

## Curriculum Vita

Kyung (Chris) T. Han  
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- Education*
- University of Massachusetts Amherst  
Doctorate in Research and Evaluation Methods (Psychometrics), May 2008
  - Middle Tennessee State University  
Graduate coursework in quantitative psychology (before transferring to UMass Amherst), 2003
  - Sung-Kyun-Kwan University, Seoul, S. Korea  
Bachelors of Arts in Business Administration (B.A.B.A.), February 2000  
Minors: Education; Science of Policy Administration

- Honors/  
Prizes/  
Grants/  
Patents*
- US-Patent on *Honeycomb structure for automated pool assembly of test questions for test administration*
  - National Council on Measurement in Education (NCME) 2023 Alicia Cascallar Award for Outstanding Paper by Early Career Scholar (as a coauthor)
  - 2018 Qiyas Award For Excellence In Research And Development by National Center for Assessment, Saudi Arabia
  - NCME 2017 Annual Award
  - American Educational Research Association (AERA) Div. D. Significant Contribution to Educational Measurement Award 2015 on the edited volume titled, *Computerized Multistage Testing: Theory and Application* (contributed two chapters)
  - NCME Award - Jason Millman Promising Measurement Scholar Award 2013
  - NCME Alicia Cascallar Award for Outstanding Paper by Early Career Scholar 2012
  - ETS Summer Internship, Educational Testing Service 2007
  - Graduate Student Grants, Applied Psychological Measurement Inc. 2006
  - Graduate Council Travel Grant, University of Massachusetts Amherst 2006
  - Outstanding Mission Performance Award, Republic of Korea Army 2000
  - Best literature award for Mobile Internet Services (\$5,000), KTF PCS Co., S. Korea 2000
  - Outstanding Business Administration Undergraduate Scholarship (tuition waiver), Sung-Kyun-Kwan University, Seoul 1996, 1997

*Professional/  
Research  
Experiences* June, 2008 to present:  
Head of Test Development and Psychometrics (TD&P), Graduate Management Admission Council® (GMAC®) (*started as associate psychometrician, then promoted to psychometrician, senior psychometrician, senior director, and then to Head of TD&P*)  
Roles: To lead Department of Test Development and Psychometrics at GMAC® (1) to design, develop, and launch assessment products to best serve the graduate

management education market, (2) to design and implement advanced test drivers based on, for example, Computerized Adaptive Testing (CAT), Multistage Testing (MST), Linear-on-the-Fly (LOFT), and (3) to conduct psychometric and operational researches to continue to renovate and improve the measurement quality and test experience of exiting test products including GMAT<sup>®</sup>, NMAT, and EA.

*Jun. 2007 to Jul. 2007:*

Research Intern, Educational Testing Service (ETS)

*September, 2004 to May, 2008:*

Senior Research Assistant, Center for Educational Assessment, University of Massachusetts Amherst

*Mar. 2000 to June 2002:*

Personnel Officer (1<sup>st</sup> Lieutenant), Republic of Korea Army

- Oct. 2001 ~ Jun. 2002, Independent research project in the Korea Army, ‘Successful Leadership in a Battalion’

*Mar. 1999 to Feb. 2000:*

Honors thesis research at Sung-Kyun-Kwan University, Seoul, Korea, ‘Case Analysis for Reconstruction Industry’ (under the guidance of Prof. Kwang S. Kim)

*Advisory  
Committees*

- Korea Institute for Curriculum and Evaluation (KICE): Developing Multistage Test system for National Accountability Assessment [2020-present].
- Universidad de Chile, Departamento de Evaluación, Medición y Registro Educacional, International Advisory Council [present]
- Secondary School Admission Test (SSAT): Technical Advisory Panel [present]
- Korea Institute for Curriculum and Evaluation (KICE): National Accountability system development [2014-2019].
- Ministry of Education, Science and Technology, Korea: Test for Enhanced Employability & Upgraded Proficiency (TEENUP) [2012-2016].
- Veebit: Development of Veebit Value Profiler Assessment kit [2013-2018].
- Korea Institute for Curriculum and Evaluation (KICE): Assessment 2.0 [2013-present].
- Korea Institute for Curriculum and Evaluation (KICE): Automated Scoring System for Constructed Responses [2013-2016].
- Korea Institute for Curriculum and Evaluation (KICE): National English Ability Test (NEAT) [2012-2013].

