Curriculum Vitae

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Research Interest

1. Cognitive neuroscience (top-down process, consciousness / EEG, MEG, fMRI)
2. Non-invasive neuromodulation (transcranial current stimulation, focused ultrasound)
3. Cognitive prefrontal-based brain-machine interfaces
4. Neuroscience-based Learning Sciences

Publications

Journal articles (*corresponding author, †equally contributing first authors)

1. Lee S†, Park B†, Seo J, Min BK*, Network-nodal tACS induces right-lateralization of thalamocortical connectivity' *Scientific Reports*, 16: 16997, April 2026

2. Seo J, Yuksel C, Oliver KI, Daffre C, Song H, Lasko NB, McCoy ERS, Milad MR, Min BK, Pace-Schott EF. 'Local and network neural activations and their associations with sleep parameters during threat conditioning and extinction in persons with Generalized Anxiety Disorder with and without Insomnia Disorder' *Psychiatry Research: Neuroimaging*, Volume 358, 1121522026, June 2026

3. Kwon JW, Min BK*, 'Deep learning-based electroencephalic decoding of the phase-lagged transcranial alternating current stimulation' *Frontiers in Human Neuroscience*, 19: 1545726, June 2025

4. Seo J†, Lee DH†, Pantazis D, Min BK*, 'Phase-lagged tACS between executive and default mode networks modulates working memory' *Scientific Reports*, 15: 9171, March 2025

5. Kim DE, Kim S, Kim MJ, Min BK, Im M*, 'Retinal Degeneration Increases Inter-Trial Variabilities of Light-Evoked Spiking Activities in Ganglion Cells' *Experimental Eye Research*, in press, February 2025

6. Seo J, Min BK*, 'Non-invasive electrical brain stimulation modulates human mental representation' *NeuroImage*, 294, 120647, May 2024

7. Kim YK, Lee JH, Park JC, Kwon JW, Kim HK, Seo J, Min BK*, 'Neuromodulation of inhibitory control using phase-lagged transcranial alternating current stimulation' *Journal of NeuroEngineering and Rehabilitation*, 21: 93, May 2024

8. Seo J, Lee JH, Min BK* 'Out-of-phase transcranial alternating current stimulation modulates the neurodynamics of inhibitory control' *NeuroImage*, 292, 120612, April 2024

9. Kim HK†, Min BK†, Lee UC, Sim JH, Noh GJ, Lee EK, Choi BM* 'Electroencephalographic features of elderly patients during anesthesia induction with remimazolam: a sub-study of a randomized controlled trial' *Anesthesiology,* 141: 681-92, https://doi.org/10.1097/ALN.0000000000004904, August 2024

10. Kim SE†, Shin CW†, Yim JY, Seo KW, Ryu HK, Choi HJ, Park JS*, Min BK* 'Resting-state electroencephalographic characteristics related to mild cognitive impairments' *Frontiers in Psychiatry*, Volume 14 - 2023 | https://doi.org/10.3389/fpsyt.2023.1231861, September 2023

11. Hong ES†, Kim HS†, Hong SK, Pantazis D, Min BK* 'Deep learning-based electroencephalic diagnosis of tinnitus symptom' *Frontiers in Human Neuroscience*, 17:1126938. doi: 10.3389/fnhum.2023.1126938, April 2023

12. Seo J†, Kim DJ†, Choi SH, Kim HK, Min BK*, 'The thalamocortical inhibitory network controls human conscious perception' *NeuroImage*, 264, 119748, December 2022

13. Kim SE†, Kim HS, Kwak YC, Ahn MH, Choi KM, Min BK†,*, 'Neurodynamic correlates for the cross-frequency coupled transcranial alternating current stimulation during working memory performance' *Frontiers in Neuroscience*, 16:1013691. doi: 10.3389/fnins.2022.1013691, September 2022

14. Min BK*, Kim HS, Ko WJ, Ahn MH, Suk HI, Pantazis D, Knight R.T., 'Electrophysiological decoding of spatial and color processing in human prefrontal cortex' *NeuroImage*, 237, 118165, August 2021

15. Kim HS†, Ahn MH†, Min BK*, 'Deep-learning-based Automatic Selection of Fewest Channels for Brain-Machine Interfaces' *IEEE Transactions on Cybernetics*, February 2021; doi: 10.1109/TCYB.2021.3052813

16. Min BK*, Kim HS, Pinotsis D, Pantazis D, 'Thalamocortical inhibitory dynamics support conscious perception' *NeuroImage*, 220, 117066, June 2020

17. Min BK*, Hämäläinen M, Pantazis D, 'New Cognitive Neurotechnology Facilitates Studies of Cortical-Subcortical Interactions' *Trends in Biotechnology*, 38 (9), September 2020, pp. 952-962

18. Kim DJ, Min BK*, 'Rich-club in the Brain's Macrostructure: Insights from Graph theoretical analysis' *Computational and Structural Biotechnology Journal*, 18, June 2020, pp. 1761-1773

19. Kwak Y, Kong K, Song WJ, Min BK, Kim SE*, 'Multilevel Feature Fusion with 3D Convolutional Neural Network for EEG based Workload Estimation' *IEEE Access*, 8, Jan 2020, pp. 16009-16021

20. Ahn MH, Hong SK, Min BK*, 'The absence of resting-state high-gamma cross-frequency coupling in patients with tinnitus' *Hearing Research*, 356, Dec 2017, pp. 63-73

21. Min BK*, Suk HI, Ahn MH, Lee MH, Lee SW, 'Individual Identification using Cognitive Electroencephalographic Neurodynamics' *IEEE Transactions on Information Forensics and Security,* 12 (9), Sep 2017, pp. 2159-2167

22. Min BK*, Ricardo CL, Millán JdR, 'Harnessing prefrontal cognitive signals for brain-machine interfaces' *Trends in Biotechnology,* 35 (7), July 2017, pp. 585-597

23. Min BK*, Dähne S, Ahn MH, Noh YK, Müller KR, 'Decoding of top-down cognitive processing for SSVEP-controlled BMI' *Scientific Reports*, 6, 36267, November 2016, doi: 10.1038/srep36267

24. Hong SK, Park SJ, Ahn MH, Min BK*, 'Top-down and bottom-up neurodynamic evidence in patients with tinnitus' *Hearing Research*, 342, Dec 2016, pp. 86-100

25. Baek HC, Min BK*, 'Blue light aids in coping with the post-lunch dip: An EEG study' *Ergonomics*, 58 (5), May 2015, pp. 803-810

26. Chang JW†, Min BK†,*, Kim BS, Chang WS, Lee YH, 'Neurophysiologic correlates of sonication treatment in patients with essential tremor' *Ultrasound in Medicine and Biology*, 41 (1), Jan 2015, pp. 124-131

27. Kim HS, Min BK, Park DH, Hawi S, Kim BJ, Czosnyka Z, Czosnyka M, Sutcliffe M, Kim DJ, 'Poro-hyperelastic Anatomical models for hydrocephalus and idiopathic intracranial hypertension' *Journal of Neurosurgery*, 122 (6), June 2015, pp. 1330-1340

28. Min BK*, Müller KR, 'Electroencephalography/sonication-mediated human brain–brain interfacing technology' *Trends in Biotechnology*, 32 (7), July 2014, pp. 345-346

29. Min BK†,*, Cho KS†, Sung JY, Cho E, 'Neurophysiological evidence for the country-of-origin effect: an event-related potential study' *NeuroReport*, 25 (4), Mar. 2014, pp. 274-278

30. Min BK†,*, Jung YC†, Kim ES, Park JY*, 'Bright illumination reduces parietal EEG alpha activity during a sustained attention task' *Brain Research*, 1538, November 2013, pp. 83-92

31. Park JY†, Min BK†,*, Jung YC*, Pak HS, Jeong YH, Kim ES, 'Illumination influences working memory: an EEG study' *Neuroscience*, 247, September 2013, pp. 386-394

32. Yoo SS, Kim HM, Min BK, Franck E, Park SS, 'Transcranial focused ultrasound to the thalamus alters anesthesia time in rats' *NeuroReport*, 22 (15), 2011, pp. 783-787

33. Min BK, Kim SJ, Park JY, Park HJ, 'Prestimulus top-down reflection of obsessive-compulsive disorder in EEG occipital alpha and frontal theta oscillations' *Neuroscience Letters*, 496, May 2011, pp. 181-185

34. Bystritsky A, Korb AS, Douglas PK, Cohen MS, Melega WP, Mulgaonkar AP, Desalles A, Min BK, Yoo SS, 'A review of low intensity focused ultrasound pulsation' *Brain Stimulation*, 4 (3), 2011, pp. 125-136

35. Min BK, Bystritsky A, Jung KI, Fischer K, Zhang Y, Maeng LS, Park SI, Chung YA, Jolesz FA, Yoo SS, 'Focused ultrasound-mediated suppression of chemically-induced acute epileptic EEG activity' *BMC Neuroscience*, 2011, 12:23

36. Min BK, Yang PS, Bohlke M, Park SS, Vago DR, Maher TJ, Yoo SS, 'Focused ultrasound modulates the level of cortical neurotransmitters: Potential as a new functional brain mapping technique' *International Journal of Imaging Systems and Technology*, 21 (2), 2011, pp. 232-240

37. Yoo SS, Bystritsky A, Lee JH, Zhang Y, Fischer K, Min BK, McDannold N, Pascual-Leone A, Jolesz F, 'Focused ultrasound modulates region-specific brain activity' *NeuroImage*, 56 (3), 2011, pp. 1267-1275

38. Min BK, Marzelli M, Yoo SS, 'Neuroimaging-based approaches in brain-computer interface' *Trends in Biotechnology*, 28 (11), November 2010, pp. 552-560

39. Park HD, Min BK, Lee KM, 'EEG oscillations reflect visual short-term memory processes for the change detection in human faces' *NeuroImage*, 53 (2), 2010, pp. 629-637

40. Min BK, Park HJ, 'Task-related modulation of anterior theta and posterior alpha EEG reflects top-down preparation' *BMC Neuroscience*, 2010, 11: 79

