



## Curriculum Vitae

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### ABOUT ME

Mr. Wong has over 40 years of experience in the area of ground improvement technology. He is currently the chief executive of Sanshin Construction in Thailand and leader of overseas operations division of Sanshin Construction in Japan. Sanshin is a well-known corporation in the fields of ground improvement, earth retaining structures, and foundation engineering in the world. Mr. Wong has extensive experience in the construction of Metro Rail Transit (MRT) systems and high-speed railroads in Japan, Hong Kong, Singapore, Taiwan, and Thailand. His technical specialties include verification and monitoring of grouting, development of ground treatment technology, and mitigation of structures using grout materials. He has authored over 10 technical papers, many of them dealing with grouting technologies for structures in challenging construction environments. For the past few years, Mr. Wong has devoted himself to the training of new engineering generation in combining theory and applications of grouting technology. He was invited by several universities in Japan, Taiwan, and Thailand to give guest speeches related to jet grouting technology, and also to be an outside committee member to mentor students for their M.S. and Ph.D. research work.

### EDUCATION

Bachelor 1983.01~1985.01 Kogyokusha College of Technology

### EMPLOYMENT EXPERIENCE

|          |                                        |
|----------|----------------------------------------|
| 1991.01~ | SANSHIN Corporation                    |
| 1991.01~ | Branch Manager, SANSHIN Corporation    |
| 2014.03~ | Executive Officer, SANSHIN Corporation |

### RESEARCH INTERESTS

1. Verification and monitoring of grouting
2. Innovations and developments in ground treatment technology
3. Grouting for seismic retrofit and liquefaction mitigate
4. Grout materials

### REPRESENTATIVE PUBLICATION

1. Liao, H.J., Cheng, S.H., **Wong, Ricky K.N.**, You, C.F., Masaoka, A. and Hsieh, C.D. (2015), "Grouting to remove piles from a tunneling machine cutter-head", Proceeding of the Institution of Civil Engineers-Geotechnical Engineering, Vol. 168, Issue 4, pp. 358-370.
2. Cheng, S.H., Liao, H.J., Yamazaki, J., and **Wong, Ricky K.N.** (2017), "Evaluation of Jet Grout Column Diameters by Acoustic Monitoring", Canadian Geotechnical Journal, Vol. 54, No. 12., pp. 1781-1789.
3. Cheng, S.H., Liao, H.J., Yamazaki, J., **Wong, Ricky K.N.**, and Iwakubo, T. (2020), "Alignment of Vertical and Inclined Jet Grout Columns for Waterproofing ", Geotechnical Testing Journal, Vol. 43, No. 2., pp. 325-338. (doi:10.1520/GTJ20180324).
4. Cheng, S.H. Chao, K.C., **Wong, Ricky K.N.**, and Wang, Morris I.M. (2023), " Control of jet grouting process induced ground displacement in clayey soil ", Transportation Geotechnics, Vol. 40, pp100983,

May, 2023. <https://doi.org/10.1016/j.trgeo.2023.100983>.

