, "Intelligent Control of inverted pendulum system using immune fuzzy fusion," WSEAS Transactions on Computer, Vol. 3, Issue 3, pp. 552-557, July, 2004.

34. Dong Hwa Kim, "Neural network-tuning of 2-DOF PID Controller with a combined 2-DOF parameter for nuclear steam generator level control," Lecture Notes in Computer Science Proceeding of Springer (SCI) Sept 22-24, 2004.

35. Dong Hwa Kim, Jae Hoon Cho, "Intelligent Tuning of PID Controller With Robust Disturbance Rejection Function Using immune Algorithm," Lecture Notes in Computer Science Proceeding of Springer (SCI) Sept 22-24, 2004.

36. Dong Hwa Kim, Jae Hoon Cho, "Robust PID Controller Tuning Using Multiobjective Optimization Based on Clonal Selection of Immune Algorithm," Lecture Notes in Computer Science Proceeding of Springer (SCI) Sept 22-24, 2004. (Best paper award)

37. Dong Hwa Kim, "The Comparison of Characteristics of 2-DOF PID Controllers and Intelligent Tuning for a Gas Turbine Generating Plant," Lecture Notes in Computer Science Proceeding of Springer (SCI) -LNCS Sept 22-24, 2004.

38. Dong Hwa Kim, etc (1 Author), "Context-based Fuzzy clustering for rule extraction of Takagi-Sugeno fuzzy model," Journal of Knowledge-Based Systems (SCI), April 2004. pp.

39. Jae Hoon Cho, Dong Hwa Kim, Sung Kwon Oh, "Fuzzy Neural Networks by means of advanced clonal selection of immune algorithm and its application to traffic route choice," J. KFLIS. Vol. 14, No. 4, pp. 402-410, 2004.

40. Sung-Kwun Oh, Dae-Keun Lee, Witold Pedrycz, Dong-Hwa Kim, "The genetic design of hybrid fuzzy controllers," Cybernetics and Systems: An International Journal (SCI), Vol. 35, pp. 333-361, 2004.

41. Dong Hwa Kim, "Intelligent control of the nonlinear dynamic system using immune fuzzy fusion," KFLIS, Vol. 4, No. 1, June 2004, pp. 70-78.

42. Dong Hwa Kim, "Robust tuning of PID controllers with disturbance rejection using bacterial foraging based optimization," WSEAS Transaction on systems Vol. 3, No. 9, 2004, pp. 2834-2840.

43. Dong Hwa Kim, Jae Hoon Cho, "Robust PID using Gain/Phase margin and advanced immune algorithm," WSEAS Transaction on systems Vol. 3, No. 9, 2004, pp. 2841-2851.

44. Dong Hwa Kim, "Robust tuning of embedded intelligent PID controller for induction motor using bacterial foraging based optimization (Best paper candidate," Lecture Notes in Computer Science Proceeding of Springer (SCI) –LNCS, ICESS2004, pp. 137-142, Dec. 9-10, 2004, Zhejiang University.

45. Dong Hwa Kim, "Optimal Learning of Fuzzy Neural Network Using Particle Swarm Optimization," Lecture Notes in Computer Science Proceeding of Springer (SCI), May 12-15, 2005, Atlanta.

46. Dong Hwa Kim, Jin Ill Park, "Intelligent Tuning of PID Controller For AVR System Using a Hybrid GA-PSO Approach," Lecture Notes in Computer Science Proceeding of Springer (SCI), May 12-15, 2005, Atlanta.

47. Dong Hwa Kim, Jae Hoon Cho, "Adaptive Tuning of PID Controller For Multivariable System Using Bacterial Foraging Based Optimization," Lecture Notes in Computer Science Proceeding of Springer (SCI), June 12-15, 2005, Poland.

48. Dong Hwa Kim, Jae Hoon Cho, "Intelligent Control of AVR System Using GA-BF," Lecture Notes in Computer Science Proceeding of Springer (SCI), September 12-15, 2005, KES 2005, Melbourne, Australia.

49. Dong Hwa Kim, Jin Ill Park, "Loss Minimization Control of Induction Motor Using GA-PSO," Lecture Notes in Computer Science Proceeding of Springer (SCI), September 12-15, 2005, KES 2005, Melbourne, Australia.

50. Dong Hwa Kim, "Robust Intelligent Tuning of PID Controller for Multivariable System Using Clonal Selection and Fuzzy Logic," Lecture Notes in Computer Science Proceeding of Springer (SCI), September 12-15, 2005, KES 2005, Melbourne, Australia.

51. Dong Hwa Kim, Jin Ill Park, "Improvement of Genetic Algorithm Using PSO and Euclidean Data Distance," IEEE 2005 Intelligent Computing, Lecture Notes in Computer Science Proceeding of Springer (SCI), Aug. 23-26, China, 2005.

52. Dong Hwa Kim, Jin Ill Park, "Intelligent PID Controller Tuning of AVR System Using GA and PSO," IEEE 2005 Intelligent Computing, Lecture Notes in Computer Science Proceeding of Springer (SCI), Aug. 23-26, 2005.

53. Dong Hwa Kim, "Decentralized PID Controller Tuning for Multivariable Process Using Multiobjective Optimization Based on Bacterial Foraging," IEEE 2005 Intelligent Computing, Lecture Notes in Computer Science Proceeding of Springer (SCI), Aug. 23-26, 2005, China.

54. Dong Hwa Kim, Jae Hoon Cho, "Robust Tuning of PID Controller Using Bacterial-Foraging-Based Optimization," JACIII, Vol. No. 6, pp. 2436, Sept. 22, 2005.

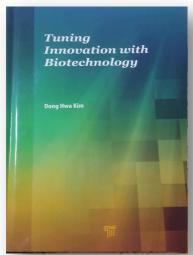55. Dong Hwa Kim, Jae Hoon Cho, "Bacteria Foraging Based Neural Network Fuzzy Learning,"

IICAI2005 (LNCS-SCI), pp. 2030-2036, December 20-22 2005, Pune, India.

56. Dong Hwa Kim, Jin Ill Park, "Enhancement Learning of GA Euclidean Data Distance and PSO," IICAI2005 (LNCS-SCI), pp. 3353-3358, December 20-22, 2005, Pune, India.

57. Dong Hwa Kim, "Intelligent tuning of AVR system using reference model based immune algorithm and PSO," IICAI2005 (LNCS-SCI), pp. 3402-3407, December 20-22, 2005, Pune, India.

58. Keun-Chang Kwak, Dong Hwa KIM, "TSK-based Linguistic Fuzzy Model with Uncertain Model Output," IEICE Trans. Information & Systems (SCI), VOL. E86-D, No. 1 March 20, 2005.

59. Keun-Chang Kwak, Dong-Hwa Kim, "TSK-based Linguistic Fuzzy Model with Uncertain Model Output", IEICE Trans. INF. & SYST., Vol. E89-D, No.12, pp. 2919-2923, 2006.

60. Dong Hwa Kim, Jin Ill Park, "GA-PSO Based Vector Control For Indirect of Three Phase Induction Motor," Applied Soft Computing (SCI), Elsevier, Volume 7, Pages 601-611, Dec., 2007.

61. Dong Hwa Kim, "Decentralised PID Controller Tuning for Multivariable Process Using Multiobjective Optimization Based on Bacterial Foraging," Dynamics of Continuous, Discrete & Impulsive Systems: Series B Applications & Algorithms (SCI), Vol. 14(SI), June, pp. 33-40, 2007.

62. Dong-Hwa Kim, Ajith Abraham, Jae Hoon Cho, "Hybrid Genetic Algorithm and Bacterial Foraging Approach for Global Optimization," Information Sciences, Applied Soft Computing Elsevier Science, 2007.

63. Dong-Hwa Kim and Ajith Abraham, "Optimal Learning of Fuzzy Neural Network Using Artificial Immune Algorithm," Neural network world," Vol. 18, No. 2, pp. 147-170, May, 2008.

64. Dong Hwa Kim, Kaoro Hirota, "Vector Control for Loss Minimization of Induction Motor Using GA-PSO," Applied Soft Computing (SCI), pp. 1692-1702, Elsevier, Aug. 2008.

65. Young Jae Lee, Ajith Abraham, Dong Hwa Kim (Korea, USA), "3D object recognition using octree model and fast search algorithm," Neural network world, Vol. 20, 359-369. March, 2010.

66. Shivashankar B. Nair, D.H. Kim, W.Godfrey, "On Realizing a Multi-Agent Emotion Engine," International Journal of Synthetic Emotions"2(2), 2011, pp.1-7.