*Professional  
Services*

- Editorial board / manuscript reviewer (*Journal of Computerized Adaptive Testing*) 2012-2022
- Editorial board (*Journal of Educational Measurement*) 2019-2022
- Editorial board (*Quantitative Psychology and Measurement*) 2021
- Software review editor (*International Journal of Testing*) 2009-2011
- Manuscript reviewer (*Applied Psychological Measurement*) 2008-2023
- Manuscript reviewer (*Psychometrika*) 2012-2018
- Manuscript reviewer (*Journal of Educational Measurement*) 2007-2019

- Manuscript reviewer (*Journal of Educational and Behavioral Statistics*) 2015-2018
- Manuscript reviewer (*British Journal of Mathematical and Statistical Psychology*) 2013-2014
- Manuscript reviewer (*Asia Pacific Education Review*) 2010-2021
- Manuscript reviewer (*Educational Assessment*) 2018
- Manuscript reviewer (*Educational and Psychological Measurement*) 2011, 2013
- Manuscript reviewer (*International Journal of Testing*) 2008-2015
- Manuscript reviewer (*Practical Assessment, Research, and Evaluation*) 2021
- Manuscript reviewer (*EDUKACJA Quarterly*) 2014-2015
- Manuscript reviewer (*SAGE Open*) 2016
- Manuscript reviewer (*Educational Sciences: Theory & Practice*) 2016
- Manuscript reviewer (*Journal of Educational Evaluation for Health Professions*) 2018
- Manuscript reviewer (*Educational Measurement: Issues and Practice*) 2018-2023
- Manuscript reviewer (*Applied Measurement in Education*) 2019
- Report reviewer (Education and Training Evaluation Commission Technical Report) 2018-2021
- Proposal reviewer (American Educational Research Association) 2010-2012
- Proposal reviewer (International Association for Computerized Adaptive Testing) 2010
- Proposal reviewer (National Council on Measurement in Education) 2007-2012
- Proposal reviewer (Northeastern Educational Research Association) 2008-2009
- Proposal reviewer (Association Test Publishers) 2009-2019
- Presentation discussant (National Council on Measurement in Education) 2009-2016
- Session chair (International Test Commission) 2010
- Session chair (International Association of Computerized Adaptive Testing) 2011
- Alicia Cascallar Award Committee (National Council on Measurement in Education) 2014-2015
- Annual Award Committee (National Council on Measurement in Education) 2017
- Jason Millman Award Committee Chair; Vice-chair (National Council on Measurement in Education) 2018-2020
- Award Committee Chair/Vice-chair (American Educational Research Association) 2015-2017
- President; Vice President (Korean-American Educational Researchers Association) 2021-2023
- Board of Directors (Korean-American Educational Researchers Association) 2021-2023
- Treasurer; Executive team (Korean-American Educational Researchers Association) 2012-2014

*Publications (Peer-reviewed)* Suk, Y., & Han, K. (in press). A psychometric framework for evaluating fairness in algorithmic decision making: differential algorithmic functioning. *Journal of Educational and Behavioral Science*.