41. Min BK, 'A thalamic reticular networking model of consciousness' *Theoretical Biology & Medical Modelling*, 2010, 7: 10

42. Min BK, 'Spectral analysis of brain oscillatory activity' *Korean Journal of Cognitive Science*, 20 (2), June 2009, pp. 155-181

43. Min BK, Park JY, Kim EJ, Kim JI, Kim JJ, Park HJ, 'Prestimulus EEG alpha activity reflects temporal expectancy' *Neuroscience Letters*, 438 (3), June 2008, pp. 270-274

44. Herrmann CS, Pauen M, Min BK, Busch NA, Riger JW, 'Analysis of a choice-reaction task yields a new interpretation of Libet's experiments' *International Journal of Psychophysiology*, 67 (2), February 2008, pp. 151-157

45. Min BK, Herrmann CS, 'Prestimulus EEG alpha activity reflects prestimulus top-down processing' *Neuroscience Letters*, 422 (2), July 2007, pp. 131-135

46. Min BK, Busch NA, Debener S, Kranczioch C, Hanslmayr S, Engel AK, Herrmann CS, 'The best of both worlds: phase-reset of human EEG alpha activity and additive power contribute to ERP generation' *International Journal of Psychophysiology*, 65 (1), July 2007, pp. 58-68

47. Choi JM, Bae BH, Min BK, Kim SY, 'The analysis of brain activity in wakefulness and deep sleep states from a dog EEG' *Journal of the Korean Physical Society*, 30 (2), April 1997, pp. 328-333

Book chapter and Booklet

1. Choi K, Min BK* (2015) 'Future directions for brain-machine interfacing technology' In Lee SW et al. (eds.), Recent Progress in Brain and Cognitive Engineering. Volume 5 of the series Trends in Augmentation of Human Performance pp. 3-18, Heidelberg: Springer, Germany (Print ISBN 978-94-017-7238-9)

2. Min BK (2013) 'Light-induced Synchronization of the SCN', Lambert Academic Publishing, Germany (ISBN 978-3-659-34240-0)

3. Min BK (2012) 'The top-down function of prestimulus EEG alpha activity', Lambert Academic Publishing, Germany (ISBN 978-3-659-24774-3)

4. Min BK (2012) 'The present and future of Brain-Computer interface' In Hong SW, Jang DY (ed.), "Neuroscience, over the border", Bada Press, Seoul, Korea (ISBN 89-55616-51-1)

5. Herrmann CS, Pauen M, Min BK, Busch NA, Rieger J (2005) 'Eine neue interpretation von Libets experimenten aus der analyse einer wahlreaktionsaufgabe' In Herrmann CS, Pauen M, Rieger J, Schicktanz S (ed.), "*Bewusstsein (Consciousness)*", pp. 120-134, Utb. Germany (ISBN 3-8252-2686-7)

6. Min BK (2000) 'MIND' (Neuroscience E-book in Korean PDF version), Mind21, Seoul, Korea (ISBN 89-89350-00-X)

Abstracts and Conference proceedings (*corresponding author)

1. Park SM, Yang JW, Jo YW, Cho YH, Min BK*, 'EEG activity correlates with school-related variables during inhibitory control' International Conference on Learning Sciences and Educational Innovation (ICOLSEI 2026), Seoul, Korea, June 2026

2. Yang JW, Min BK*, 'Network-based tACS modulates prestimulus EEG alpha activity during coherent motion perception' Federation of European Neuroscience Societies (FENS) 2026 Forum, Barcelona, Spain, July 2026 (submitted)

3. Lee SG, Park BH, Seo J, Min BK*, 'Network-level Neuromodulation of Thalamocortical Connectivity by tACS during Color Perception' The 54th Annual Meeting of International Neuropsychology Society, Philadelphia, Pennsylvania, USA, February 2026

4. Yun SB, Yang JW, Min BK*, 'EEG alpha phase synchronization correlates with response time during inhibitory control' The 28th annual meeting of Korean Society for Brain and Neural Sciences (KSBNS), K-Brain 2025 & The 3rd CJK Neuroscience Meeting, Songdo Convensia, Incheon, Korea, August 2025

5. Lee JY, Min BK*, Choi JH*, 'Inter-individual entrainment of respiratory rhythms induced by huddling during sleep in mice' The 28th annual meeting of Korean Society for Brain and Neural Sciences (KSBNS), K-Brain 2025 & The 3rd CJK Neuroscience Meeting, Songdo Convensia, Incheon, Korea, August 2025

6. Lee KH, Lee WH, Yeo SH, Min BK*, Kim HM* 'AI-enabled real-time prediction of acoustic pressure fields for transcranial focused ultrasound with a multi-element transducer array' The 6th Focused Ultrasound Neuromodulation (FUN25) Conference, Hong Kong, July 2025

7. Lee SG, Park BH, Seo J, Min BK*, 'Non-invasive Electrical Stimulation Modulates Thalamocortical Connectivity During Mental Illusion' The 28th Annual Meeting of Association for the Scientific Study of Consciousness, Heraklion, Crete, Greece, July 2025

8. Yang JW†, Yun SB†, Min BK*, 'Deep learning-based electroencephalic decoding of coherence and direction of the random dot kinematogram' The 11th International BCI Meeting, Banff, Canada, June 2025

9. Seo J, Min BK*, 'Non-invasive electrical stimulation modulates resting-state thalamocortical functional connectivity' The 32nd Annual Meeting of Cognitive Neuroscience Society, Boston, USA, March 2025

10. Yang JW, Park JC, Min BK*, 'Lateralized transcranial alternating current stimulation modulates visual perception of uni-directed movement' The 27th Annual Meeting of the Korean Society for Brain and Neural Sciences, Gyeongju, Korea, October 2024

11. Lee J, Kim B, Min BK*, Choi JH*, 'Effects of huddling on sleep dynamics and neural activity in mice' The 27th Annual Meeting of the Korean Society for Brain and Neural Sciences, Gyeongju, Korea, October 2024

12. Seo J, Min BK*, 'Resting-state functional connectivity is modulated by phase-dependent transcranial alternating current stimulation' The 53rd Annual Meeting of Society for Neuroscience, Chicago, USA, October 2024

13. Lee KH, Park TY, Min BK, Kim HM*, 'Real-time simulation of phased multi-element transducers using AI' The 23rd Annual International Symposium on Therapeutic Ultrasound, Taipei, Taiwan, September 2024

14. Min BK*, 'Network-wise transcranial alternating current stimulation with phase lags' Dynamics of Cognition, COGSCI 2024, The Annual Meeting of the Cognitive Science Society, Rotterdam, the Netherlands, July 2024

15. Yoon SB, Lee JH, Yang JW, Seo J, Min BK*, 'Fronto-occipital EEG phase synchronization during inhibitory control' The 38th Annual Conference of the Korean Society for Cognitive Science, Seoul, Korea, May 2024; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2024

16. Kim DE, Kim S, Min BK, Im M*, 'Retinal Degeneration Increases Variabilities of Light-Evoked Spiking Activities in Ganglion Cells Depending on Stimulus Contrast' The 46th International Conference of the IEEE Engineering in Medicine and Biology Society, Orlando, USA, July 2024

17. Yun SB, Lee JH, Kim YK, Park JC, Kwon JW, Yang JW, Seo J, Min BK*, 'Phase-prediction of EEG alpha activity using an artificial neural network' The Annual Meeting of Korean Society for Cognitive & Biological Psychology, Seoul National University, Seoul, Korea, February 2024

18. Kim YK, Lee JH, Park JC, Kwon JW, Yun SB, Yang JW, Seo J, Min BK*, 'Out-of-phase transcranial alternating current stimulation modulates prestimulus EEG theta and alpha power' The 31st Annual Meeting of Cognitive Neuroscience Society, Toronto, Canada, April 2024

19. Seo J, Lee JH, Kim YK, Park JC, Kwon JW, Min BK*, 'Non-invasive Electrical Brain Stimulation with a Phase lag: an fMRI Study' The 30th Annual Meeting of the Organization for Human Brain Mapping (OHBM) 2024, Seoul, Korea, June 2024

20. Kim YK, Lee JH, Park JC, Kwon JW, Yun SB, Yang JW, Seo JH, Min BK*, 'Enhanced inhibitory control after out-of-phase theta tACS between the lDLPFC and dACC' The 12th IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea, February 2024

21. Seo J, Lee JH, Kim YK, Park JC, Kwon JW, Min BK*, 'Thalamocortical Neurodynamics in human conscious perception: an fMRI Study' The ICMRI 2023 (11th International Congress on MRI), Seoul, Korea, November 2023

22. Seo J, Lee JH, Kim YK, Park JC, Kwon JW, Min BK*, 'Out-of-phase transcranial alternating current stimulation across anterior cingulate and dorsolateral prefrontal cortices modulates brain activation in inhibitory control' The 52nd Annual Meeting of Society for Neuroscience, Washington, USA, November 2023

23. Kim YK, Kwon JW, Lee JH, Park JC, Yun SB, Seo J, Min BK*, 'Out-of-phase transcranial alternating current stimulation between dorsolateral prefrontal and anterior cingulate cortices alters P300 amplitudes during inhibitory-control performance' The 13th International Conference on Cognitive Science, Seoul, Korea, August 2023

24. Kwon JW, Park JC, Kim YK, Lee JH, Yoon SB, Seo J, Min BK*, 'Frontal and occipital tACS-mediated neuromodulation of visual perception' The 37th Annual Conference of the Korean Society for Cognitive Science, Seoul, Korea, May 2023; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2023

25. Park JC, Kwon JW, Lee JH, Kim YK, Yoon SB, Seo J, Min BK*, 'tACS-mediated neuromodulation of perceptual decision' The 37th Annual Conference of the Korean Society for Cognitive Science, Seoul, Korea, May 2023; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2023