67. Lee HC, Lee YJ, Lim JH, Kim DH, IJA, "an efficient algorithm for query processing in sensor networks," Sensors (Basel), 2011, 11(2), 1682-92.

68. Jae Hoon Cho, Dong Hwa Kim, Mária VIRČÍKOVÁ, Peter SINČÁK, "Design of LCL filter using Hybrid Intelligent Optimization for Photovoltaic System," Information Vol.15, No.3. 2012

69. Dong Hwa Kim, "Experimental Research of Intelligent Multivariable 2-DOF PID Control System for DCS," International Journal of Systems Applications, Engineering & Development, July, 2013, pp. 148-157.

70. Dong Hwa Kim, "Advanced Optimization by PMSM of PSO and Neural Network," WSEAS (July, 2013)

71. Dong Hwa Kim, "Optimal Control of Nonlinear System by Fuzzy and Immune Network," SEMCCO, 2013.

72. Dong Hwa, Jae Hoon Cho, "Advanced Intelligence Tuning Using Hybrid of Clonal Selection and Genetic Algorithm, GM and PM", International Journal of Computational Intelligence and Applications, Vol. 14, No. 1, 2015.

73. Dong Hwa Kim, Dae Sung Seo, "A Study on the analysis on Preparation Status of 4th Wave of Vesegard Group, and Cooperation Building and Export Activation", Journal of Distribution and Management Research, Vol.20, No.3, pp. 49~58, 2017.

74. Dong Hwa Kim, et el, "A study on method of market development of other higher tech. products through review on case study of factor that impact buying decision in China and India", J. of distribution and management research, Vo. 20, pp. 49-58, 2017.

75. Dong Hwa Kim, "A Study on Preparation and Strategy Building for 4th Knowledge Wave of African Country (Focusing on AI)", International Journal of Economics and Management ISSN: 2393-9125), Vol. 7, No. 7, pp. 57-79, July 2020.

76. Dong Hwa Kim, "Getachew Teshome**, Dawit Dubela**, Yosef Dentamo**, Hinsermu Alemayehu, "Optimal Conversion of DC-DC Converter Considered Optimal Switching Time and Optimal Switching Mode of PWM by Fuzzy Based PID Tuning', IJITEE (ISSN: 2273-3075), pp. 1-6, March 2020.

77. Dong Hwa Kim, Tefera T. Y., Dae Hee Won, "A Study on Performance Characteristics of Artificial Immune Network System for Practical Application", ICAST, Springer, May 2020.

78. Dong Hwa Kim, "A Study on AI Impact of Post Corona-19 in Africa", SSGR-IJEMS (ISSN: 2393-9125), Issue 8, July 2020.

79. Dong Hwa Kim et el, "A study on Teaching Method of Control Engineering by Using Python Based PID", IARJSET (ISSN: 2393-8021), Sept 2020.

80. Dong Hwa Kim, "A Study on Improving Lecture Skill and Implementation of Anti-reset and Bampless Using 2-DOF-PID Controller and Python", IARJSET (ISSN: 2393-8021), Oct 2020.

81. Dong Hwa Kim, "Advanced Lecture Skill of Fuzzy Control in Python", IARJSET (ISSN: 2393-8021), Oct 2020.

82. Dong Hwa Kim, "A study on Cooperation and Status of 4th Industrial Revolution in Western Balkans", IJEMS (ISSN: 2392-9125), April 2020.

83. Dong Hwa Kim, "A Study on Preparation and Strategy Building for 4th Knowledge Wave of African Country (Focusing on AI)", IJEMS, July 2020.

84. Dong Hwa Kim, "A Study on Pedagogy Curriculum by AI and for AI in K-12 Education", IJHSS, Oct 2020.

85. Dong Hwa Kim, "Advanced Lecture for PID Controller of Nonlinear System in Python", IJRTE (ISSN 2277-3878). Vol-9 Issue-6, pp. 20-29, March 2021 (Scopus).

86. Dong Hwa Kim, Dynamic Decoupling and Intelligent Optimal PID Controller Tuning of Multivariable Qua-drones," IJRTE (Scopus), Vol. 10, No. 4, pp. 228-240, Dec. 2021.

87. Dong Hwa Kim, Young Sung Kim, " Failure Prediction of Wind Turbine using Neural Network and Operation Signal," IJRTE (Scopus), Vol. 10, No. 4, pp. 261-268, Dec. 2021.

88. Dong Hwa Kim, "A Study on Reinforcement of Self-Directed Learning Using Controlling Face Emotion," IJRTE (ISSN 2277-3878). Vol-10 Issue-5, Jan.2022 (Scopus).

89. Dong Hwa Kim, "Face Emotion Pattern Analysis of Korean Depending on Environment Using BCGAN and Optimal Face Emotion Expression" Sept 2022.

90. Dong Hwa Kim, "A study on the impact of generative AI on Korean economy growth", IARJSET, Vol. 10, No. 9, pp. 251-270, Sept 2023. ISSN2393-8021.

91. Dong Hwa Kim, Dae Sung Seo, "A study on the impact of deep learning on Korean economic growth," IJIBC (KCI), Vol.15, No. 4, 2023, pp. 90-99.

92. Dong Hwa Kim, "A study on the efficiency enhancement of self-directed learning and online lecture using emotional factor control, "EJSIT, Vo.3, No. 6, pp. 294-304, Dec, 2023. ISSN2786-4936

93. Dong Hwa Kim Rojina, "A Study on the Curriculum Design for K-12 AI Education Using Knowledge Graph," EJSIT, Vol. 4, No. 4, pp. 491-509, Oct. 2023. ISSN2786-4936.

94. Dong Hwa Kim, "AI Curriculum Design for Korea K-12 AI Education Through Analyzing AI Education Curriculum," IJRTE, Vol. 12, No. 3, pp. 72-81, Sept, 2023. ISSN 2277-3878.

95. Dong Hwa Kim, "A Study on an Effective Teaching of AI Using Google Colab-Based DCGAN Deep Learning Model Building for Music Data Analysis and Genre Classification," IJRTE, Vol. 11, No. 6, pp. 13-25, March 2023.

96. Dong Hwa Kim, "A Study on The Job Replacement Impact of ChatGPT and Education Method", EJSIT, Aug 2023.

97. Dong Hwa Kim, "The Impact on Job Replacement and Economy by TAG (Text to Art Generative)-AI," IARJSET, Vo. 11, No. 1, 2024, pp.1-17, 2024. ISSN2393-8021.

98. Dong Hwa Kim, Seung Min Bak, "How to Prepare Agriculture Operations under the Impact of LLM Technology (Focusing on the Perilla Vegetable Harvest Mobile Robot and Gripper)," IARJSET, Vol. 11, No. 9, Sept. 2024.
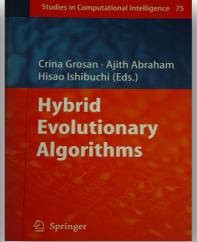
99. Dong Hwa Kim, "The Impact on Job Replacement and Economy by TAG (Text to Art Generative)-AI," IARJSET, Vo. 11, No. 1, 2024, pp.1-17, 2024. ISSN2393-8021.
100. Dong Hwa Kim, "A Study on the Possibility of ChatGPT Application for Optimal Coffee Bean Roast Process Development to Focus on The Best Customer Flavor," IARJSET, Vol. 12, Issue 3, March 2025.
101. Dong Hwa Kim, "How to Develop a High-Quality Job for ChatGPT Era in Developing Country?" IARJSET, Vol. 12, No. 7, July, 2025.
102. Dong Hwa Kim, "How to Educate AI Thinking, AI Literacy, and AI Literature?" IARJSET, Vol. 12, No. 9, Sept. 2025.

● Book Author (Research book)

1. How to teach and Learn AI, Outskirt express, USA, Aug 2022, 400pp.

2. Africa and 4th Wave (Will it risk or Chance?), Oct 2020 (English version, Amazon).

3. 4th wave Status and preparation of Visegrad Group Country (April 2019, LAMBERT, Germany, (ISBN 978-620-0-24115-3), Research book (English version).

4. Research book, Innovation tuning based on biotechnology (Dec 2017), Panstanford publishing Co. (USA). ISBN 978-981-4745-55-2 (English version).

5. Dong-Hwa Kim, Jae Hoon Cho, and Ajith Abraham, "Hybrid Genetic Algorithm and Bacterial Foraging Approach for Global Optimization and Robust Tuning of PID Controller with Disturbance Rejection," Hybrid Evolutionary Algorithms (Computational Intelligence 75), Springer, Germany, 2007.