5. Liao, H.J., Cheng, S.H., Kuo, L.W., **Wong, Ricky K.N.**, and Chien, P.Y. (2012), "Properties of hydraulically dumped coal ash after soil mixing improvement", *Procds., 4th International Conference on Grouting and Deep Mixing*, New Orleans, Louisiana, USA, February, Vol. 2, PP. 1373-1384.
6. Chu, H.C., Wong, **Ricky K.N.**, Liao, H.J., and Cheng, S.H. (2012), "Large diameter rapid jet grouting in Taipei silty soil", *Procds., 4th International Conference on Grouting and Deep Mixing*, New Orleans, Louisiana, USA, February, Vol. 2, PP. 2132-2141.
7. Cheng, S.H., **Wong, Ricky K.N.**, and Liao, H.J. (2012), "A large diameter jet grouting method for arrival of shield tunneling machine", *International Symposium & short courses: Recent Research, Advances & Execution Aspects of Ground Improvement Works*, Brussels, Belgium, May, Vol. 4, PP. 205-214.
8. Cheng, S.H., Liao, H.J., **Wong, Ricky K.N.**, Iwakubo, T., and Hsieh, Y.H. (2013), "Performance of V-JET method for arrival of shield tunneling machine", *Proceedings of Geotechnics for Sustainable development*, Hanoi, Vietnam, November, PP. 191-199.
9. Cheng, S.H., Liao, H.J., **Wong, Ricky K.N.**, Junichi Yamazaki, Iwakubo, T., and Wang Morris (2015), "TAM Grouting to Reduce Artesian Water Pressure Acting on the Base of Excavation", *International Conference on Soft Ground Engineering*, Singapore, December PP. 873-881.
10. Liao, H.J., Chiu, C.L., Cheng, S.H., and **Wong, Ricky K.N.** (2016), "3D Measurement for Drilling Alignment of Jet Grouting in Silty Sand", *Proceeding of the 19th Southeast Asian Geotechnical Conference & 2nd AGSSEA Conference*, Singapore, May PP. 817-821.
11. Liao, H.J., Cheng, S.H., Lu, S. L., Chiu, C. L. and **Wong, Ricky K. N.** (2017), "Pressure Distribution of TAM Grouting under a Deep Excavation in Silty Soil", *Grouting, Deep Mixing and Diaphragm Walls at Grouting 2017*, Hawaii USA, July, GSP 288, PP. 175-184.
12. **Wong, Ricky K. N.**, Iwakubo, T., Leong, G. K., Weng, Y. F., Chu, J., and Cheng, S.H. (2019), "Performance of Rapid-Jet system for soil improvement works in soft marine clay ", *The 16<sup>th</sup> Asian Regional Conference on Soil Mechanics and Geotechnical Engineering*, Taipei, Taiwan, October.
13. **Wong, Ricky K. N.**, Weng, Y. F., Leong, G. K., and Cheng, S.H. (2019), "Evaluation of effectiveness of large diameter jet grout for soil improvement works in soft marine clay ", *The 4<sup>th</sup> International Conference on Geotechnics for Sustainable Infrastructure Development*, Hanoi, Vietnam, November.
14. Chao, K. C., Seepim S., Surachet, L., Prasert, C., and **Wong, Ricky K. N.** (2019), "Evaluation of Large Diameter Jet Grouting Technique used for Tunnel Construction in Bangkok", *5<sup>th</sup> International on Science, Engineering & Environment*, Bangkok, Thailand, Nov., c3051.
15. Cheng, S.H., Liao, H. J., **Wong, Ricky K. N.** and Junichi Yamazaki (2020), "Advanced Quality Control Technology for Jet Grouting Method ", *Proceeding of International Symposium on Evolution of Jet Grouting Technology*, Tokyo, Japan, October. II-89.
16. Subhasinghe, R. S., Chao, K. C., **Wong, Ricky K. N.** and Iwakubo, T. (2020), "Effect of Jet Grouted Preceding Beams on Performance of Diaphragm Wall for the MRT Orange Line Project", *Proceeding of International Symposium on Evolution of Jet Grouting Technology*, Tokyo, Japan, October.
17. Silve, N., Chao, K. C., **Wong, Ricky K. N.**, Iwakubo, T., and Cheng, S. H. (2020), "Evaluation of Large Diameter Jet Grouted Columns using Acoustic Monitoring System for Bangkok Soils", *Proceeding of International Symposium on Evolution of Jet Grouting Technology*, Tokyo, Japan, October.
18. Chao, K. C., Surachet, L., **Wong, Ricky K. N.**, Iwakubo, T., and Takeshima, H. (2020), "Evaluation of Large Diameter Jet Grouting Technique used for Tunnel Construction in Bangkok", *Proceeding of International Symposium on Evolution of Jet Grouting Technology*, Tokyo, Japan, October.