26. Lee JH, Kim YK, Kwon JW, Park JC, Yoon SB, Seo J, Min BK*, 'tACS-mediated neuromodulation of inhibitory control' The 37th Annual Conference of the Korean Society for Cognitive Science, Seoul, Korea, May 2023; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2023

27. Min BK*, Hong ES, Kim HS, Hong SK, Pantazis D, 'Deep learning-based diagnosis of tinnitus using EEG signals' The 10th International BCI Meeting, Brussels, Belgium, June 2023

28. Kim HK, Kwon JW, Park JC, Kim YK, Lee JH, Seo J, Min BK*, 'Improved perception performance via transcranial alternating current stimulation to the superior parietal and occipital regions' The Annual Meeting of Association for Psychological Science, Washington DC, USA, May 2023

29. Kim HK, Sim JH, Noh GJ, Min BK*, Choi BM*, 'Electroencephalogram characteristics during induction of anesthesia with remimazolam in elderly patients' The annual conference of the Korean Society for Anesthetic Pharmacology, Seoul Trade Exhibition & Convention Hall, Korea, April 2023

30. Kim YK, Kwon JW, Lee JH, Park JC, Kim HK, Seo J, Min BK*, 'Improved inhibitory-control performance by out-of-phase transcranial alternating current stimulation' The 30th Annual Meeting of Cognitive Neuroscience Society, San Francisco, USA, March 2023

31. Kwon JW, Kim YK, Park JC, Lee JH, Kim HK, Seo J, Min BK*, 'Decoding the phase-lag type of brain stimulation using EEG signals' *Brain Stimulation*, 16 (1), p. 234, https://doi.org/10.1016/j.brs.2023.01.353 The 5th international Brain Stimulation Conference, Lisbon, Portugal, February 2023

32. Lee JH, Kim HK, Kim YK, Park JC, Kwon JW, Seo J, Min BK*, 'Occipital EEG upper-alpha power enhancement using cross-frequency coupled transcranial alternating current stimulation with a 45-degree phase lag' The Annual Meeting of Korean Society for Cognitive & Biological Psychology, Yonsei University, Seoul, Korea, February 2023

33. Kwon JW, Kim HK, Lee JH, Park JC, Kim YK, Seo J, Min BK*, 'Frontal EEG upper-alpha power enhancement during working-memory performance using transcranial alternating current stimulation with a 180-degree phase lag' The Annual Meeting of Korean Society for Human Brain Mapping, The K-Hotel, Seoul, Korea, November 2022

34. Park JC, Hong ES, Kim YK, Kwon JW, Seo J, Kim HK, Min BK*, 'Improved working-memory performance by cross-frequency coupled transcranial alternating current stimulation to central-executive and default-mode networks with a phase lag' The 51st Annual Meeting of Society for Neuroscience, San Diego, USA, November 2022

35. Seo JH, Kim DJ, Choi SH, Min BK*, 'Thalamocortical causal communications in conscious perception' The 25th Annual Meeting of Association for the Scientific Study of Consciousness, Amsterdam, The Netherlands, July 2022

36. Kim HS, Ahn MH, Min BK*, 'Fronto-occipital EEG alpha reduction by transcranial alternating current stimulation during working memory performance' The 29th Annual Meeting of Cognitive Neuroscience Society, San Francisco, USA, April 2022

37. Ahn MH, Kim HS, Min BK*, 'Fronto-occipital phase shift in EEG cross-frequency coupled phase-dependency during working memory performance' The 50th Annual Meeting of Society for Neuroscience, Chicago, USA, November 2021

38. Hong ES, Hong KH, Min BK*, 'Prefrontal EEG-based decoding of expectancy' The 2nd Korea Artificial Intelligence Conference, Jeju, Korea, September 2021

39. Kwak YC, Song WJ, Min BK, Kim SE*, 'Classification of working memory performance with 3D convolutional neural network from EEG signals' The Annual Conference of the Korean Institute of Communications and Information Sciences, YongPyong, Korea, February 2020

40. Kim JW, Kim HS, Min BK*, 'Cross-frequency coupled entrainment of EEG activity by transcranial alternating current stimulation' The 27th Annual Meeting of Cognitive Neuroscience Society, Boston, USA, March 2020

41. Kwak YC, Song WJ, Min BK, Kim SE*, '3D CNN based multilevel feature fusion for workload estimation' The 8th IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea, February 2020

42. Min BK*, Kim JW, Pantazis D, Kim HS, 'Decoding prestimulus EEG alpha activity reveals expectancy in the direction of stimulus changes' The 49th Annual Meeting of *Society for Neuroscience*, Chicago, USA, October 2019

43. Kim HS, Pantazis D, Kim KW, Kim JW, Kim JE, Kwon HC, Min BK*, 'The role of thalamus in conscious experience using a flicker paradigm' The 23rd Annual Meeting of Association for the Scientific Study of Consciousness, London, Canada, June 2019

44. Kim HS, Pantazis D, Min BK*, 'Decoding EEG signals reveals weak auditory neuronal representations in tinnitus' Brain Twitter Conference 2019 #brainTC, Online international conference, March 2019

45. Min BK*, Choi KM, Kim HS, Ahn MH, 'Enhanced working-memory performance by cross-frequency coupled transcranial alternative current stimulation' The 26th Annual Meeting of Cognitive Neuroscience Society, San Francisco, USA, March 2019

46. Kim JW, Kim MN, Kang DH, Ahn MH, Kim HS, Min BK*, 'An online top-down SSVEP-BMI for augmented reality' The 7th IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea, February 2019

47. Ahn MH, Kim JW, Min BK*, 'Selection of optimized EEG electrodes for BMIs using unsupervised learning' The Annual Conference of the Korean Institute of Communications and Information Sciences, Jeju, Korea, June 2018

48. Choi KM, Min BK*, 'Non-invasive neuromodulation' The Annual Conference of the Korean Institute of Communications and Information Sciences, Jeju, Korea, June 2018

49. Ahn MH, Min BK*, 'The minimal-electrode selection study for EEG-BMIs using a discriminability' The 32nd Annual Conference of the Korean Society for Cognitive Science, Seoul, Korea, June 2018; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', June 2018

50. Kim JW, Ahn MH, Min BK*, 'A top-down SSVEP BMI embedded in a Microsoft Hololens' The 32nd Annual Conference of the Korean Society for Cognitive Science, Seoul, Korea, June 2018; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', June 2018

51. Min BK*, 'A thalamo-cortical iterating model for consciousness' The 22nd Annual Meeting of Association for the Scientific Study of Consciousness, Krakow, Poland, June 2018

52. Min BK*, Ahn MH, Hong SK, 'Abnormal resting-state EEG cross-frequency coupling in patients with tinnitus' The 25th Annual Meeting of Cognitive Neuroscience Society, Boston, USA, March 2018

53. Choi KM, Choi SH, Lee SM, Jang KI, Chae JH, Min BK*, 'A six-week follow-up study of three-week rTMS treatment of patients with depression' The Brain and Artificial Intelligence symposium (Brain Engineering Society of Korea), Gangwondo, Korea, January 2018

54. Ahn MH, Min BK*, 'Applying deep-learning to a top-down SSVEP BMI' The 6th IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea, January 2018

55. Ahn MH, Min BK*, 'Brain-machine interfacing sensors using brainwave magnetic resonance' IEEE Sensors 2017, Glasgow, Scotland, UK, Oct.29-Nov.1, 2017

56. Ahn MH, Min BK*, 'SSVEP-based individual authentication' The 2nd Neural Engineering summer workshop (Brain Engineering Society of Korea), Busan, Korea, July 2017

57. Min BK*, 'Neuroscientific perspective of deep-learning' The 31st Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea, May 2017; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2017

58. Ahn MH, Min BK*, 'Top-down cognitive brain-fingerprint technology' The 31st Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea, May 2017; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2017

59. Ahn MH, Min BK*, 'Online Implementation of Top-Down SSVEP-BMI' The 5th IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea, January 2017

60. Ahn MH, Yang CH, Kim IS, Min BK*, 'Brain functional connectivity during the evaluation of product-preference' The 7th International Symposium on Brain and Cognitive Engineering, Seoul, Korea, July 2015; Printed in 'Proceedings of the Brain and Cognitive Engineering Symposium', July 2015,

pp. 51-53

61. Min BK*, 'Top-down brain-machine interfacing technology' The 7th International Symposium on Brain and Cognitive Engineering, Seoul, Korea, July 2015

62. Ahn MH, Yang CH, Min BK*, 'Frontal cross-talk during the evaluation of preference' The 29th Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea, May 2015; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2015

63. Choi KW, Kim IS, Min BK*, 'A feedback training system using cognitive brain-computer interface' The 3rd IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea, January 2015

64. Min BK*, 'EEG/sonication-mediated human brain-brain interfacing technology' The 6th International Symposium on Brain and Cognitive Engineering, Tübingen, Germany, June 2014

65. Kim IS, So KS, Ryu MH, Min BK*, 'Sonication-mediated somatosensory experience' The 6th International Symposium on Brain and Cognitive Engineering, Tübingen, Germany, June 2014

66. So KS, Ryu MH, Min BK*, 'Human somatosensory experience using ultrasound sonication to the peripheral nervous system' The 28th Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea, May 2014; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2014

67. Oh SJ, Min BK*, 'RGB ratio of background light influences the arousal factor of emotion' The 44th Annual Meeting of *Society for Neuroscience*, Washington, USA, November 2014

68. Choi KW, Min BK*, 'A brain-computer interfacing system using prefrontal EEG signals' IEEE International conference on Systems, Man, and Cybernetics, San Diego, USA, October 2014

69. Baek HC, Kim IS, Pak HS, Jeong YH, Min BK*, 'Blue light modulates EEG alpha activity' The 21st Annual Meeting of Cognitive Neuroscience Society, Boston, USA, April 2014

70. Min BK*, Cho E, Cho KS, Sung JY, 'EEG theta-band phase-coupling for the country-of-origin effect' The 21st Annual Meeting of *Cognitive Neuroscience Society*, Boston, USA, April 2014