6. Dong-Hwa Kim, Ajith Abraham, and K. Hirota, "Hybrid Genetic: Particle Swarm Optimization Algorithm," Hybrid Evolutionary Algorithms (Computational Intelligence 75), Springer, 2007.

7. Soft computing, "Complete a comparative analysis of the tuning of the PID controller," Springer-Verlag, Chapter 4, 2006.

8. Dong Hwa Kim, Ajith Abraham, Jae Hoon Cho, "Hybrid Genetic Algorithm and Bacterial Foraging Approach for Intelligent PID Controller Tuning," Hybrid Evolutionary Systems (Springer-Verlag, Berlin, SCI), Chapter 3, 2006.

9. How to they educate for formation university, July 2016 (Korean version).

10. How we can survive? (2005), Naeha publisher, Textbook (Korean version)

11. Effective education strategy in Information era (2003), Hyubsoung (Korean version)

Tuning innovation with biotechnology, 2019.
https://www.amazon.com/Tuning-Innovation-Biotechnology-Dong-Hwa/dp/9814745359

Book chapter 3, 4

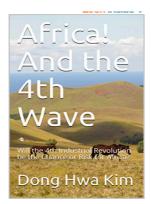How can receive Nobel award (Korean Version)?
April 2019

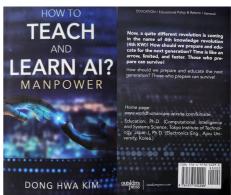Visegrad group and 4th industrial revolution.
Amazon: https://www.amazon.ca/Visegrad-Group-4th-Industrial-%20Visegrad%20Group%20and%204th%20Industrial%20Revolution%20Preparation%20Status,%202019.Revolution/dp/6200241155

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How toTeach and Learn AI
Aug 2022
Outskirt Express, USA

- **Book Author (University textbook)**

  • Sensor engineering (2001.1), Taehoon publisher (University Textbook, Korean version)
  • Intelligent automation (Sept 1998), Kidali publisher (University Textbook, Korean version)
  • New Instrumentation (Sept. 1997) Dong Il publisher (University Textbook, Korean version)
  • Sensor engineering (March 1996) University press (University Textbook, Korean version)
  • Process control (March 1996) University press (University Textbook, Korean version)

- **Plenary Invited Speaker (International Conference)**

  1. ICRR2024, Dec. 4-7, 2024, Yokohama, Japan.
  2. 2019-03-16-18-ICISS 2019-Tokai University-Japan
  3. ICEECCOT2018, Dec. 14-16, 2018, India
  4. CMECE2018, Aug. 24-29, Singapore
  5. ICOAC2018, June 09, 4th Industrial revolution and education, 2018, Dubai.
  6. ICISS2018, April 04, 2018, Tour and innovation in 4th Industrial revolution, Juju, Korea.
  7. ICT2018, Feb. 25, 2018, Seoul, ICT and Sport, Culture.
  8. AIR2018, Jan. 25, 2018, Bangkok, New ICT and Emotional tech.
  9. ICARI2017, Dec. 29-30, 2017, Shanghai, China, New technology and social paradigm in 21C.
  10. AMS2017, Dec. 04, 2017, Kota Kinbalu, Malaysia, What is the core Technology and How will The Paradigm of Economy, Society, and Study be changed in 4th Wave Era of 21C?
  11. ISMDNA2017, Nov, 24, 2017, Dubai, What will be the core Technology in Mechanical Design, Manufacture and Automation.
  12. ICIEE2017, Feb. 22-24, 2017, Singapore, What we have to prepare for the 21 C, 4-Revolution!

13. ICIA2016, Oct. 26-28, 2016, Jeju, Korea, Technology mega trend and emotion research as artificial intelligence.
14. ICSSCCET2016, March 18, 2016, Chennai, India
15. ICIEMS2016, March 16, 2016, Ponecherry, India
16. IICCC2015, Aug. 13-19, Ulaabatar, Mongolia
17. MiTA2014, High Technology, Korean Innovation Valley, and FEZ For Boosting investment in Knowledge Based Society, Sept. 25, 2014, Yangon Myanmar.
18. ACET2014, E-governance in Korea, Aug. 26, 2014, Honkong.
19. ICOE2014, Smart City and ICT in Korea, Aug. 12, 2014, Colombo, Sri Lanka.
20. ICCCEG2014, ICT development experience and strategy in Korea, June 18, 2014, Ho chi min City, Vietnam.
21. UKsim2014, March 24-26, Cambridge UK. (http://uksim2014.info/)
22. SPIN2014, Hybrid system and Emotion for the promising technology, Feb. 22, 2014, India.
23. (http://www.spin2014.com/Default.aspx)
24. CMECE2014, Electrical, Mechanical, Computer Engineering, Jan. 24-26, Sanya, China.
25. (http://www.cmece.net/keynote.php)
26. AIMS2013, December 3-5, Kota Kinabalu, Borneo, Sabah, Malaysia
27. ICIEE2013, Artificial Intelligence and Emotion as future technology from experience, Sept. 22, 2013, Jeju, Korea.
28. ACBIT2013: Biomedical Informatics and User Demanded Emotion Robot, Sept. 16, 2013, Aizu Wakamatsu, Japan.
29. CISIM2013 conference, Keynote speaker, Sept. 22, 2013, Seoul, Korea.
    (http://cimsim2013.info/)
30. UKSIM2013 conference, Keynote speaker, 2013. April. 10-12: Cambridge, UK.
31. SIM2013 conference, Keynote speaker: Jan. 29, 2013, Bangkok.
32. Robot and soft computing, Nov. 07, 2012, Szechnyi Istvan University, Hungary
33. Korea IT status and strategy, Oct. 26, 2012, Bratislava, Slovakia.
34. Korea IT status and strategy, Oct. 23, 2012, Kosice, Slovakia.
35. Convergence and Emotional technology for education, OTS'12, July 31, 2012, Tallinn University, Estonia.
36. Fuzzy and Emotional robot, June 22, 2012, EFTL, Swiss.
37. Intelligent and Emotional technology, Obuda University, May 15, 2012, Hungary.
38. CISM2012 conference, Invited speaker, What kind of technology will be the future technology, Jan. 12, 2012, India
39. ICBAKE2011 conference, Keynote speaker, Convergence and Emotional Technology, Sept. 20, 2011, India.
40. IWACIII2009 International workshop on advanced computational intelligence and intelligent informatics, Nov. 7, 2009, TIT, Japan.
41. Dong Hwa Kim, "Status and perspective of the development of emotion robot," International conference in Yanbian University of Science and Technology, June 29-July 4, 2009, China.
42. Dong Hwa. etc., "Towards a Dynamic Emotional Model," IEEE-ISIE2009, 2009. 10, Seoul, Korea.
43. Dong Hwa Kim, "Efficient S&T Cultivating Activities in Local Government For Promotion of Knowledge Based Industrial Society," YongWol International conference, May 17-21, 2009. YongWol, Korea.
44. Dong Hwa Kim, "Status and Future of Emotional Robot," ICIC2009, May 11-13, 2009, Daejeon, Korea.

45. Dong-Hwa Kim, "Emotion robot status and future,"ARBO, Feb. 5-7. 2009, Oita Japan.
46. H HuCare2010, International conference, Daejeon, S. Korea, 2010.
47. HuCare2011, International conference, Daejeon, S. Korea, 2010.
48. HuCare2013, International conference in S. Korea, Dec. 12-14, 2013.
49. ICIE2013, International conference, Jeju, S. Korea, Oct. 21-22, 2013.
50. ACED2014, International conference, Jeju, S. Korea, May 21-24, 2014.
51. ICRAE2016, International conference, Jeju, S. Korea, Aug. 28-30, 2016.
52. ICIEE2017, International conference, Singapore, Feb. 21-22, 2017.
53. ISMDNA2017, International conference, Dubai, Nov. 24-26, 2017.
54. ICRAE2017, International conference, Shanghai, China, Dec. 29-31, 2017.
55. ICOAE2018, International conference, Seoul, S. Korea, Jan 21-23, 2018.
56. ICIss2018, International conference, Jeju, S. Korea, April 27-29, 2018.
57. CMEC2018 (International conference, Singapore, Aug. 24-26, 2018.
58. ICISS2018, International conference, April 27-29, 2018, Jeju, Korea
59. PEAE2019, International conference, Phuket, Thailand, Jan. 19-21, 2019.
60. ICISS2019, International conference, Tokyo, Japan, March 16, 18, 2019.
61. ICISS2018 (International conference, April 27-29, 2018, Jeju, Korea
62. MCECE202, Aug. 17-19, 2018 Seoul, South Korea
63. ICEECCOT2018, Dec. 14-16, 2018, India
64. PEAE 2019, Jan 19-21, 2019, Thailand
65. ICISS 2019, March 16-18, 2019, Tokai University, Japan
66. ICW2020, Nov. 25-27, 2020, Royal Ambarukmo, Yogyakarta, Indonesia
67. Robotmeet2021, Sept 13, 2021, Portugal

