Curriculum Vitae

Associate Prof. Yu-Cheng Kan, Ph.D.

1) General Information

●AssociateProfessor, Chaoyang University of Technology, Department of Construction Engineering
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2) Academic Background and Degrees

● Bachelor Department of Civil Engineering, National Chung-Hsing University, Taichung, Taiwan(1981-1985)
● M.S. Department of Civil and Environmental Engineering, Kansas State University (1987-1989)
● Ph. D. Department of Civil and Environmental Engineering, Kansas State University (1989-1993)

3) Professional Career

● Associate engineer, Department of Rapid Transit Systems, Taipei City Government (1994/8~1995/7)
● Associate Professor, Department of Civil Engineering, Nan-Jeon College, Tainan (1995/8~1996/7)
● Associate Professor, Department of Civil Engineering, Chaoyang University of Technology (1996/8~now)

4) Miscellaneous

● Member of IASMiRT ASCE (Since 1998)
● Chair of Committee in the Branch of Concrete Technology in Structures and materials of Nuclear Facilities (2016~2018)

5) Research fields

● Structural mechanics of concrete
● Shielding concrete
●Special concrete
● Fracture mechanics of concrete
● Behavior of concrete deck

6) Publications

1. Y. -C. Kan, M.-G. Lee and H. –W. Lee. “Experimental investigation of mode-I fracture toughness of real-cracked concrete repaired by epoxy,” *Construction and*

Building Materials, 293(12):123490, July 2021.

2. Ming-Gin Lee, S.-L. Lo b , Y.-C. Kan, et al. “Water quenched slag from incinerator ash used as artificial stone,” *Case Studies in Construction Materials*, Vol. 16, June 2022, e00827.
3. Yu-Cheng Kan, Kuang-Chih Pei, Wei-Lin Hsu, “Bond Behavior of Low-activated High Aluminate Concrete with Reinforcement under Cyclic Load,” Materials Science Forum (EI), Vol. 972, pp. 34-39, Oct. 2019.
4. Chung-Ho Huang, Y.-C. Kan, L.-H. Chen and,K.-C. Pei, “Flexural Behavior of Concrete Beams with Large Size Steel Bars,” Journal of Structures and Buildings (SCI), 167(SB 6), pp. 334-342, 2014.
5. Kan, Y.-C., K.-C. Pei and C.-L. Chang, “Strength and Fracture Toughness of Heavy Concrete with Various Iron Aggregate Inclusions,” the Journal of Nuclear Engineering Design (SCI), Vol.228 pp.119-127, March, 2004.
6. Wu, Chung-Hao, C.-H. Huang *, Y.-C. Kan, Tsong Yen, “ Effects of fineness and dosage of fly ash on the fracture properties and strength of concrete,” Applied Science (SCI), Vol. 9, No. 2266, 2019.
7. Kuang-Chih Pei, Yu-Cheng Kan, “Using Acoustic Emission Monitoring to Observe the De-bonding Behavior of Rebar in Cyclic Pull-out Tests,” Applied Mechanics and Materials (EI), Vol. 784, pp. 377-384, 2015.
8. Kan, Yu-Cheng, L-H Chen, Tson Yen, " Mechanical Behavior of Lightweight Concrete Steel Deck," Construction and Building Materials (SCI), Vols. 42, Elsevier, pp 78-86, May, 2013.
9. Chung-Hao Wu, Yu-Cheng Kan, Chung-Ho Huang, Tsong Yen, Li-Huai Chen, " Flexural behavior and size effect of full scale reinforced lightweight concrete beam," Journal of Marine Science and Technology (SCI), Vol. 19, 2, pp. 132-140, April, 2011.
10. Kan, Yu-Cheng, L-H Chen, C.H. Wu, Tson Yen and H-W Liao, “Composite Behavior of Concrete Slab with Steel Decking under Flexural,” Advanced Materials Research (EI), Vols. 284-286, pp 628-632, 2011.
11. Y. -C. Kan, T. Yen and M.-G. Lee. “Restored strength of cracked concrete beam repaired by epoxy and PMMA,” ACI Material (SCI), Vol. 105, pp. 451-8, 2008.
12. Kan, Y.-C.*, K.-C. Pei and C.-L. Chang, 2004, “Strength and Fracture Toughness of Heavy Concrete with Various Iron Aggregate Inclusions,” the Journal of **Nuclear Engineering Design**, Vol.228 pp.119-127, March. (SCI/EI)
13. Chiang,C.-H., C.-L. Tsai and Y.-C. Kan, 2000," Acoustic Inspection of Bond Strength of Steel-reinforced Mortar after Exposure to Elevated Temperatures," **Ultrasonics**, Vol.38, pp. 534-536.
14. Chih-Hung Chiang, and Yu-Cheng Kan, 1999, "Reinforced Concrete Application of Acoustic Nondestructive Testing for Safety Evaluation," **Nondestructive Testing Evaluation**, Vol. 15, pp.139-150. (EI)