19. Liao, H. J., Weng, S. J. Cheng, S.H., and **Wong, Ricky K. N.** (2021), " Base Grouting against Uplifting Water for a Deep Excavation in Taipei Basin ", 10th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, University of Cambridge, UK, June, PP. 773-779.
20. Liao, H. J., Weng, S. J. Ho, C. C., and **Wong, Ricky K. N.** (2021), " Grouting for the Rescue of Stuck in Conglomerate Boulder Layer ", 10<sup>th</sup> International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, University of Cambridge, UK, June, PP. 91-97.
21. **Wong, Ricky K.N.**, Jhan, R. F., Wang, Y. H., Wong, Isaac T. Y., Lin, Y. C., Cheng, S. H., Ge, Louis (2022), " Supporting measures for improving the spoil slurry flow during jet grouting in soft clay ", *Procds.*, 11<sup>th</sup> International Symposium: Field monitoring in geomechanics, United Kingdom.
22. Akhter, J., Saowiang, K., Chao, K. C. **Wong, Ricky K.N.** (2022), " Evaluation of Key Design Features for Embankment Constructed with Deep Cement Mixing Piles on Soft Clay ", *Procds.*, 11<sup>th</sup> International Symposium: Field monitoring in geomechanics, United Kingdom.
23. Liao, H.J., Chen, Y. H. and **Wong, Ricky K. N.** (2023), " LESSONS LEARNED FROM SILICATE GROUTING IN A COFFERDAM CONSTRUCTION ", *Procds.*, 6th International Conference on Grouting and Deep Mixing, New Orleans, Louisiana, USA,
24. Sarkar, P. K., Chan, K. C., and **Wong, Ricky K.N.** (2022), "Evaluation of Index Program affecting Unconfined Compressive Strength of Jet-grouted Soil Columns for Bangkok Soils", *Procds.*, International conference on deep foundations and round improvement, Berlin.
25. Cheng, S. H., Lu, C. W., **Wong, Ricky K. N.**, Hsu, H. Y., Wong, Isaac T. Y., Chen, C. H. and Chen, C. J. (2023), " A case study of the ground improvement works for the TBM tunneling in composite stratum ", The 17<sup>th</sup> Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, Nur-Sultan, Kazakhstan, August.
26. Cheng, S.H., Li, M.J., **Wong, Ricky K.N.**, Iwakubo, T., and Ueno, S. (2023), " A smart TAM grouting system for the base grout of the shaft in Bangkok ", 2nd International Conference on Construction Resources for Environmentally Sustainable Technologies, Fukuoka, Japan, November, PP. 341-344.
27. Cheng, S.H., Liao, H. J., **Wong, Ricky K. N.**, Li, M. J., Jhu, H. M., Wang, Y. H., Cheng, S. C. (2023), " Jet Grout Digitization management systems for piles removal in clayey layers ", *Proceeding of the 21st Southeast Asian Geotechnical Conference and 4th AGSSEA Conference (SEAGC-AGSSEA 2023)*, Bnagkok, Thailand, October, Paper No. 6387.
28. Saelao, T., Chao, K. C., Cheng, S. H., **Wong, Ricky K. N.**, Wang, I. M. (2023), " Evaluation of Bottom Grouting Quality for Metropolitan Waterworks Authority (MWA) Project ", *Proceeding of the 21st Southeast Asian Geotechnical Conference and 4th AGSSEA Conference (SEAGC-AGSSEA 2023)*, Bnagkok, Thailand.
29. Cheng, S.H., **Wong, Ricky K. N.**, Hsu, H. Y., Wong, Isaac T. Y., Chen, C. J. (2024), " Ground improvement for the shield tunneling in the composite stratum ", *Proceeding of the 11th International Symposium of Geotechnical Aspects of Underground Construction in Soft Ground (IS-Macau 2024)*, Macao, China, June, Paper No. 238.