● Special Inviting Lecture (University)

1. Future technology as mega trend, Inviting of Indian National Science Council, March 15-25, 2016
2. TDT University, Emotional Artificial Intelligence, Hoi Chi Min, Vietnam, June 20, 2014.
3. Execell Group Institutions, Chennai India, July 20, 2014.
4. Vidyaa Vikas Educational Institutions, Chennai India, July 20, 2014.
5. Meenakshi College of Eng., Chennai India, July 21, 2014.
6. Sai Ram Eng. College, Chennai India, July 21, 2014.
7. VIT University, Chennai India, July 22, 2014.
8. Professional Group, Chennai India, July 22, 2014.
9. Karpagam College of Eng., Chennai India, July 23, 2014.
10. Chettnad College of Eng. & Trch., Chennai India, July 23, 2014.
11. Jay Shriram Group of Institutions, Chennai India, July 23, 2014.
12. Myanmar S&T Univ., Artificial Intelligence, Sept. 24, 2014, Myanmar.
13. Slovenia Univ.: Artificial intelligence and future technology, Jan. 9, 2013.
14. Sousse Univ., Tunisia: What is the future technology? Jan 21, 2013.
15. Bangkok Univ., Tailand: E-learning and future technology, Feb. 1, 2013.
16. Insbruk Univ., Austria: Robot technology and future technology, Feb. 10, 2013 (Visiting).
17. Budapest Univ., Hungary: Emotion technology as economic growth, Feb. 15, 2013.
18. Sofia Univ., Bulgaria: What kind of tech will be given an impact on economic growth, Feb.16, 2013.
19. Munhen Tech. Univ., Germany: Emotion dynamic, Feb. 13, 2013.
20. ACBIT2013: Biomedical Informatics and User Demanded Emotion Robot, Sept. 16, 2013, Aizu Wakamatsu, Japan (Inviting).
21. Obuda Univ., Hungary: Human Oriented Emotional Smart Technology, May 2, 2012.
22. Budapest Tech. University, Hungary: Status of Korea S&T For Cooperation and Emotional

Robot, May 15, 2012.

23. Cracow Univ., Poland: Enhancing Emotions: Fuzziness Mood and Physiological Effects, May 23, 2012.
24. EPFL Rosane, Swiss: Enhancing Emotions: Fuzziness Mood and Physiological Effects for Emotional Robot, June 22, 2012.
25. Ostrava Univ., Cz: Robot and Entertainment, June 25, 2012.
26. Tallin Univ. Estonia: Emotion and IT, July, 31, 2012.
27. Aalto Univ., Filand : Fuzzy emotion and emotion robot, Aug. 2012.
28. Sechenyi estvan Univ, Groy, Hungary: Fuzziness Mood and Physiological Effects for Emotional Robot, Sept. 24 2012.
29. ICT International Meeting, Warsaw, Poland: emotion and market, Sept. 27, 2012.
30. Etovos Univ., Hungary: Psychology and emotion robot, Oct. 15, 2012.
31. Kosice Tech Univ., Slovakia: Korea R&D program, ICT succeed story, Oct. 23, 2012.
32. Bratislava Univ., Slovakia: Korea ICT development status, Oct. 26, 2012.
33. Sechenyi estvan Univ, Groy, Hungary: Artificial intelligence and Emotion, and robot, Nov. 7, 2012.
34. Brno Univ., Cz: Control system and artificial intelligence, Nov. 20, 2012.
35. Miskolc Univ., Hungary: Emotion and control, Korea education system, Nov. 23, 2012.
36. Nelson mandela Univ., Tanzania: Adjustable technology and robot, Dec. 26, 2012, Africa.
37. Kenya Univ., Kenya: Robot technology and adjustable education, Dec. 10, 2012, Narobi.

- **International conference Organization and Chair**

1. ICCAS2003, International conference control, automation and system, Oct. 22-25, Gyeongju, Korea
2. ISIS2003, The 4th international symposium on advanced intelligent systems, Sept 25-28, Jeju, Korea.
3. KFIS2003, Fuzzy and Intelligent system, May 3 2003, Kangung, Korea.
4. IFAC2003, Symposium on power plants and power systems control 2003, Sept. 15-19, Seoul, Korea.
5. IEEE CIRAS2003 (Computational Intelligence Robotics and Autonomous Systems), Dec. 15-18 2003, Singapore.
6. ICCAS2004, Aug. 25-27, 2004, Bangkok.
7. SCI2004, July 18-21, 2004, Orland, Florida, USA.
8. KFIS (Korea Fuzzy and Intelligence Society: 2004, 10. 30. Masan, Korea.
9. KES2005 (9th International Conference on Knowledge-Based Intelligent Information Engineering Systems), Special session, Sept. 12-15, Australia.
10. IASTED2005-ACIT (The International Association of Science and Technology for Development), Special session, June 20-24, Russia.
11. IASTED2005-CI (The International Association of Science and Technology for Development), Special session, July 2-6, Canada.
12. KES2006 (10th International Conference on Knowledge-Based Intelligent Information Engineering Systems), Special session, Oct. 9-11, 2006, Bournemouth International Centre, Bournemouth, UK.
13. EME2006 (6th Experience-Based Intelligence Learning for Emotional System and E-Learning Special session, Oct. 9-11, 2006, Bournemouth International Centre, Bournemouth, UK.
14. WMSCI2006 (The 10th World Multi-Conference on Systems, Cybernetics and and Informatics: July 16-19, 2006, USA.

15. IEEE-ICIC2006 (International Conference on Intelligent Computing), KUNMING China 2006.
16. The 13th International Conference on Neural Information Processing (ICONIP2006), "Emotion and Artificial Intelligence Based E-Learning Networking and Education", October 3-6, 2006, Hong Kong
17. General chair of Korea Information and Technology Society, Summer conference, 2006. 6. 23-6. 24, Hanbat National University, Daejeon, South Korea.
18. IEEE AMS2008, May 2008, Malaysia.
19. HuCARE2008, Dec. 4-5, 2008. Organizer
20. HuCARE2010. Dec. 15-18, International conference, Yuseong, Korea.HuCARE2011. Dec. 15-18, International conference, Yuseong, Korea.
21. DIHCA2005 (Daeduck International Conference on Human-Centered Advanced Intelligent Technology 2005 Conference Date: September 25(Sun)-27(Tue), 2005, Conference Site: Yuseong Hotel, Yuseong, Daejeon, South Korea.
22. The Second International Conference Hu-CARE2006 (International Conference on Human-Centered Advanced Technology Research/Education 2006, Conference Date: October 24(Mon)-26(Thu), 2006, Conference Site: Yuseong Hotel, Yuseong, Daejeon, South Korea
23. The Third International Conference Hu-CARE2008 (International Conference on Human-Centered Advanced Technology Research/Education 2008, Conference Date: Dec. 4(Third)-5(Fri), 2008, Conference Site: Hanbat National University, Daejeon, South Korea.
24. HuCare2010, International conference, Daejeon, Korea, 2010.
25. HuCare2011, International conference, Daejeon, Korea, 2010.
26. HuCare2013, International conference in S. Korea, Dec. 12-14, 2013.
27. ICIE2013, International conference, Jeju, S. Korea, Oct. 21-22, 2013.
28. ACED2014, International conference, Jeju, S. Korea, May 21-24, 2014.
29. ICRAE2016, International conference, Jeju, S. Korea, Aug. 28-30, 2016.
30. ICIEE2017, International conference, Singapore, Feb. 21-22, 2017.Sept, 14-15, 2017.
31. ISMDNA2017, International conference, Dubai, Nov. 24-26, 2017.
32. ICRAE2017, International conference, Shanghai, China, Dec. 29-31, 2017.
33. ICOAE2018, International conference, Seoul, S. Korea, Jan 21-23, 2018.
34. ICIss2018, International conference, Jeju, S. Korea, April 27-29, 2018.
35. CMEC2018 (International conference, Singapore, Aug. 24-26, 2018.
36. ICISS2018, International conference, April 27-29, 2018, Jeju, Korea
37. PEAE2019, International conference, Phuket, Thailand, Jan. 19-21, 2019.
38. ICISS2019, International conference, Tokyo, Japan, March 16, 18, 2019.