*Journals and  
Book  
Chapters)*

- Lim, H., Choe, E. M., & Han, K. (2022). A residual-based differential item functioning detection framework in item response theory. *Journal of Educational Measurement*, 59(1), 80-104. DOI: 10.1111/jedm.12313.
- Choe, E. M. & Han, K. (2022). Constructing a robust score scale from IRT scores with informed boundaries. *Journal of Educational Measurement*. <https://doi.org/10.1111/jedm.12307>.
- Han, K. T. (2020). Framework for developing multistage testing with inter-sectional routing for short-length tests. *Applied Psychological Measurement*, 44(2), 87-102.
- Liu, C., Han, K. T., & Li, J. (2019). Compromised item detection for computerized adaptive testing. *Frontiers in Psychology*, 10(829). DOI: <https://doi.org/10.3389/fpsyg.2019.00829>.
- Han, K. T., Dimitrov, D., & Al-Mashary, F. (2019). Developing multistage tests using D-scoring method. *Educational and Psychological Measurement*, 79(5), 988-1008. <https://doi.org/10.1177/0013164419841428>
- Han, K. T. (2018). Conducting simulation studies for computerized adaptive testing using SimulCAT: an instructional piece. *Journal of Educational Evaluation for Health Professions*, 15(20). DOI: <https://doi.org/10.3352/jeehp.2018.15.20>.
- Han, K. T. (2018). Components of the item selection algorithm in computerized adaptive testing. *Journal of Educational Evaluation for Health Professions*, 15(7). DOI: <https://doi.org/10.3352/jeehp.2018.15.7>.
- Han, K. T. (2018). PARSCALE, In *SAGE Encyclopedia of Educational Research, Measurement and Evaluation*.
- Han, K. T. (2018). WinGen. In W. J. van der Linden & R. K. Hambleton (Eds.), *Handbook of item response theory: models, statistical tools, and applications*. Boca Raton, FL: CRC Press.
- Guo, F., Meng, H., Han, K. T., & Talento-Miller, E. (2016). GMAT integrated reasoning section: design and development. *China Examinations*, 295(11), 3-12.
- Han, K. T. (2016). Maximum likelihood score estimation method with fences for short-length tests and computerized adaptive tests. *Applied Psychological Measurement*, 40(4), 289-301.
- Han, K. T., & Rudner, L. M. (2016). Decision consistency. In C. Wells, & M. Faulkner-Bond (Eds), *Educational measurement: from foundation to future*. New York, NY: Guilford.
- Han, K. T., Wells, C. S., & Hambleton, R. K. (2015) Effect of adjusting pseudo-guessing parameter estimates on test scaling when item parameter drift is

- present. *Practical Assessment, Research & Evaluation*, 20(16). DOI: <https://doi.org/10.7275/jyyy-wp74>.
- Deng, N., Anatchkova, M. D., Waring, M. E., Han, K. T., & Ware, J. E. (2015). Testing item response theory invariance of the standardized quality-of-life disease impact scale (QDIS®) in acute coronary syndrome patients: differential functioning of items and scale. *Quality of Life Research*, 24(8), 1809-1822.
- American Council on Education. (2015). Educational measurement. (Korean Society for Educational Evaluation, & Korean-American Educational Research Association, Trans.). Seoul: Korea. (Original work published 2006)
- Han, K. T., & Paek, I. (2014). A review of commercial software packages for multidimensional IRT Modeling. *Applied Psychological Measurement*, 38(6), 486-498.
- Han, K. T., & Guo, F. (2014). Impact of violation of the missing-at-random assumption on full-information maximum likelihood method in multidimensional adaptive testing. *Practical Assessment, Research & Evaluation*, 19(2). Available online: <http://pareonline.net/getvn.asp?v=19&n=2>.
- Han, K. T., & Koniewski, M. (2014). Software tools for multistage testing simulation. In D. Yan, A. von Davier, & C. Lewis (Eds), *Computerized multistage testing: theory and applications*. Boca Raton, FL: CRC Press.
- Han, K. T., & Guo, F. (2014). Assembling optimal modules on-the-fly. In D. Yan, A. von Davier, & C. Lewis (Eds), *Computerized multistage testing: theory and applications*. Boca Raton, FL: CRC Press.
- Han, K. T. (2013). MSTGen: Simulated data generator for multistage testing. *Applied Psychological Measurement*, 37(8), 666-668.
- Han, K. T. (2013). Item pocket approach to allow response review and change in computerized adaptive testing. *Applied Psychological Measurement*, 37(4), 259-275.
- Paek, I., & Han, K. T. (2013). Software review: IRTPRO 2.1 for Windows (item response theory for patient-reported outcomes). *Applied Psychological Measurement*, 37(3), 242-252.
- Talento-Miller, E., Guo, F., & Han, K. T. (2013). Examining test speededness by native language. *International Journal of Testing*, 13(2), 89-104.
- Deng, N., & Han, K. T., & Hambleton, R. K. (2013). A review of DIMPACK V.1.0: Conditional Covariance-based dimensionality analysis package. *Applied Psychological Measurement*, 37, 162-172.