71. Noh YK, Min BK*, 'Feature Selection for Brain-Computer Interface Using Nearest Neighbor Information' The 2nd IEEE International Winter Workshop on Brain-Computer Interface, High1 Resort, Korea, February 2014

72. Choi JH, So KS, Kim IS, Min BK*, 'Phase coherence of EEG theta activity in the semantic processing of the country-of-origin' The 20th International Conference on Neural Information Processing, Daegu, Korea, November 2013

73. Oh SJ, Pak HS, Jung YH, Lee JS, Min BK*, 'RGB-modulated illumination influences prestimulus EEG alpha activity during an emotion task' The 12th Annual Meeting of *the International Colour Society (AIC)*, The Sage Gateshead, UK, July 2013

74. Min BK*, 'EEG/Sonication-based Brain-Brain Interfacing' The IEEE International Winter Workshop on Brain-Computer Interface, High1 Resort, Korea, February 2013

75. So KS, Ryu MH, Pak HS, Jung YH, Oh SJ, Min BK*, 'The event-related potentials reflect the perceptive interaction between colorful stimuli and RGB-modulated background illumination' The 20th Annual Meeting of *Cognitive Neuroscience Society*, San Francisco, USA, April 2013; *Journal of Cognitive Neuroscience (Supplement)* p. 232

76. Oh SJ, Pak HS, Jung YH, So KS, Ryu MH, Min BK*, 'Red light promotes the Aversive evaluation of unpleasant stimuli: An EEG study' The 20th Annual Meeting of *Cognitive Neuroscience Society*, San Francisco, USA, April 2013; *Journal of Cognitive Neuroscience (Supplement)* p. 245

77. Min BK*, Jung YC, Pak HS, Jung YH, Kim ES, Park JY, 'Bright lightning reduces parietal EEG alpha activity during the continuous performance task' The 33rd International Conference on Cognitive Science, Penang, Malaysia, December 2012

78. Min BK*, 'EEG correlates of a background illumination condition on human cognitive processing' The 12th China-Japan-Korea Joint Workshop on Neurobiology and Neuroinformatics, Seoul, Korea, November 22-23, 2012

79. Min BK*, Cho KS, Sung JY, Cho E, 'EEG signals reflect the effect of the country of origin on product preference' The 42th Annual Meeting of *Society for Neuroscience*, New Orleans, USA, October 2012

80. Nam YJ, Min BK, Hong UP, 'Syntactic indeterminacy effects on semantic integration in on-line sentence comprehension - An ERP study on Korean' The Annual Conference of *The Architectures and Mechanisms for Language Processing*, Riva del Garda, Italy, September 2012

81. Min BK*, Park JY, Kim ES, Jung YC, 'Bright lightning reduces frontal EEG theta activity during the Sternberg memory task' The 16th annual meeting of the Association for the Scientific Study of Consciousness, Brighton, UK, July 2012

82. Nam YJ, Min BK*, Hong UP, 'An ERP Study on the semantic integration in on-line language processing' The 26th Annual Conference of *The Korean Society for Cognitive Science*, Seoul, Korea, June 2012; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', June 2012

83. Min BK*, Cho KS, Sung JY, Cho E, 'Nation-branding alters product preference: an EEG study' The 26th Annual Conference of *The Korean Society for Cognitive Science*, Seoul, Korea, June 2012; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', June 2012

84. Min BK*, Park JY, Kim ES, Jung YC, 'The effect of illumination on a cognitive task performance: An EEG study' The 26th Annual Conference of *The Korean Society for Cognitive Science*, Seoul, Korea, June 2012; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', June 2012

85. Min BK*, 'Brain-Brain Interface' The 4th International Symposium on Brain and Cognitive Engineering, Seoul, Korea, May 2012

86. Yoo SS, Bystritsky A, Lee JH, Zhang Y, Fischer K, Min BK, McDannold N, Jolesz F, Pascual-Leone A, 'TMS1.1 Noninvasive brain stimulation using focused ultrasound' The 14th European Congress of Clinical Neurophysiology and the 4th International Conference on Transcranial Magnetic and Direct Current Stimulation, Rome, Italy, June 2011; *Clinical Neurophysiology*, 122 (S1), pp. S52-S53

87. Yoo SS, Pascual-Leone A, Min BK, Fischer K, Yang PS, Jolesz F, 'Computer-controlled, image-guided focused ultrasound system for neuromodulation' The 7th World Stroke Congress, Seoul, Korea, October 2010

88. Yoo SS, Bystritsky A, Lee JH, Zhang Y, Min BK, Fischer K, McDannold N, Jolesz F, Pascual-Leone A, 'Localized Modulation of Brain Function using Pulsed Low-intensity Focused Ultrasound' The 16th Annual Meeting of *Human Brain Mapping,* Barcelona, Spain, June 2010, p. 4

89. Min BK, Kim SJ, Park JY, Park HJ, 'Prestimulus top-down reflection of obsessive-compulsive disorder in EEG frontal theta and occipital alpha bands' The 39th Annual Meeting of *Society for Neuroscience*, Chicago, USA, October 2009

90. Min BK, Park HJ, 'EEG frontal alpha and occipital gamma activities of congenitally blind subjects during mental rotation' The 23rd Annual Conference of *The Korean Society for Cognitive Science*, Seoul, Korea, May 2009; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2009

91. Min BK, Kim JJ, Park HJ, 'Prestimulus EEG frontal theta and occipital alpha activities reflect prestimulus top-down processing' The 16th Annual Meeting of *Cognitive Neuroscience Society*, San Francisco, USA, March 2009; Printed in 'Cognitive Neuroscience Society Annual Meeting Program 2009' *Journal of Cognitive Neuroscience (Supplement*) p. 71 (B46)

92. Min BK, Han KJ, Min JH, Kim JH, Park HJ, 'Frontal N270 and decision making on a social contextual task' The 11th Conference of *Korean Society for Human Brain Mapping*, Seoul, Korea, Nov 2008

93. Park BH, Min BK, Park HJ, 'Plasticity of neural networks for working memory processing in the congenitally blind' The 11th Conference of *Korean Society for Human Brain Mapping*, Seoul, Korea, Nov 2008

94. Min BK, Lee DH, Park SY, Kim JI, Park HJ, 'Prestimulus EEG theta activity reflects prestimulus top-down inhibitory processing' The 11th Conference of *Korean Society for Human Brain Mapping*, Seoul, Korea, Nov 2008

95. Kim JI, Min BK, Park HJ, 'Sleep in congenital blind and normal subjects: analyses of spectral power and sLORETA' The 11th Conference of *Korean Society for Human Brain Mapping*, Seoul, Korea, Nov 2008

96. Lee NY, Lee YJ, Min BK, Kim JH, Park HJ, 'What happens in your brain when you look at newspaper company logos: An event-related potential study' The 11th Conference of *Korean Society for Human Brain Mapping*, Seoul, Korea, Nov 2008

97. Min BK, Park JY, Kim SJ, Park HJ, 'The relationship between prestimulus EEG alpha activity and top-down inhibitory processing in obsessive-compulsive disorder patients' The 38th Annual Meeting of *Society for Neuroscience*, Washington, DC, USA, November 2008

98. Lee DH, Park JY, Min BK, Park HJ, 'The difference of EEG gamma oscillation between consonant and dissonant chord' The 38th Annual Meeting of *Society for Neuroscience*, Washington, DC, USA, November 2008

99. Min BK, Park HJ, 'EEG alpha and gamma activity in congenitally blind subjects during mental rotation' The 10th International Conference on Cognitive Neuroscience, Bodrum, Turkey, September 2008; *Frontiers in Human Neuroscience* (doi: 10.3389/conf.neuro.09.2009.01.130)

100. Min BK, Lee JH, Han KJ, 'EEG alpha activity reflects social contextual processing during a color-matching task' The 6th International Conference of Cognitive Science, Seoul, Korea, July 2008

101. Min BK, Kim JI, Seo BS, Chun JW, Park HI, Kim JJ, Park HJ, 'Involvement of the visual association cortex in congenitally blind subjects during mental imagery' The 6th International Conference of Cognitive Science, Seoul, Korea, July 2008

102. Min BK, Kim JJ, Park HJ, 'Prestimulus EEG alpha activity reflects temporal expectancy' The 15th Annual Meeting of *Cognitive Neuroscience Society*, San Francisco, USA, April 2008; Printed in 'Cognitive Neuroscience Society Annual Meeting Program 2008' *Journal of Cognitive Neuroscience (Supplement*) p. 48 (A110)

103. Min BK, Kim JI, Kim JJ, Park HJ, 'Expectation in prestimulus EEG alpha activity' The 9th Conference of *Korean Society for Human Brain Mapping*, Seoul, Korea, Nov 2007; Printed in 'The Autumn Conference of Korean Society for Human Brain Mapping' p. 37

104. Min BK, Busch NA, Debener S, Engel AK, Herrmann CS, 'Evoked Visual Alpha activity reflects Cognitive processing' The 11th Annual Meeting of *Cognitive Neuroscience Society*, San Francisco, USA, April 2004; Printed in 'Cognitive Neuroscience Society Annual Meeting Program 2004' *Journal of Cognitive Neuroscience (Supplement*) p. 81 (B141)

105. Min BK, Busch NA, Debener S, Engel AK, Herrmann CS, 'Differentiating Evoked and Induced Visual Alpha activity by Exogenous parameters' The 14th *Evoked Potentials International Conference (EPIC XIV)*, University of Leipzig, Germany, March 2004; Printed in 'Evoked Potentials

International Conference XIV: Leipzig Series in Cognitive Sciences 5' (A. Widmann et al., eds) p. 110 *Leipziger Universitätsverlag*

106. Min BK, Kim MS, Youn T, Kim JJ, Kwon JS, 'Event-Related Potentials of a Linguistic Binding Process in a Korean Monosyllabic Word' The 32nd Annual Meeting of *Society for Neuroscience*, Orlando, USA, November 2002; Published at online *2002 Abstract Viewer/Itinerary Planner*. Program No. 279.7. Washington, DC: Society for Neuroscience