- **International Journal Editor**

  - JACIII (Journal of Advanced Computational Intelligence and Intelligent Informatics), Dec. 12, 2004-up now), Fuji Press, Japan.

  - IJCIR (International Journal of Computational Intelligence Research), May 1, 2005-, India Research Publication.

  - International Journal Intelligence, Jan.1 -2007-, Finland.

- **International Conference paper**

  1. Kim, Dong Hwa, "Application of Multivariable 2-DOF PID controller with Neural network Tuning method to the Parallel flow Control for Heat exchange, "FUZ-IEEE, Aug. 22-25,

1999, Seoul, Korea.

2. Kim, Dong Hwa, "Complex Process Control using the Adaptive Neural Fuzzy Inference System," KACC (international section), OCT.18-20,00, Young-in, Korea.

3. Kim, Dong Hwa, "Design and the character analysis of the experimental system for automatic control, "KACC (international section), OCT. 18-20,00, Young-in, Korea.

4. Kim, Dong Hwa, "An Analysis of Cost Driver in Software Cost Model by Neural Network System," KACC (international section), OCT. 18-20,00, Young-in, Korea.

5. Kim, Dong Hwa, "An Estimation of Software Development Effort for Distributed Control System by ANFIS," KACC (international section), OCT. 18-20, 2000.

6. Dong Hwa Kim, "A Model Study for Software Development Effort and Cost Estimation by Adaptive Neural Fuzzy Inference System," KACC international section, Oct.18-20, 2000, Young-in, Korea.

7. Kim, Dong Hwa, "Tuning of a PID controller using immune network model and fuzzy set," ISIE2001, June 15, 2001, Pusan, Korea.

8. Kim, Dong Hwa, "A comparison of the characteristics of a PID controller tuning on a multivariable process," SICE/ICASE2001, July 24, 2001, Nagoya, Japan.

9. Kim, Dong Hwa, "Tuning of a PID controller using an Artificial immune network model and local fuzzy set," IFAS/NAFIPS2001, July 28, 2001, Vancouver, Canada.

10. Kim, Dong Hwa, "Intelligent tuning of a PID controller using immune algorithm," ICCAS2001, Oct.17-21, 2001, Jeju, Korea.

11. Kim, Dong Hwa, "Intelligent tuning of a PID controller for multivariable process using immune network model based on fuzzy set," FUZ-IEEE, Dec.2. 2001, Melbourne.

12. Kim, Dong Hwa, "Intelligent Tuning of the 2-DOF PID Controller On the DCS for Steam Temperature Control of Thermal Power Plant," IEEEI&CPS, May 7, 2002 Savannah, USA.

13. Kim, Dong Hwa, "Tuning of 2-DOF PID controller by immune algorithm," May 12-16, 2002, 2002 IEEE international conference on evolutionary computation," IEEE CEC2002, May 12-16, Hawaii, 2002, USA.

14. Kim, Dong Hwa, "Auto-tuning of reference model-based PID controller using immune algorithm, "IEEE CEC2002, May 12-16, 2002, Hawaii, USA.

15. Kim, Dong Hwa, "Neural networks control by an immune algorithm based auto-weight function tuning, "IEEE IJNN2002, May 12-16, 2002, Hawaii, USA.

16. Kim, Dong Hwa, "Parameter tuning of fuzzy neural networks by immune algorithm," IEEE-FUZZ2002, May 12-16, 2002, Hawaii, USA

17. Kim, Dong Hwa, "Intelligent Tuning of the 2-DOF PID Controller with a Separated 2-DOF Parameter Using Immune Network for Boiler Control of Thermal Power Plant," IFAC, July 21-26, 2002, Barocelona, Spain.

18. Kim, Dong Hwa, "An Artificial immune network algorithm based 2-DOF controller system design," SCIS&ISIS 2002, Oct. 21-25, 2002, Japan.

19. Kim, Dong Hwa, "Temperature control of power plant using immune algorithm based decoupling computation," SCIS&ISIS 2002, Oct. 21-25, 2002, Japan.

20. Kim, Dong Hwa, "Intelligent Control by Immune Network Algorithm Based Auto-Weight Function Tuning," ICCAS2002, Oct. 16-19, 2002, Muju, Korea.

21. Kim, Dong Hwa, "Auto-Tuning Of Reference Model-Based PID Controller Using Immune Algorithm," ICCAS2002, Oct. 16-19, 2002, Muju, Korea.

22. Kim, Dong Hwa, "Immune Based 2-DOF PID Controller Design for Complex Process Control," ICCAS2002, Oct. 16-19, 2002, Muju, Korea.

23. Kim, Dong Hwa, "Immune Based Intelligent Tuning of the 2-DOF PID Controller for Thermal Power Plant," ICCAS2002, Oct. 16-19, 2002, Muju, Korea.

24. Kim, Dong Hwa, "Decoupling Based PID Control and Intelligent Tuning of the Multivariable Thermal Power Plant," ICCAS2002, Oct. 16-19, 2002, Muju, Korea.

25. Kim, Dong Hwa, "Intelligent Control by Immune Network Algorithm Based Auto-Weight Function Tuning," ICCAS2002, Oct. 16-19, 2002, Muju, Korea.

26. Kim, Dong Hwa, "Application of immune network for an intelligent controller of a multivariable system," InTech2002, Dec. 3-5, 2002, Vetnam.

27. Kim, Dong Hwa, "Intelligent 2-DOF PID control of thermal power plant using immune-based multiobjective, Journal of Research institute for the foundation of Production, Vol. 3, No. 1, pp. 8-17, 2003.

28. Kim, Dong Hwa, "Power plant boiler level control using immune algorithm based rule auto-tuning," Journal of Research Institute for foundation of Production, Vol. 3, No. 1, pp. 8-17, 2003.

29. Dong Hwa Kim, "Immune algorithm based intelligent control of multivariable power plant," FIP2003, March 1-4 2003, Beijing, China.

30. Dong Hwa Kim, "Immune algorithm based intelligent PID control of nonlinear multivariable power plant," FIP2003, March 1-4 2003, Beijing, China.

31. Kim, Dong Hwa, "Intelligent 2-DOF PID control for thermal power plant using immune-based multivariable," DCIDS2003, May 15-18, 2003, Canada, Ontario

32. Kim, Dong Hwa, "Tuning of PID controller of dead time process using immune-based multiobjective," IASTED, May 19-21, 2003, Mexico.

33. Kim, Dong Hwa, "Intelligent 2-DOF PID controller for a thermal power plant using immune-based multiobjective," IASTED, May 19-21, 2003, Mexico.

34. Kim, Dong Hwa, "Intelligent Tuning of PID controller for thermal power plant using immune-based multiobjective," IFSA, June 29-July 2, 2003, Turkey.

35. Kim, Dong Hwa, "Comparison of PID Controller Tuning of Power Plant Using Immune and Genetic Algorithms," IEEE-CIMSA2003, 29-31 July 2003, pp., Ligano, Switzerland.

36. Kim, Dong Hwa, "Level control by immune algorithm based fuzzy membership function tuning," IFSA, June 29-July 2, 2003, pp.301-306, Turkey.

37. Kim, Dong Hwa, "Intelligent Tuning of dead time process using immune based multiobjective," IASTED, July 14-16, 2003, Canada.

38. Dong Hwa Kim, "Intelligent control of power plant using immune algorithm based multiobjective fuzzy optimization," SCI&ISIS2003, Sept. 25-28 2003, Jeju.

39. Dong Hwa Kim, "Comparison of PID tuning of power plant using immune and genetic Algorithms," SCI&ISIS2003, Sept. 25-28 2003, Jeju.

40. Dong Hwa Kim, "Dcs Model for power plant steam generator," IFAC2003, Sept. 15-19 2003, Seoul.

41. Kim, Dong Hwa, "Multivariable intelligent control of power plant deaerator using immune algorithm," IFAC2003, Sept. 15-19 2003, Seoul.

42. Kim, Dong Hwa, "Intelligent control of power plant boiler level using immune algorithm based fuzzy rule tuning," IFAC2003, Sept. 15-19 2003, Seoul.