7) Proceedings

1. Kan, Yu-Cheng, “Mechanical Behavior of Mode I Fractured Concrete Repaired by Polymethyl Methacrylate (PMMA),” Proceeding, ICMTA2019 (EI), Kyoto, Japan, October 11-14, 2019.
2. Yu-Cheng Kan , K.-C. Pei and M.-H. Cheng, “Investigation of the Mechanical Property of Low-Activation Concrete,” CMPSE2017 Proceeding (EI), MATEC Web

of Conferences, Vol. 130, 2017.
3. Kan, Yu-Cheng, K.- C., M.-H. Cheng "A Study of Fracture Properties of High Alumina Shielding Concrete (HASC)", SMiRT-24, Busan, Korea, August 10-25, 2017.
4. Kan, Yu-Cheng, Hung-Wei Lee, "Investigation of fracture toughness of cracked Concrete beam Repaired by Epoxy," Proceeding, International Conference on Shells, Plates and Beams, University of Bologna, Italy, 9-11 September 2015.
5. Kan, Y.-C., K.-C. Pei, Li-Hwei Chen, "An Investigation of Bond Behavior of Large-size Steel Bar Used in Nuclear Concrete Containment," Proceeding, SMiRT-22, San Francisco, August 18-23, 2013.
6. Kan, Y.-C., K.-C. Pei, C. -C. Cheng, "Deteriorating Fracture Property and Wave Velocity of Concrete Used in Nuclear Power Plant in Marine Environment," Proceeding, SMiRT 18, Beijing, China, August 7-12, 2005.
5. Kan, Y.-C.*, S.-C. Yang and K.-C. Pei, 2003, "Toughness of Steel Fiber-Reinforced Heavy Concrete," ***Proceeding***, *17th International Conference of Structural Mechanics in Reactor Technology* (SMiRT-17), Prague, Czech,17-22 August.
7. Kan, Y.-C., Pei, K.-C. and Chang, C.-L., 2001, " Strength and Fracture Toughness of Heavy Concrete with Various Iron Aggregate Inclusions," ***Proceeding***, *16th International Conference of Structural Mechanics in Reactor Technology* (SMiRT-16), Washington D.C., 12-17 August, paper No.1230, H5 pp.1-7.
8. Kan, Y.-C., C.-S. Sue, and C.-C. Cheng, 1999,"Comparison of Cracked Sections revealed by dye and the NDT method." ***Proceedings***, EASEC-7, Kochi, Japan, August, pp.1514-1519.
9. Chiang, C.-H., C.-K. Tang, and, Y.-C. Kan, 1998, "Experimental Study on the Acoustic Wave Velocity in Steel Reinforced Mortar Under External Pull-Out Load." 22nd National Conference on Theoretical and Applied Mechanics, December 19-21, Tainan, Taiwan.
10. Kan, Y.-C. and S. E. Swartz, 1998. "Evaluation of Residual Strength from the Cracked Sections of Concrete Beams." Proceedings, EASEC6, Taipei, R.O.C., January 14-16, 1998, pp.817-822.
11. Chiang, C.-H., Y.-C. Kan, C.-K. Tang, and C.-S. Su, 1997, "Acoustic Inspection of Bond Strength Between Mortar and Reinforcement," 23rd Annual Symposium on Progress in Quantitative Nondestructive Evaluation, San Diego.
12. Kan, Y.-C., and Swartz, S. E., (1995). "The Effects of Mix Variables on Concrete Fracture Mechanics Parameters." Fracture Mechanics of Concrete Structures-FraMCoS 2 Proceedings, Zurich, Switzerland, pp.111-118.
13. Swartz, S.E., Kan, Y.-C., (1992). "The influence of aggregate/paste bonding and strength on mode I fracture mechanics properties of concrete." Fracture Mechanics of Concrete Structures. ed. by Z.P. Bazant, FramCoS 1, Elsevier Applied Science, London, pp.437-442.
14. Swartz, S. E., Kan, Y.-C.,(1991). "Effect of support conditions on fracture energy measurements for concrete beams." ECF 8 Fracture Behavior and Design of Materials and Structures, pp. 660-666.
15. Swartz, S.E., Kan, Y.-C.,(1991). "On the validity of indirect measurement of the LPD for SEN concrete beams." In Fracture Processes in Concrete, Rock and Ceramics, eds, J.G.M. vanMier, J.G. Rots, A. Baakker, E&FN SPON, London, 1991, pp.771-778.
16. Swartz, S.E., Kan, Y.-C., and Hu, K. K., (1990). "An expert system approach to

applying fracture mechanics to reinforced concrete." International Workshop on the Applications of Fracture Mechanics to Reinforced Concrete, Turin, Italy, 6 October, 1990, pp. 579-606.

17. Kan, Y.-C., Swartz, S. E.,(1989). "Influence of curing conditions and widths on the fracture of concrete beams." Proceedings of 1989 SEN Spring Conference on Experimental Mechanics. Cambridge, MA, May 29-June 1, 1989, pp.196-201.
18. Liu, Z.-G., Swartz, S. E., Hu, K. K., and Kan, Y.-C., (1989). "Time-dependent response and fracture of plain concrete beams." In fracture of Concrete and Rock: Recent Developments, eds. S.P. Shah, S.E. Swartz & B. Barr, Elsevier Applied Science, London, pp.577-586.