107. Min BK, Kim MS, Youn T, Kim JJ, Kwon JS, 'Event-Related Potentials of a Monosyllabic Word' The 16th Annual Conference of *The Korean Society for Cognitive Science*, Busan, Korea, May 2002; Printed in 'Proceedings of the Korean Society for Cognitive Science Conference', May 2002, pp. 211-215

108. Min BK, Park HJ, Kang DH, Youn T, Kim MS, Kwon JS, 'Time-frequency analysis of 40Hz in oddball paradigm in schizophrenia: Preliminary study' The 44th Annual conference of *Korean Neuropsychiatric Association*, Seoul, Korea, October 2001

Educations

2003 Jan-2007 Jul	Ph.D. in Natural Sciences (magna cum laude) (Advisor: Prof. Dr. Christoph Herrmann) Department of Biological Psychology Otto-von-Guericke University, Magdeburg, Germany
1997 Sep-1998 Jun	M.Sc. in Neurobiology and Physiology (Advisor: Prof. Fred Turek, Ph.D.) Department of Neurobiology and Physiology (NSF Bio-timing Lab.) Northwestern University, The Graduate School, IL, USA
1990 Mar –1994 Feb	Seoul National University, Korea B.S. (Forest Sciences/ Chemistry)

Ph.D./M.Sc. Theses

1. Min BK, 'The top-down function of prestimulus EEG alpha activity' (*Otto-von-Guericke University in Magdeburg* (Germany), Department of Biological Psychology, Ph.D. Thesis: July 4, 2007)

2. Min BK, 'Light-induced Synchronization of the Suprachiasmatic Neural Network: Converting Glutamate to GABA' (*Northwestern University* (USA), The Graduate School, Department of Neurobiology and Physiology, M.S. Thesis: June 19, 1998)

Professional Experience

2026 Sep-Present	Director, Institute of Cognitive Science Seoul National University, Korea
2026 Apr-2027 Dec	Vice President, The Korean Society for the Learning Sciences
2026 May-Present	Interdisciplinary Program in Artificial Intelligence, College of Engineering Seoul National University, Korea
2026 May-Present	Adjunct Professor Department of Chemistry Education, College of Education Seoul National University, Korea
2026 Apr-Present	Interdisciplinary Program in Cognitive Science, College of Humanities Seoul National University, Korea
2026 Apr-Present	Adjunct Professor Department of Biology Education, College of Education

	Seoul National University, Korea
2026 Apr-Present	Adjunct Professor Department of Education, College of Education Seoul National University, Korea
2026 Mar-Present	Head, Transdisciplinary Learning Sciences, College of Education Seoul National University, Korea
2026 Mar-Present	Adjunct Professor Bigdata Consortium Seoul National University, Korea
2025 Dec-Present	Interdisciplinary Program in Neuroscience, College of Natural Sciences Seoul National University, Korea
2025 Oct-Present	Affiliated Faculty Learning Sciences Research Institute Seoul National University, Korea
2025 Sep-Present	Full Professor Transdisciplinary Learning Sciences, College of Education Seoul National University, Korea
2024 Jan-Present	Delegate of The Korean Society for Brain and Neural Sciences
2022 May-2026 Aug	Korean National Coordinator, International Brain Bee World Championship
2021 Sep-2025 Aug	Full Professor / Tenured Department of Brain and Cognitive Engineering Korea University, Seoul, Korea
2025 Jan-2025 Aug	Visiting Professor, Convergence and Open Sharing System Seoul National University, Korea
2023 Jan-2024 Dec	President, Korean Society for Cognitive Science
2023 Feb-2024 Dec	President, International Association for Cognitive Science (IACS)
2023 Apr-2025 Feb	Member of the 10th Faculty Council of Korea University
2024 Mar-2025 July	Director, Institute of Computer-Information & Communication Korea University, Seoul, Korea
2022 Sep-2025 July	Director, Institute of Brain and Cognitive Engineering Korea University, Seoul, Korea
2020 Aug-2022 July	Head, Interdisciplinary Major in Brain & Cognitive Sciences Korea University, Seoul, Korea
2020 Mar-2022 Feb	Adjunct Professor Department of Artificial Intelligence Korea University, Seoul, Korea
2017 Sep-2021 Aug	Associate Professor Department of Brain and Cognitive Engineering Korea University, Seoul, Korea

2018 Sep-2019 Aug	Visiting Scholar McGovern Institute for Brain Research MIT, Boston, USA
2012 Mar-2017 Aug	Assistant Professor Department of Brain and Cognitive Engineering Korea University, Seoul, Korea
2011 Sep-2012 Feb	Research Assistant Professor Institute of Behavioral Sciences in Medicine Yonsei University, College of Medicine (Severance Hospital), Seoul, Korea
2011 May-2011 Aug	Research fellow Institute of Behavioral Sciences in Medicine Yonsei University, College of Medicine (Severance Hospital), Seoul, Korea
2009 Nov-2011 Mar	Research fellow (Department of Radiology) Harvard Medical School, Brigham and Women's Hospital 75 Francis street, Boston, MA 02115, USA
2007 Oct-2009 Sep	Post-doctoral fellow (Advisor: Prof. Jae-Jin Kim, M.D./Ph.D. and Prof. Hae-Jeong Park, Ph.D) Brain Korea 21 project for Medical Science (Neuroscience unit) Yonsei University, College of Medicine (Severance Hospital), Seoul, Korea
2002 Jul-Aug	DAAD-KOSEF Summer Research Institute Program Otto-von-Guericke University, Magdeburg, Germany
2001 Sep-2002 Nov	Interdisciplinary Program in Cognitive Science (Advisor: Prof. Jun-Soo Kwon, M.D., Ph.D.) Seoul National University, Korea
2001 May-2003 May	Neuroscience Research Institute, Medical Research Center College of Medicine, Seoul National University, Korea
2001 Mar-2002 Aug	Clinical Research Institute Seoul National University Hospital, Korea
1996 summer	Johns Hopkins University, MD, USA The Zanvyl Krieger Mind/Brain Institute (Short-term visiting 'computational neuroscience lab')
1996 Mar-Aug	Korea Advanced Institute of Science and Technology (KAIST) Department of Physics, Brain Lab. (Advisor: Prof. Soo-Yong Kim, Ph.D.)

Other Professional Experiences and Activities

2026 Feb	Program co-chair, The 15th IEEE International Winter Conference on Brain-Computer Interface, YongPyong, Korea
2024 May	Organizing committee, The 37th Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea
2023 Aug	Organizing committee, The 13th International Conference on Cognitive Science, Seoul, Korea
2023 May	Organizing committee, The 36th Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea

2022 Aug-	Associate editor (in Brain Imaging Methods), *Frontiers in Human Neuroscience* (Electronic ISSN 1662-5161), *Frontiers in Neuroimaging* (Electronic ISSN 2813-1193), *Frontiers in Neurology* (Electronic ISSN 1664-2295)
2022 Mar-	Advisory board member for the electroceutical therapies & digital therapeutics, Korea Brain Research Institute, Ministry of Science & ICT
2022 May-	The Korea national coordinator of the International Brain Bee (IBB) World Championship
2018-2022	SPARK KU-MAGIC advisory board member (Medical Applied R&D Global Initiative Center at Korea University)
2018	The director of the auditing affairs, Korean Society for Cognitive Science
2018 Jan 30-Feb 1	Program Committee, 2018 Brain and AI Symposium, Brain Engineering Society of Korea, HoengSung, Korea
2018 Jan 15-17	Program Committee, The 6th IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea
2017 Nov 2-3	*Publicity co-chair,* 2017 International Symposium on Perception, Action, and Cognitive Systems (PACS2017): Next Generation AI Engineer House, Seoul National University, Korea
2017 Oct 13-15	*Program chair,* 2017 Autumn School for Cognitive Science The Korean Society for Cognitive Science, HongChen, Korea
2017 Oct 13-15	*Lecture* (EEG in Cognitive Neuroscience) 2017 Autumn School for Cognitive Science The Korean Society for Cognitive Science, HongChen, Korea
2017 May	Session chair, The 31st Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea
2017	The director of the educational affairs, Korean Society for Cognitive Science
2017 Jan	Publication co-chair & Session chair, The 5th IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea
2016 Feb	Registration chair, The 4th IEEE International Winter Conference on Brain-Computer Interface, YongPyong, Korea
2015 July	The director of the general affairs, Korean Brain Education Society
2015 July	Session chair, The 7th Symposium on Brain and Cognitive Engineering, Seoul, Korea
2015 May	Session chair, The 29th Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea
2015 Jan	Registration chair, The 3rd IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea
2015	Academic Editor for the journal 'Cognitive Science', Korean Society for Cognitive Science
2015	The director of the financial affairs, Korean Society for Cognitive Science

2014 Oct	Program committee, 2014 IEEE International Conference on Systems, Man, and Cybernetics, San Diego, CA, USA
2014 Oct	Session co-chair, 2014 IEEE International Conference on Systems, Man, and Cybernetics, San Diego, CA, USA
2014 Feb	Registration chair, The 2nd IEEE International Winter Conference on Brain-Computer Interface, High1 Resort, Korea
2012-2013	Mentoring students for *Creative Challenger Program* at Korea University
2013	The director of the general affairs, Korean Society for Cognitive Science
2013 Feb	Session chair, The 1st IEEE International Winter Workshop on Brain-Computer Interface, High1 Resort, Korea
2013 Feb	Publication chair, The 1st IEEE International Winter Workshop on Brain-Computer Interface, High1 Resort, Korea
2012 Nov	Local Arrangement co-chair, The 12th China-Japan-Korea Joint Workshop on Neurobiology and Neuroinformatics, Seoul, Korea
2012 Oct	Publication co-chair, 2012 IEEE International Conference on Systems, Man, and Cybernetics, COEX, Seoul, Korea
2012 Aug	Organizing committee, Session chair, The 3rd Neural Engineering workshop (Brain Engineering Society of Korea), Seoul, Korea
2012 June	Session chair, The 26th Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea
2012 June-present	Expert-board, Center for Korean EEG data, Seoul, Korea
2012 Jan-present	Review-board of long-term strategy for the development of Science & Technology Korea Institute of Science & Technology Evaluation and Planning, Seoul, Korea
2012	A trustee member of the public relations, Korean Society for Cognitive Science
2012 Mar-2016 Oct	A trustee member of the international co-work, Brain Engineering Society of Korea
2010-2011	Mentoring students for *Senior Design Project* at Boston University (Department of Biomedical Engineering), Boston, USA
2008 Nov	Contribution of an essay to the official webzine of BK21 project for Medical Science, Yonsei University, Seoul, Korea
2008 Jan	Organization of 2007/2008 Winter workshop (Sogang University) of Korean Students Association of Cognitive Science
2002/2007	Founder and President of Korean Students Association of Cognitive Science
2000-2001	Contribution of Neuroscience essays to Korea Science Foundation official webzine