43. Dong Hwa Kim, "Adaptive intelligent control of inverted pendulum using immune fuzzy fusion," ICCAS2003, Oct. 22-25 2003, Gyeongju.

44. Dong Hwa Kim, "Immune algorithm based 2-DOF controller design and tuning for power stabilizer," ICCAS2003, Oct. 22-25 2003, Gyeongju.

45. Dong Hwa Kim, "Implementation of 2-DOF controller using immune algorithm," ICCAS2003, Oct. 22-25 2003, Gyeongju.

46. Dong Hwa Kim, "Intelligent 2-DOF PID control for thermal power plant using immune based multivariable," ICCAS2003, Oct. 22-25 2003, Gyeongju.

47. Kim, Dong Hwa, "Adaptive controller design for multivariable system using immune algorithms," IEEE CIRAS2003, Dec. 15-18 2003, Singapore.

48. Kim, Dong Hwa, "Intelligent control by immune algorithm based weight parameter tuning of fuzzy neural networks," IEEE CIRAS2003, Dec. 15-18 2003, Singapore.

49. Dong Hwa Kim, "Nuclear steam generator level control by a neural network-tuning 2-DOF PID controller," IEEE ICNSC2004, Taipei, March 21-23, 2004.

50. Dong Hwa Kim, Hwan Lee, "Intelligent Control of Nonlinear Power Plant Using Immune Algorithm Based Multiobjective Optimization," IEEE ICNSC2004, Taipei, March 21-23, 2004.

51. Dong Hwa Kim, Jae Hoon Cho, Intelligent Tuning of PID Controller With Disturbance Function Using Immune Algorithm," NAFIPS2004, June 27-30, 2004, Canada.

52. Dong Hwa Kim, Jae Hoon Cho, "Robust Tuning for Disturbance Rejection of PID Controller Using Evolutionary Algorithm," NAFIPS2004, June 27-30, 2004, Canada.

53. Dong Hwa Kim., "Neuro-Fuzzy Tuning of PID Controller for Control of Actual Gas Turbine Power," IEEE CIMSA2004, July 14-16, 2004, Boston.

54. Dong Hwa Kim, "Nuclear Steam Generator Level Control by a Neural Network-Tuning 2-DOF PID Controller," IEEE CIMSA2004, July 14-16, 2004, Boston.

55. Dong Hwa Kim, Jae Hoon Cho, "Intelligent Tuning of PID Controller with Disturbance Function Using Immune Algorithm," IEEE-CIMSA2004, July 14-16, 2004, Boston.

56. Dong Hwa Kim, "Decentralised PID Controller Tuning for Motor Using Multiobjective Optimization Based on Clonal Selection of Immune Algorithm," IEEE-ICSSSM04, July 19-24, 2004, China.

57. Dong Hwa Kim, Jae Hoon Cho, "An Immune Based Neo-Fuzzy Approach Modeling And Control of Dynamic System," IEEE-ICSSSM04, July 19-24, 2004, China.

58. Dong Hwa Kim, Jae Hoon Cho, "Parameter Estimation of a Squirrel-Double Cage Induction Motor Using Clonal Selection of Immune Algorithm," IEEE-IECON04, Nov. 2-6, Pusan, Korea.

59. Dong Hwa Kim, "Robust Disturbance Rejection Control Of Thermal Power Plant Using Immune Algorithm Based Multiobjective ,"SCI, July 18-21,2004, Florida, USA.

60. Dong Hwa Kim, " Adaptive Tuning of PID Controller For Embedded System Using Immune Algorithm Based Multiobjective Fuzzy Optimization," Aug. 2004. (SCI), ICESS2004, Dec. 9-10, 2004, Zhejiang University, Hanzhou.

61. Dong Hwa Kim, Jae Hoon Cho, "Design of Embedded PID Controller With Disturbance Rejection Function Using Immune Algorithm," Aug. 2004. (SCI)

62. Dong Hwa Kim, Jae Hoon Cho, "Robust Tuning of Embedded Intelligent PID Controller For Induction Motor Using Bacterial Foraging Based Optimization,", Aug. 2004. (SCI) Conference.

63. Dong Hwa Kim, Jae Hoon Cho, "Optimal control of induction motor using immune algorithm based fuzzy neural network," ICCAS'04, Aug. 25-27, 2004, Thailand.

64. Dong Hwa Kim, Jae Hoon Cho, "Intelligent tuning of PID controller with disturbance rejection using immune algorithm," ICCAS'04, Aug. 25-27, 2004, Thailand.

65. Dong Hwa Kim, Jae Hoon Cho, Won Pyo Hong, Seung Hack Lee Hwan Lee, "Intelligent tuning of PID controller with disturbance rejection using immune algorithm," ICCAS'04, Aug. 25-27, 2004, Thailand.

66. Dong Hwa Kim, Jae Hoon Cho, "Parameter estimation of a squirrel-double cage induction motor using clonal selection of immune algorithm," IECON2004, Nov. 4, 2004. Busan.

67. Dong Hwa Kim, Jae Hoon Cho, "Design of robust PID controller with disturbance rejection for motor using immune algorithm," HIS04, Dec. 06-08, 2004, Kitakyushu, Japan.

68. Dong Hwa Kim, Jae Hoon Cho, Hwan Lee, "Robust motor control using clonal selection of immune algorithm based multiobjective," HIS04, Dec. 06-08, 2004, Kitakyushu, Japan.

69. Dong Hwa Kim, "Robust tuning of PID controller with disturbance rejection using bacterial foraging based optimization," International symposium on computational intelligent and industrial application (ISCIIA2004), Dec. 20-22, 2004, Hikou, China.

70. Dong Hwa Kim, Jae Hoon Cho, Won Pyo Hong, Seung Hack Lee, "Intelligent parameter estimation of induction motor using immune algorithm," International symposium on

computational intelligent and industrial application (ISCIIA2004), Dec. 20-22, 2004, Hikou, China.

71. Won Pyo Hong, Choong Sub Yoon, Dong Hwa Kim, "Design of fault diagnostic system for induction motors with redundant controller area network," International symposium on computational intelligent and industrial application (ISCIIA2004), Dec. 20-22, 2004, Hikou, China.

72. Rajendra P. Badapanda, Shivashankar B. Nair, Dong Hwa Kim, "A Framework for Rapid Deployment of Devices and Robots on a Network," ICENCO'2004 (1st International Computer Engineering Conference New Technologies for the Information Society), Faculty of Engineering, December 27-30, 2004, Cairo University Cairo, EGYPT.

73. Dong Hwa Kim, Jae Hoon Cho, "Particle Swarm Optimization Algorithm Based Fuzzy Neural Network," International Fuzzy System Association, Tsinghua University, Sichuan University, Aug. 28-31, 2005.

74. Dong Hwa Kim, Jae Hoon Cho, "Robust Tuning of PID Controller with Disturbance Rejection Using Bacterial Foraging Based Optimization," International Fuzzy System Association, Tsinghua University, Sichuan University, Aug. 28-31, 2005.

75. Dong Hwa Kim, Jae Hoon Cho, "Dong Hwa Kim, "Optimal Learning of Neo-Fuzzy Structure Using Bacteria Foraging Optimization," ICCASE2005, Bucheon, Korea June 2-5, 2005.

76. Dong Hwa Kim, Jae Hoon Cho, "Optimal Learning of Fuzzy Neural Network Using Particle Swarm Optimization Algorithm," ICCASE2005, Bucheon, Korea June 2-5, 2005.

77. Dong Hwa Kim, "Robust Control of PID controller using bacterial foraging based optimization", Proceedings of the second IASTED International Multi-conference, June 20-24, 2005, Novosibirsk, Russia.

78. Dong Hwa Kim, Jae Hoon Cho, "Robust Control of Power plant using Immune Algorithm", Proceedings of the Second IASTED International Multi-conference, June 20-24, 2005, Novosibirsk, Russia.

79. Dong Hwa Kim, "Networked based intelligent motor-control systems using IEEE/EIA 709.1 Fieldbus," Proceedings of the second IASTED International Multi-conference, June 20-24, 2005, Novosibirsk, Russia.

80. Dong Hwa Kim, "Robust PID Controller Tuning of Multivariable System Using Clonal Selection and Fuzzy Logic," SICE Annual conference 2005, Okayama University, Japan, Aug. 8-10, 2005.

81. Dong Hwa Kim, Jae Hoon Cho, "Novel Hybrid Control Using GA and Bacteria Foraging," SICE Annual conference 2005, Okayama University, Japan, Aug. 8-10, 2005.

82. Dong Hwa Kim, "Optimal Learning of Fuzzy Neural Network Using Particle Swarm Optimization," Lecture Notes in Computer Science Proceeding of Springer (SCI), IEEE-ISI2005, May 12-15, 2005, Atlanta.

83. Dong Hwa Kim, Jin Ill Park, "Intelligent Tuning of PID Controller For AVR System Using a Hybrid GA-PSO Approach," Lecture Notes in Computer Science Proceeding of Springer (SCI), IEEE-ISI2005, May 12-15, 2005, Atlanta.

84. Dong Hwa Kim, Jae Hoon Cho, "Adaptive Tuning of PID Controller For Multivariable System Using Bacterial Foraging Based Optimization," Lecture Notes in Computer Science Proceeding of Springer (SCI), IWEB2005, June 12-15, 2005, Poland.

85. Dong Hwa Kim, Jin Ill Park, "Improvement of Genetic Algorithm Using PSO and Euclidean Data Distance," IEEE 2005 Intelligent computing, Lecture Notes in Computer Science Proceeding of Springer (SCI), IEEE-ICIC2005, Aug. 23-26, Hefei, China.

86. Dong Hwa Kim, Jin Ill Park, "Intelligent PID Controller Tuning of AVR System Using GA and PSO," IEEE 2005 Intelligent computing, Lecture Notes in Computer Science Proceeding of Springer (SCI), IEEE-ICIC2005, Aug. 23-26, Hefei, China.

87. Dong Hwa Kim, Jae Hoon Cho, "Particle Swarm Optimization Algorithm Based Fuzzy Neural Network," International Fuzzy System Association, Tsinghua University, Sichuan

University, Aug. 28-31, 2005.

88. Dong Hwa Kim, "Robust tuning of embedded intelligent PID controller for induction motor using bacterial foraging based optimization (Best paper candidate," Lecture Notes in Computer Science Proceeding of Springer (SCI) –LNCS, ICESS2004, Dec. 9-10, 2004, Zhejiang University, Hanzhou, China.

89. Dong Hwa Kim, "Tuning of PID Controller For Dead time Process Using Immune Based Multiobjective, SMCia/05, 2005 IEEE Mid-Summer Workshop on Soft Computing in Industrial Applications Helsinki University of Technology, June 28-30, 2005, Espoo, Finland.

90. Dong Hwa Kim, "Tuning of PID Controller Using Gain/Phase Margin and Immune Algorithm," SMCia/05, 2005 IEEE Mid-Summer Workshop on Soft Computing in Industrial Applications Helsinki University of Technology, June 28-30, 2005, Espoo, Finland.

91. Dong Hwa Kim, Jae Hoon Cho, "Intelligent Control of AVR System Using GA-BF," Lecture Notes in Computer Science Proceeding of Springer (SCI), Sept. 12-15, 2005, KES 2005, Melbourne, Australia.

92. Dong Hwa Kim, Jin Ill Park, "Loss Minimization Control of Induction Motor Using GA-PSO," Lecture Notes in Computer Science Proceeding of Springer (SCI), Sept. 12-15, 2005, KES 2005, Melbourne, Australia.

93. Dong Hwa Kim, "Robust Intelligent Tuning of PID Controller for Multivariable System Using Clonal Selection and Fuzzy Logic," Lecture Notes in Computer Science Proceeding of Springer (SCI), Sept. 12-15, 2005, KES 2005, Melbourne, Australia.

94. Dong Hwa Kim, Jae Hoon Cho, "Advanced bacterial foraging using immune algorithm," ISIS2005, Yeosu, Sept. 28-Oct.1, 2005. Korea.

95. Dong Hwa Kim, Jin Ill Park, "Vector control for loss minimization of induction motor using GA-PSO," ISIS2005, Yeosu, Sept. 28-Oct.1, 2005. Korea.

96. Dong Hwa Kim, GA-PSO Based Controller Tuning For Vector Control of Three Phase Induction Motor, IEEE-CIRAS2005, pp. No. 1125 (EC23), Dec. 13-15, 2005, Singapore.

97. Dong Hwa Kim, Jin Ill Park, "Advanced Learning for Genetic Algorithm Using PSO and Euclidean Data Distance," IEEE-CIRAS2005, pp. No. 1125 (EC23), Dec. 13-15, 2005, Singapore.

98. Dong Hwa Kim, "Vector Control of Induction Motor Using advanced Hybrid System based on GA and Bacteria Foraging," AROB (Artificial life and Robotics) 2006, Jan 23-25, 2006, Oita, Japan.

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100. Dong Hwa Kim (Invite Speaker), "Advanced Bacterial Foraging and Its Application Using Fuzzy Logic and Clonal Selection of Immune Algorithm," AFSS2006, Sept.18-21, Baoding,

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2. Kim, Dong Hwa, "A feasibility study on application of immune network for intelligent controller of a multivariable system," Oct.17, 2001, ICASE, Jeju.

3. Kim, Dong Hwa, "Fuel system control of Gun-san gas turbine using fuzzy neural network," Nov. 19, 1999, KFLIS, Daejon.

4. Kim, Dong Hwa, "Tuning of New 2-DOF PID Controller for Gun-san Gas turbine by Adaptive Neural Fuzzy Inference System," Nov. 19, KFLIS.

5. Kim, Dong Hwa, "2-DOF PID controller for heat exchange," Oct. 14, 1999, ICASE, Young in, Korea.

6. Kim, Dong Hwa, "2-DOF PID controller for cascade system," Oct. 14, 1999, ICASE, Young in, Korea.

7. Kim, Dong Hwa, "A study of characteristics 2-DOF PID controller with filter," July20, 1999, KIEE.

8. Kim, Dong Hwa, "PID control for 2-inertia system using pole allocation," July 20, 1999, KIEE.

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11. Kim, Dong Hwa, "A study on 2-DOF PID controller for air control valve," Dec.16, 1998, KIEE.

12. Kim, Dong Hwa, "Output characteristics of 2-DOF PID control for Gas turbine system," Oct. 1998, ICASE.

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  4. Application of DCS to Plant, Jan. 1999. Ministry of education.

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23. Emotion robot and its application (KNRF), Sept.1, 2012-Feb. 2015.

24. Cognitive reinforce/development for self-directed learning of online education and algorithm development of cognitive related for dementia prevention using emotional AI, KNRF (한국연구재단), June 1, 2021-May 30, 2024 (3-years)

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- **Project**

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3. Intelligent control for chemical injector, Sept. 1, 1996-Aug. 31, 1997, KOSEF (Korea Scientific and Engineering Foundation) Fund.
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5. Development of Intelligent control for process experimental system, Sept. 1, 1998-Aug. 31, 2000, KOSEF (Korea Scientific and Engineering Foundation) Fund.
6. Development of signal condition for low differential pressure sensor, Oct. 1, 1997-Sept. 30, 1998, Minister of Commercial and trade.
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9. Intelligent controller development for DCS, Dec. 1, 1998-Nov. 30, 1999, Hanbat National University.
10. Development of improvement controller and modeling for power plant controller, Sept.1, 2001-Aug., 2004. EESRI.
11. Development of an intelligent algorithm for motor drive, June 4, 2005 – Sept. 4, 2005 (3-Month), Inviting Prof. Marek Perkowski (Portland State University, USA), Brainpool program of KOFST
12. Basic education for electrical engineering field, Sept. 1, 2002-Aug. 30, 2004, KEPRI
13. Development of controller in water refinery system, May 1, 2003 – Feb. 28, 2004, Small and Medium fund.
14. Development of intelligent motor drive, Oct. 1, 2003-Sept. 30, 2006. KEPRI.
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● **Inviting Program from Overseas**

- Inviting Program, KOFST, Lecturer, Ph.D., Mark Near, Dept. of Computer Science, University of Wales, UK, 2004 (Year).
- Inviting Program, KOFST, Professor, Ph.D., Marek Perkowiski, Dept. of Electrical and Computer Eng., Portland State University, USA. June. 1- Aug. 31, 2005.
- Inviting Program, KOFST, Ph.D., Xiao-Zhi Gao, Institute of Intelligent power electronics, Helsinki University of Technology, Finland. Dec. 1, 2005-Nov. 30, 2007.
- IEEE-Saci2009, Budapest Hungary and Romania Joint Conference, May 25-30, 2009. "Emotional Robotics"

● **Patent right**

- PH control of water purification system using tuning of neural network-based 2-DOF PID controller: Registration No. 2003-101033, April 17, 2006.
- Multi-Optimization Study of a Boiler System Using Immune Algorithms. 2007. 7.
- Kalid Saeed (Poland), Dong Hwa (Korea), Image recognition and device by biometrics, July 2012.
- Dong Hwa Kim, "AI based optimal fried chicken process and service system for customer taste (인공지능기반 소비자기호에 최적화된 치킨 튀김 서비스제공시스템), No. 10-2021-0159952, Nov. 19, 2021.