Classes

2026 2nd semester	*Veritas Lecture II (Class: Brain, Body, and Learning)* *SNU College* *Seoul National University, Seoul, Korea*

Lecture (Class: Learning Neuroscience Lab.)
Transdisciplinary Learning Sciences
Seoul National University, Seoul, Korea
Lecture (Class: Principles of Neuroscience 2)
Interdisciplinary Program in Neuroscience, College of Natural Sciences
Seoul National University, Seoul, Korea

Lecture (Class: Studies in Information Processing)
Interdisciplinary Program in Cognitive Science, *College of Humanity*
Seoul National University, Seoul, Korea

Lecture (Class: Methodology in Cognitive Science)
Interdisciplinary Program in Cognitive Science, *College of Humanity*
Seoul National University, Seoul, Korea

Lecture (Class: Independent study for Graduate students)
College of Education
Seoul National University, Seoul, Korea

2026 summer semester *Lecture (Class: Seminar in Learning Sciences)*
College of Education
Seoul National University, Seoul, Korea

2026 1st semester *Lecture (Class: Brain, Mind, and Learning)*
Transdisciplinary Learning Sciences
Seoul National University, Seoul, Korea

Lecture (Class: Principles of Neuroscience 1)
Interdisciplinary Program in Neuroscience, *College of Natural Sciences*
Seoul National University, Seoul, Korea

Lecture (Class: Experience and Growth)
College of Education
Seoul National University, Seoul, Korea

Lecture (Class: Key Competencies in the Age of Artificial Intelligence)
College of Education
Seoul National University, Seoul, Korea

Lecture (Class: Independent study for Graduate students)
College of Education
Seoul National University, Seoul, Korea

2025 2nd semester *Lecture (Class: Seminar in Learning Sciences)*
College of Education
Seoul National University, Seoul, Korea

Lecture (Class: Independent study for Graduate students)
College of Education
Seoul National University, Seoul, Korea

2025 1st semester *Lecture (Class: Brain wave Analysis)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Topics in Brain & Cognitive Engineering I)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Advanced Topics in Data Science)– graduate course
Department of Big Data and Convergence
Korea University, Seoul, Korea

Lecture (Class: Introduction to Brain Data)
Convergence and Open Sharing System
Seoul National University, Seoul, Korea

Lecture (Class: Big Data and Cognitive Sciences)
Convergence and Open Sharing System
Seoul National University, Seoul, Korea

2024 2nd semester *Lecture (Class: Introduction to Brain wave)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Topics in Consciousness)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2024 1st semester *Lecture (Class: Introduction to Cognitive Brain Science)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Special Research in Brain & Cognitive Engineering 1)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2023 2nd semester *Lecture (Class: Topics in Cognitive Science)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Brain wave Analysis)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2023 1st semester *Lecture (Class: Topics in Brain & Cognitive Engineering II)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Research Internship)– undergraduate course
Interdisciplinary Major in Brain and Cognitive Sciences,
Korea University, Seoul, Korea

2022 2nd semester *Lecture (Class: Topics in Consciousness)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Behavioral Methods in Cognitive Science)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2022 1st semester *Lecture (Class: Introduction to Brain wave)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Brain wave Analysis)– graduate course
Department of Brain and Cognitive Engineering

Korea University, Seoul, Korea

2021 2nd semester — *Lecture (Class: Topics in Brain & Cognitive Engineering II)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Behavioral Methods in Cognitive Science)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2021 1st semester — *Lecture (Class: Introduction to Brain wave)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Brain wave Analysis)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2020 2nd semester — *Lecture (Class: Introduction to Brain wave)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2020 1st semester — *Lecture (Class: Brain wave Analysis)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Introduction to Brain wave)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2019 2nd semester — *Lecture (Class: Brain wave Analysis)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Introduction to Brain wave)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2018 1st semester — *Lecture* (Class: Introduction to Brain wave)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Debate on Science & Technology)– undergraduate course
Core General Education, *Korea University*, Seoul, Korea

2017 2nd semester — *Lecture* (Class: Brain wave Analysis)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Introduction to Cognitive Brain Science*)– graduate course*
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

2017 1st semester — *Lecture* (Class: Introduction to Brain wave)– graduate course
Department of Brain and Cognitive Engineering
Korea University, Seoul, Korea

Lecture (Class: Debate on Science & Technology)– undergraduate course
Core General Education, *Korea University*, Seoul, Korea

2016 2nd semester	*Lecture* (Class: Introduction to Brain-Computer Interfaces)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
	Lecture (Class: Debate on Science & Technology)– undergraduate course Core General Education, *Korea University*, Seoul, Korea
2016 1st semester	*Lecture* (Class: Introduction to Brain wave)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
	Lecture (Class: Debate on Science & Technology)– undergraduate course Core General Education, *Korea University*, Seoul, Korea
2015 2nd semester	*Lecture* (Class: Introduction to Brain wave)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
	Lecture (Class: Debate on Science & Technology)– undergraduate course Core General Education, *Korea University*, Seoul, Korea
	Lecture (Class: Brain wave Analysis)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
2015 1st semester	*Lecture* (Class: Introduction to Brain wave)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
2014 2nd semester	*Lecture* (Class: Introduction to Brain wave)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
	Lecture (Class: Introduction to Brain and Cognitive Science)– undergraduate course Interdisciplinary Major in Brain and Cognitive Sciences *Korea University*, Seoul, Korea
2014 1st semester	*Lecture (Class:* Introduction to Cognitive Brain Science*)– graduate course* *Department of Brain and Cognitive Engineering* *Korea University, Seoul, Korea*
	Lecture (Class: Topics in Cognitive Science)– graduate course *Department of Brain and Cognitive Engineering* *Korea University, Seoul, Korea*
2013/2014 winter	*Lecture* (Class: Artificial Intelligence)– undergraduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
2013 2nd semester	*Lecture* (Class: Introduction to Brain wave)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
	Lecture (Class: Introduction to Brain and Cognitive Science)– undergraduate course Interdisciplinary Major in Brain and Cognitive Sciences *Korea University*, Seoul, Korea

2013 1st semester	*Lecture* (Class: Topics in Brain and Cognitive Engineering I)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
	Lecture (Class: Introduction to Brain and Cognitive Science)– undergraduate course Interdisciplinary Major in Brain and Cognitive Sciences *Korea University*, Seoul, Korea
2012 2nd semester	*Lecture* (Class: Introduction to Cognitive Brain Science)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
	Lecture (Class: Introduction to Brain and Cognitive Science)– undergraduate course Interdisciplinary Major in Brain and Cognitive Sciences *Korea University*, Seoul, Korea
2012 1st semester	*Lecture* (Class: Neuroscience)– graduate course Department of Brain and Cognitive Engineering *Korea University*, Seoul, Korea
	Lecture (Class: Introduction to Brain and Cognitive Science)– undergraduate course Interdisciplinary Major in Brain and Cognitive Sciences *Korea University*, Seoul, Korea
2011 2nd semester	*Lecture* (Class: Advanced Cognitive Science Seminar) – graduate course Instructor, Department of Communication Science *Konkuk University*, Seoul, Korea
2009 2nd semester	*Lecture* (Class: Methodology of Cognitive Science)– graduate course (team teaching) Instructor, Interdisciplinary Program in Cognitive Science *Seoul National University*, Seoul, Korea
2008 2nd semester	*Lecture* (Class: Cognitive Neuroscience Seminar) – graduate course Instructor, Interdisciplinary Program in Cognitive Science *SungKyunKwan University*, Seoul, Korea
2008 1st semester	*Lecture* (Class: Brain, Mind & Behavior) – undergraduate course Instructor, Department of Psychology *SungKyunKwan University*, Seoul, Korea

Academic Editor for the following Journals

Scientific Reports (ISSN: 2045-2322; Editor)
BMC Neuroscience (ISSN: 1471-2202; Editor)
Frontiers in Human Neuroscience (ISSN: 1662-5161; Associate Editor)
Frontiers in Neuroimaging (ISSN: 2813-1193, Associate Editor)
Frontiers in Neurology (ISSN: 1664-2295, Associate Editor)
Frontiers in Neurorobotics (ISSN: 1662-5218; since 2020)
Medicine (ISSN: 0025-7974; since 2014)
Cognitive Science (Korean domestic journal: from 2015 to 2016)

Review Activity for the following Journals & Research Funds

Trends in Biotechnology (Cell Press)
Communications Biology (Nature Press)

Scientific Reports (Nature Press)
NeuroImage
PLOS ONE
Heliyon (Cell Press)
Neural Networks
Frontiers in Neuroscience
Frontiers in Psychiatry
Journal of Ultrasound in Medicine
Journal of Computing Science and Engineering
BMC Neuroscience
Ergonomics
Physiology & Behavior
Social Neuroscience
Journal of Clinical Neurophysiology
Journal of Psychosomatic Research
IEEE Transactions on Cybernetics
IEEE International Conference on Systems, Man, and Cybernetics
IEEE Transactions on Information Forensics and Security
IEEE Access
IEEE International Winter Conference on Brain-Computer Interface
Journal of Cognitive Science
International Journal of Psychophysiology
International Journal of Imaging Systems and Technology
Swiss National Science Foundation
Bulletin of the Polish Academy of Sciences: Technical Sciences
Cognitive Science (Korean domestic journal)
Science of Emotion and Sensibility (Korean domestic journal)
Cognitive and Biological Psychology (Korean domestic journal)