● **Lectures**

⬛ B. S Course

- Engineering mathematic
- Electric engineering and electronics
- Instrumentation and Control
- Sensor Engineering
- Plant control
- Sensor and Measurement
- Electrical engineering and DCS system
- Policy Strategy for Science and Technology
- S&T, and Culture, Policy strategy
- Human based S&T Strategy
- Emotional Smart Technology

⬛ Graduate Course

- Plant control

- Intelligent Control

- Multivariable control

- Intelligent Process

- Policy Strategy for Science and Technology

- S&T, and Culture, Policy strategy

- Human based S&T Strategy

- Emotional Smart Technology

🔱 Supervised Graduate Students

- Hanbat National University Master, Byong Yul Song, 1999.

- Hanbat National University Master, Kyong Yol, Yun, 1999.

- Hanbat National University Master, Song Jin Park, 2000.

- Hanbat National University Master, Byong Chul Kim, 2001.

- Hanbat National University Master, Don Soo Chun, 2001.

- Hanbat National University Master, Sang Bock Chang, 2003.

- Hanbat National University Master, Jin Ill Park, 2003.

- Hanbat National University Master, You Song Kee, 2006.

- Hanbat National University Master, Sun Wook Kim, 2006.

- Hanbat National University Master, In Sang Kim, 2006.

- Choong Book National University, Ph.D., Joo Sick Kim, 1998.

- Choong Book National University, Ph.D., Gun Chang Kwack, 2002.

- Choong Book National University, Ph.D., Sung Suck Kim. 2005.

- Lorin Czi, Ph.D Course (Lecture and Supervisor, Budapest University), Silvia Luckaova, Ph.D student (Ostrava University, Kosice University, Slovakia), M. Senthilkamar, (Annamaiai University, India).

- Emnet Ashenafi, Lidiya, Syntayehu, Yosef worku (Master course, Adama science and technology, Ethiopia)

● **Paper Review**

- Review 3 papers including Dynamic Emotion Understanding in Human-Robot Interaction Based on Two-layer Fuzzy SVR-TS Model, IEEE-SMC-SMCA-16-06-0551, 2016.
- Review 12 paper, 2017.
- Review 23 paper, 2018.
- Review 27paper, 2019.
- Reviewing several papers (25 papers), 2020.
- IEEE (Transactions on Knowledge and Data Engineering, TKDE-2020-06-0621.R2), Direct Learning with Multi-task Neural Networks for Treatment Effect Estimation, Feb 2021.
- - 2022-2025 (IEEE-TKDE), 180 paper review: skip.

● **Committee**

- IEEE-ASM2009, 2010, 2011, 2012 (Asian Simulation and Modeling), Indonesia, Malaysia.
- CIMSIM2014, Nov.15-17, 2014, Vietnam.
- ANNIE04 conference (Nov. 7-10, 2004), Nov. 10, 2003 - Nov. 10, 2004. St. Louise, MO,

USA.

- ISCIA2004 conference, Dec. 20, 2003-Dec. 20-22, 2004, Haikou, China
- AFSS2004 conference, Dec. 19, 2003-Dec. 18-19, 2004, Hue city, Vietnam.
- ISCIIA2004 conference, Dec. 10, 2003-Dec. 20-22, 2004, China
- ICS2004 conference, Dec. 10, 2003-Dec. 15-17, 2004, Taiwan
- Korea Institute of Industrial Technology Evaluation and Technology, Expert committee, Dec., 2006
- KASAS (Korea Automation Standard Association Society: Expert Committee, 2004, 10-2006, Now
- Society of Korea Robot and Automation (2004-2006), Korea.
- Daejeon City Committee for Construction, Jan. 2004-Dec. 2012, Daejeon, Korea.
- Korea Information Technology Director, Jan. 1, 2004-Dec., 31, 2008, Korea.
- KES2005 (Special session), Sept. 12-15, 2005, Australia.
- IASTED2005-ACIT (Special session), June 20, 2004-June 20-24, 2005, Russia,
- IASTED2005-CI (Special session), July 2, 2004-July 2-6, 2005, Canada,
- KES2006, Oct. 11, 2005-Oct. 9-11, Bournemouth International Centre, Bournemouth, 2006, UK.
- EME2006, Oct. 11, 2005-Oct. 9-11, Bournemouth International Centre, Bournemouth, 2006, UK.
- Committee of Korea Engineering Award 7th, 2007. ISIIA2007, Dec. 10, 2005-Dec. 18-20, 2007, India.
- The International Program Committee for the IASTED International Conference on, Computational Intelligence (CI), Nov. 25, 2006 - July 4, 2007, Japan.
- President, Society of Korea Science and Technology, Dec. 1, 2008, Korea.
- Co-editor, Japan Society for Fuzzy Theory and Intelligent Informatics, executive committees, June 2, 2007 -2009, Japan.
- Co-editor, Journal of Advanced Computational Intelligence and Intelligent Informatics (JACIII), 2006-, Fuji press, Japan.
- Editor, IJCIR (International Journal of Computational Intelligence), 2007-, Helsinki, University of Technology, Filand.
- SACI2009 (5th International Symposium on Applied Computational Intelligence and Informatics), May 28-29, 2009, Timişoara, Romania.

● **Membership**

- IEEE (Fuzzy, Neural network, Evolutionary, Industrial application, Control technology, Automatic control, System and man, cybernetic)
- ISA (The Instrumentation, Systems, and Automation Society)
- IEEJ (Institute Electrical Engineering of Japan)
- JROS (Japan Robotic Society)
- SOFT (Society of Fuzzy Theory and Intelligent Informatics, Japan)
- INNS (International Neural Network Society)
- SICE (Society of Instrument and Control Engineering, Japan)
- KIEE (Korea Institute of Electrical Engineering)
- ICASE (Institute of Control Automation and System Engineering, Korea)

- KFLIS (Korea Fuzzy Logic and Intelligent System)

● **Research Area**

- Emotional Robot, Intelligent control, Drone control, Process control, Control system theory, Sensor, Instrumentation, Intelligent Robot control, Sensor and signal processing, Measurement and sensor, Fuzzy and control, Neural network and control, Immune algorithm and control, Genetic and control, Bacterial foraging and intelligence, Hybrid intelligent system, Emotional and artificial intelligence.

● **Awards**

- Best paper award, "Robust PID controller tuning using multi-objective based on clonal selection of immune algorithm," KES2004 International conference, Sept. 20-25, 2004, Newzealand.
- Best paper candidate, "Dong Hwa Kim, "Robust tuning of embedded intelligent PID controller for induction motor using bacterial foraging based optimization," Lecture Notes in Computer Science Proceeding of Springer (SCI) –LNCS, ICESS2004, Dec. 9-10, 2004, Zhejiang University, Hanzhou, China.
- Best researcher award: 2005 SCI paper of the Hanbat National University July 19, 2006
- Registered, Marquis Who's Who, Jan. 1, 2007
- IBC (International Biographical Centre) 2007. 4 and Award Metal, April 2007.
- Cambridge Blue Book, Great lives, Dictionary of International Biography, 2000 Outstanding Intellectuals of the 21st Century, July 2007
- ABI (the American Biographical Institute) 2007/2008, Registered, (2007/2008), April, 2007.
- Universal Award of Accomplishment, Jan. 25, 2008, ABI (USA)
- Great Minds of the 21st Century 2007/2008, Feb. 8, 2008, ABI (USA)
- Lifetime of Scientific Achievement Award, Feb. 8, 2008, IBC (UK)
- One World – Diverse Yet Intertwined Gold Medal For Korea2008, Feb. 2008, ABI (USA)
- 2000 Outstanding Intellectuals of the 21st Century Awards, Feb. 15, 2008.
- ABI 200 International Scientist, Publishing in 2008.
- Marquis Who's Who selected great minds in 21 Century, Aug. 2007/2008/2009.
- Great minds of 21 Century to dedication in IBC, 2008.
- Top 100 Engineers 2008, Feb. 29, 2008, IBC (UK)
- International Einstein Award for Scientific achievement, May 4, 2010, IBC.
- Best Korean Innovation, Korea times, Dec., 2010.