Committee

IEEE Systems, Man, and Cybernetics Society
Brain-Machine Interface Systems (Technical Committee, since 2016)

Patent and Technical Royalty

1. Korean Patent (No. 10-2022-0162445: 'System and Method for Controlling Personalized EEG'; decided for registration on September 23, 2026: Kim SE, Min BK, Kim YS, Park JC, Jin CG)

2. Korean Patent (No. 10-2891105: 'Apparatus, Method and Recording Medium for Controlling Cognitive Processing Speed through Non-invasive Brain Stimulation'; registered on November 20, 2025)

3. Korean Patent (No. 10-2861842: 'Device and Method of Phase-lagged non-invasive Neurostimulation-based Augmentation of Cognitive Functions using the anticorrelated relation between task-relevant brain networks, Recording Medium for Performing the Method'; registered on September 15, 2025)

4. Korean Patent (No. 10-2025-0044255: 'Non-invasive brain stimulation-based drowsiness-modulation technology during driving'; applied on April 4, 2025)

5. Korean Patent (No. 10-2592993: 'Non-invasive scalp-electrode-based electrical brain-stimulatory spatial-resolution augmenting device and method, and a computer-readable storage medium'; registered on October 18, 2023)

6. Korean Patent (No. 10-2533054: 'Apparatus for Diagnosis and Prediction of Tinnitus based on Electroencephalography, Method for Processing Electroencephalography signal and Computer program for the same'; registered on May 11, 2023)

7. Korean Patent (No. 10-2510646: 'Biological-clock and sleep-cycle function control device through non-invasive brain stimulation, control method using the same, and a computer-readable storage medium'; applied on March 13, 2023)

8. Korean Patent (No. 10-2023-0032744: 'Apparatus, Method and Recording Medium for Controlling Cognitive Processing Speed through Non-invasive Brain Stimulation'; applied on March 13, 2023)

9. Korean Patent (No. 10-2023-0000531: 'Device and Method of Phase-lagged non-invasive Neurostimulation-based Augmentation of Cognitive Functions using the anticorrelated relation between task-relevant brain networks, Recording Medium for Performing the Method'; applied on November 21, 2022)

10. Korean Patent (No. 10-2403540: 'Apparatus and method for neuromodulation to improve the tinnitus symptom and its related cognitive impairment'; registered on May 25, 2022: Hong SK, Ahn MH, Min BK, Yoo JH)

11. US patent application (No. US 17/707,193: 'Apparatus for controlling Biological Clock and Sleep cycle through non-invasive brain stimulation, control method using the same, and computer-readable storage medium having computer program recorded thereon for providing the same'; applied on March 29, 2022)

12. US patent registration (No. US 11,241,185: 'Resonating Device and Method of Individual EEG Cognitive Frequency, Recording Medium for Performing the Method'; registered on Feb. 08, 2022)

13. Korean Patent (No. 10-2021-0053454: 'Non-invasive scalp-electrode-based electrical brain-stimulatory spatial-resolution augmenting device and method, and a computer-readable storage medium'; applied on April 26, 2021)

14. Korean Patent (No. 10-2021-0053007: 'Apparatus for Diagnosis and Prediction of Tinnitus based on Electroencephalography, Method for Processing Electroencephalography signal and Computer program for the same'; applied on April 23, 2021)

15. Korean Patent (No. 10-2021-0044449: 'Biological-clock and sleep-cycle function control device through non-invasive brain stimulation, control method using the same, and a computer-readable storage medium'; applied on April 6, 2021)

16. US patent registration (No. US 10,890,972: 'Prefrontal-based Cognitive Brain-Machine Interfacing Apparatus and Method Thereof'; registered on Jan. 12, 2021)

17. Korean Patent (No. 10-2020-0122516: 'Apparatus and Method for Neuromodulation for Tinnitus Remedy and Improvement of Tinnitus-related Cognitive Impairment'; applied on Sep 22, 2020)

18. Korean Patent (No. 10-2124430: 'Method for selecting optimized EEG electrodes based on brain machine interfaces and recording medium for performing the method'; registered on June 12, 2020)

19. Korean Patent (No. 10-2113547: 'Device and Method of EEG Individual Cognitive Frequency Resonance-based Augmentation of Cognitive Functions, Recording Medium for Performing the Method'; registered on May 15, 2020)

20. US patent registration (No. US 10,635,899: 'Apparatus and Method for Detecting Brain Fingerprint using Causal Connectivity of Brain Wave'; registered on 28 Apr. 2020)

21. US patent registration (No. US 10,524,683: 'EEG-based Brain-Machine Interface Apparatus and Method for Recognizing Human Intention using flickering visual stimulus'; registered on Jan. 7, 2020)

22. Korean Patent (No. 10-2031958: 'Prefrontal based Cognitive Brain-Machine Interfacing Apparatus and Method'; registered on Oct. 7, 2019)

23. US patent application (No. US 16/286,220: 'Resonating Device and Method of Individual EEG Cognitive Frequency, Recording Medium for Performing the Method'; applied on Feb. 26, 2019)

24. Korean Patent (No. 10-1949079: 'Resonating Device and Method of Individual EEG Cognitive Frequency, Recording Medium for Performing the Method'; registered on Feb. 11, 2019)

25. Korean Patent (No. 10-2019-0008327: 'Device and Method of EEG Individual Cognitive Frequency Resonance-based Augmentation of Cognitive Functions, Recording Medium for Performing the Method'; applied on Jan. 22, 2019)

26. Korean Patent (No. 10-1939369: 'Apparatus and Method for Context Recognizable Brain-Machine Interface'; registered on January 10, 2019)

27. Korean Patent (No. 10-2018-0082075: 'Method for selecting optimized EEG electrodes based on brain machine interfaces and recording medium for performing the method'; applied on July 16, 2018)

28. US patent application (No. US 15/946,882: 'Prefrontal-based Cognitive Brain-Machine Interfacing Apparatus and Method Thereof'; applied on Apr. 6, 2018)

29. Korean Patent (No. 10-2018-0032121: 'Prefrontal based Cognitive Brain-Machine Interfacing Apparatus and Method'; applied on Mar. 20, 2018)

30. Korean Patent (No. 10-2018-0023103: 'Resonating Device and Method of Individual EEG Cognitive Frequency, Recording Medium for Performing the Method'; applied on Feb 26, 2018)

31. Korean Patent (No. 10-1811365: 'Apparatus and Method for Detecting Brain Fingerprint using Causal Connectivity of Brain Wave'; registered on Dec. 15, 2017)

32. US patent application (No. US 15/677,589: 'Apparatus and Method for Detecting Brain Fingerprint using Causal Connectivity of Brain Wave'; applied on Aug. 15, 2017)

33. Korean Patent (No. 10-2017-0057479: 'Apparatus and Method for Context Recognizable Brain-Machine Interface'; applied on May 8, 2017)

34. Korean Patent (No. 10-2016-0105488: 'Apparatus and Method for Detecting Brain Fingerprint using Causal Connectivity of Brain Wave'; applied on Aug. 19, 2016)

35. Korean Patent (No. 10-1617005: 'Apparatus and Method for Brain-Brain Interface using Brainwave Magnetic Resonance and Transcranial Laser'; registered on Apr. 25, 2016)

36. US patent application (No. US 14/884,972: 'EEG-based Brain-Machine Interface Apparatus and Method for Recognizing Human Intention using flickering visual stimulus'; applied on Oct. 16, 2015)

37. PCT patent application (No. PCT/KR14/884,972: 'EEG-based Brain-Machine Interface Apparatus and Method for Recognizing Human Intention using flickering visual stimulus'; applied on Oct. 16, 2015)

38. Korean Patent (No. 10-1470588: 'Apparatus and Method for Brain-Brain Interfacing'; registered on Dec. 2, 2014)

39. Korean Patent (No. 10-1469878: 'System and Method for Outputting Ultrasonic Energy to control Neural Function'; registered on Dec. 1, 2014)

40. Korean Patent (No. 10-1431203: 'Brain-Machine Interface Apparatus and Method for Recognizing Human Intention using Brain Wave'; registered on Aug. 11, 2014)

41. 2 domestic patents in process, 2 PCT international patents

42. LG Electronics Inc. : 2012 July – 2013 June

43. Lifetech Ltd. (technical royalty): 2012 Sep. - 2015 Aug. / 2015 June - 2018 May

Research Grant

1. Human Plus Convergence Research Grant (National Research Foundation of Korea): Non-invasive brain stimulation-EEG resonance-based study for a human-intelligence-augmenting system: 2018 Apr. – 2018 Nov. / 2020. Apr. – 2024 Dec.

2. Advanced Science Research Grant (National Research Foundation of Korea): Thalamic signal based study of consciousness: 2018 Mar. – 2021 Feb.

3. Basic Science Research Grant (National Research Foundation of Korea): 2012 Sep. - 2018 Aug.

4. Information Technology Research Grant (Institute for Information & communications Technology Promotion): 2017 Jan. – 2021 Dec.

5. Software Computing Source Technology Development Grant (Research for Brain-Computer Interfaces): 2017 Apr. – 2019 Dec.

6. Global Frontier Grant (National Research Foundation of Korea): 2012 Sep. - 2015 Aug.

Academic Affiliations

2012-present	Brain Engineering Society of Korea
2009-present	Korean Psychological Association
2007-present	Korean Society for Human Brain Mapping
2003-present	Association for the Scientific Study of Consciousness
2002-present	Korean Brain Society
2002-present	Society for Neuroscience
2001-present	Cognitive Neuroscience Society
2001-present	Korean Society for Cognitive Science
1996-present	American Association for the Advancement of Science

Honors, Scholarships and Fellowships

2018 July	2018 Albert Nelson Marquis Lifetime Achievement Award
Since 2013 Jun	Being listed for inclusion in 'Marquis *Who's Who'* since the World 2014 (31st Edition)
Since 2011 Feb	Being listed for inclusion in 'Marquis *Who's Who*' since America 2012 (66th Edition)
2010 Nov	Honored as Gerald J. Friedman Fellow, Friedman Diabetes Institute, Beth Israel Medical Center, New York, USA
2007 Nov	Award in oral presentation, The 9th Conference of *Korean Society for Human Brain Mapping*
2007 July	Magna-cum-laude Graduation (Magdeburg University, Germany)
2002 July	DAAD-KOSEF Scholarship (Summer Institute Program) DAAD (Deutscher Akademischer Austausch Dienst) and

	KOSEF (Korea Science and Engineering Foundation) Joint-Program
2000 Dec	Award at the Korea Digital Contents Contest, SoftExpo 2000 Ministry of Information and Communication, Korea
1993 Sep	Superior Scholarship (Seoul National University, Korea)

Invited talks

2026 March	Seoul National University Brain Imaging Center (SNUBIC) Workshop: Demonstration of Concurrent tES–fMRI Experiment
2026 January	2026 Winter Learning Science Workshop: EEG Research (Theory & Practice)
2025 June	"Neuromodulation of thalamus-based conscious perception", Keimyung University, Daegu, Korea
2025 April	"Thalamocortical neurodynamics in human conscious perception of mental representation", KIST, Seoul, Korea
2024 October	"tACS-mediated neuromodulation of mental representation", Korean Brain Stimulation Society, Korea University Hospital, Seoul, Korea
2024 August	"Thalamocortical neurodynamics in human conscious perception", Hong Kong University of Science & Technology, Hong Kong
2024 August	"Phase-dependent tACS-based Neuromodulation", The Korean Society of Brain Neuromodulation Therapy, Seoul, Korea
2024 April	"Thalamocortical inhibitory dynamics support conscious perception", Cutting-edge Biomedical Research, Ajou University Hospital, Suwon, Korea
2024 March	"Fundamentals of EEG and non-invasive neuromodulation", Brain-based Learning Research Center, Seoul National University, Seoul, Korea
2023 August	"Neurodynamics-based Neuromodulation" Brain and Artificial Intelligence Workshop, Korea Brain Education Society, Gonjiam, Korea
2023 April	Special Lecture, The 10th annual meeting of Korean Society of Intraoperative Neurophysiological monitoring, Auditorium, St. Mary Hospital, Seoul, Korea
2023 March	"Funny story of the Brain" 2023 Brain Awareness Week (hosted by the Korean Society for Cognitive Science), Hana square Auditorium, Korea University
2023 March	"From the Brain & To the Brain" 2023 Monthly Seminar for students of the Korean Society for Cognitive Science, Science Library, Korea University
2023 March	"Carrier Panel" 2023 Seminar @ Institute of Brain & Cognitive Engineering, Korea University
2022 Sep	"Brain-machine interfaces: present and future perspectives" The 27th annual conference of Korean Society of Stereotactic and Functional Neurosurgery, Grand Hyatt, Inchon, Korea
2022 May	"Cognitive Neuromodulation" Korea Brain Research Institute, Daegu, Korea
2022 May	"EEG and Brain Stimulation" National Science Foundation of Korea
2021 Oct	"Neuromodulation" Samsung Research

2020 Dec	"Thalamus and Conscious Perception" The 7th annual meeting of Korea Society for EEG and Neurophysiology
2020 Nov	Asia Community Lectures "Human Brain Interfaces", St. Mary's University, USA
2019 Oct	Sound Design Research Lab, Hyundai Motor Company, Gyeonggi-do, Korea
2015 July	The 7th Symposium on Brain and Cognitive Engineering, Seoul, Korea
2015 Feb	The 7th Korea Brain Science Olympiad – Neural Engineering section
2014 June	The 6th International Symposium on Brain and Cognitive Engineering, Tübingen, Germany
2014 Feb	The 6th Korea Brain Science Olympiad – Neural Engineering section
2014 Jan	Software Convergence Symposium 2014 (SWCS 2014), Coex, Seoul, Korea
2013 Dec	Seoul National University, Korea Institute of Psychological Science (Prof. Sungryong Koh)
2013 May	A debate "On Science of Consciousness", The 27th Annual Conference of *The Korean Society for Cognitive Science*, Seoul, Korea
2013 Feb	2013 IEEE International Winter Workshop on Brain-Computer Interface, High1 Resort, Korea
2013 Feb	The 5th Korea Brain Science Olympiad – Neural Engineering section
2012 Dec	Psychiatric Grand Round, GangNam Severance Hospital, Department of Psychiatry, Seoul, Korea
2012 Nov	The 12th China-Japan-Korea Joint Workshop on Neurobiology & Neuroinformatics, Seoul, Korea
2012 Nov	Humanities Based Convergence 2012 Seminar, Seoul, Korea
2012 Sep	ICP (Information and Communication Program), College of Information & Communications, Korea University, Seoul, Korea
2012 June	The 26th Annual Conference of The Korean Society for Cognitive Science, Seoul, Korea
2012 May	The 4th International Symposium on Brain and Cognitive Engineering, Seoul, Korea
2012 Apr	Seoul National University, Korea Institute for Cognitive Science (Prof. Kyung-Min Lee)
2012 Mar	The 1st meeting of the Korean Society of Brain Engineering, DaeJon, Korea
2012 Feb	National Research Foundation, DaeJon, Korea A periodic meeting of the Cognitive Convergence Engineering
2012 Feb	Chonnam National University, GwangJu, Korea Department of Psychology (Prof. Tae-Jin Park)

2012 Feb	SungKyunKwan University, Seoul, Korea Department of Interaction Science (Prof. Kwang-Soo Cho)
2012 Feb	Yonsei University, College of Medicine, Seoul, Korea Department of Psychiatry (Prof. Suk-Kyoon An)
2012 Feb	Hallym University College of Medicine, Chunchun, Korea Department of Physiology (Prof. Hyung-Cheul Shin)
2011 Dec	Korea University, Seoul, Korea Department of Psychology (Prof. Hyun-Taek Kim)
2011 Dec	Citizen forum for the evaluation of the effect of future science & technology Korea Institute of Science & Technology Evaluation and Planning, Seoul, Korea
2011 Dec	Yonsei University, College of Medicine, Seoul, Korea Department of Pharmacology (Prof. Dong-Goo Kim)
2011 Dec	The Annual conference of the Korean Society of Stress Medicine, Seoul, Korea (invited as a guest speaker)
2011 Nov	The Korean Society for Neuro-Humanities
2011 Nov	The 30th Annual conference of Acoustical Society of Korea, Daejon, Korea (invited as a guest speaker)
2011 Aug	Brain and Cognition Measurement Lab (Dr. Yong-Ho Lee) Korea Research Institute of Standards and Science, Daejon, Korea
2011 Mar	Special Seminar, Martinos Center, Massachusetts General Hospital, Harvard Medical School, Boston, USA
2009 Sep	Korea Institute of Science and Technology, Seoul, Korea Center for Neural Science (Dr. Ji-Hyun Choi)
2009 Sep	SungKyunKwan University, Seoul, Korea Class: Language and Mind (Prof. Myung-Won Choi)
2009 July	Korea Computer Congress 2009, Jeju, Korea Intelligence-Language-Vision-Bio association workshop Korea Information Science Society
2009 June	Hankuk University of Foreign Studies, Seoul, Korea Linguistics and Cognitive Science (Prof. Jong Sup Chun)
2009 Apr	Korea University, Seoul, Korea Department of Psychology (Prof. Chai-Youn Kim) Cognitive Neuroscience Colloquium
2008 Dec	Hankuk University of Foreign Studies, Seoul, Korea Linguistics and Cognitive Science (Prof. Jong Sup Chun)
2008 Dec	Workshop #2: 'Oscillations in Human Electrophysiology' The 11th Annual Meeting of *The Korean Society for Brain and Neural Science*,

	Seoul, Korea
2008 Aug	Brain and Cognition Measurement Lab (Dr. Yong-Ho Lee) Korea Research Institute of Standards and Science, Daejon, Korea
2008 May	National Institute of Scientific Investigation, Seoul, Korea
2008 May	Yonsei University, Seoul, Korea Graduate program in Cognitive Science (Prof. Sang Chul Chong)
2008 Apr	Yonsei University, Seoul, Korea Department of Communication Human Communication Lab. (Prof. Joohan Kim)
2008 Mar	Seoul National University, Korea Institute for Cognitive Science (Prof. Kyung-Min Lee)
2008 Jan	2007/2008 Winter workshop (Sogang University) of Korean Students Association of Cognitive Science
2007 Nov	Yonsei University, College of Medicine, Seoul, Korea Department of Pharmacology (Prof. Dong-Goo Kim)
2007 Oct	Ewha womans University, Korea Department of Life Science Behavior and Ecology Lab. (Prof. Jae-Chun Choi)
2007 Oct	Seoul National University Hospital, Korea MEG Center (Prof. Chun-Kee Chung)
2007 Sep	Seoul National University Hospital, Korea Clinical Cognitive Neuroscience Center (Prof. Jun-Soo Kwon)
2007 Sep	Yonsei University, College of Medicine, Seoul, Korea Research Institute of Radiological Science Molecular Neuroimaging Technology Lab. (Prof. Hae-Jung Park)
2002 Jun	Sogang University, Seoul, Korea Language Lab. (Prof. Sook-Hwan Cho)
1999 Apr	Korea Advanced Institute of Science & Technology, DaeJon, Korea Brain Lab. (Prof. Soo-Yong Kim)
1999 Apr	Seoul National University, Korea Institute for Molecular Biology and Genetics Molecular Neurobiology Lab. (Prof. Bong-Kiun Kaang)
1998 Jun	Northwestern Medical School, Chicago, IL, USA Melatonin Receptor Lab. (Prof. Margarita Dubocovich)