- Han, K. T. (2012). An efficiency balanced information criterion for item selection in computerized adaptive testing. *Journal of Educational Measurement*, 49(3), 225-246.
- Han, K. T., Wells, C. S., & Sireci, S. G. (2012). Impact of multidirectional item parameter drift on test equating and proficiency estimates. *Applied Measurement in Education*, 25(2), 97-117.
- Han, K. T. (2012). SimulCAT: Windows software for simulating computerized adaptive test administration. *Applied Psychological Measurement*, 36(1), 64-66.
- Han, K. T. (2012). Fixing the c parameter in the three-parameter logistic model. *Practical Assessment, Research & Evaluation*, 17(1). Available online: <http://pareonline.net/getvn.asp?v=17&n=1>.
- Han, K. T. (2009). IRTEQ: Windows application that implements IRT scaling and equating. *Applied Psychological Measurement*, 33(6), 491-493.
- Liang, T., Han, K. T., & Hambleton, R. K. (2009). ResidPlots-2: Computer software for IRT graphical residual analyses. *Applied Psychological Measurement*, 33(5), 411-412.
- Sireci, S. G., Han, K. T., & Wells, C. S. (2008). Methods for evaluating the validity of test scores for English language learners. *Educational Assessment*, 13(2), 108-131.
- Sireci, S. G., Wells, C. S., & Han, K. T. (2008). Identifying item parameter drift in multistage adaptive testing. *CLEAR Exam Review*, 19(1), 14-21.
- Han, K. T. (2007). WinGen: Windows software that generates IRT parameters and item responses. *Applied Psychological Measurement*, 31, 457-459.
- Selected Presentations and Reports* Lim, H., & Han, K. (2023, April). *Automated test assembly in operational assessment programs*. Paper will be presented at the annual conference of the National Council on Measurement in Education (NCME), Chicago.
- Malatesta, J., Satkus, P., & Han, K. (2023, April). *The effects of uncontrolled speededness on IRT Item and ability estimation*. Paper will be presented at the annual conference of the National Council on Measurement in Education (NCME), Chicago.
- Lim, H., Zhu, D., Choe, E., & Han, K. (2023, April). *Detecting differential item functioning among multiple groups using IRT residual DIF framework*. Paper will be presented at the annual conference of the National Council on Measurement in Education (NCME), Chicago.
- Fu, Y., & Han, K. (2023, April). *Enemy item detection for quantitative item type*. Paper will be presented at the annual conference of the National Council on Measurement in Education (NCME), Chicago.

- Suk, Y., & Han, K. (2023, April). *A framework for evaluating fairness in algorithmic decision making: differential algorithmic functioning*. Paper will be presented at the annual conference of the National Council on Measurement in Education (NCME), Chicago.
- Zhu, D., Fu, Y., & Han, K. (2023, April). *Understanding factors for creating isomorphic instances in automated item generation*. Paper will be presented at the annual conference of the National Council on Measurement in Education (NCME), Chicago.
- Satkus, P. & Han, K. (2022, September). *Considering Test-taking Experience for Item Selection in CAT*. Paper presented at the biannual conference of the International Association of Computerized Adaptive Testing, Frankfurt, Germany.
- Lim, H., & Han, K. (2022, April). *Factors affecting item calibration using adaptively administered test data*. Poster presented at the annual International Meeting of the Psychometric Society (IMPS), Bologna, Italy.
- Lim, H., Choe, E. M., & Han, K. (2022, April). *Detecting differential item functioning in CAT using IRT residual DIF approach*. Paper presented at the annual conference of the National Council on Measurement in Education (NCME), San Diego.
- Fu, Y. & Han, K. (2022, April). *Enemy item detection for different item types*. Paper presented at the annual conference of the National Council on Measurement in Education (NCME), San Diego.
- Lim, H., Choe, E. M., Han, K., Lee, S., & Hong, M. (2021, June). *IRT residual approach to detecting differential item functioning*. Paper presented at the annual conference of the National Council on Measurement in Education (NCME), Online.
- Hong, M., Fu, Y., & Han, K. (2021, June). *Prediction of Item Difficulty Using Natural Language Processing with Topic Modeling*. Paper presented at the annual conference of the National Council on Measurement in Education (NCME), Online.
- Pan, Y., Lee, S., & Han, K. (2021, June). *Understanding different ways to compute measurement errors and score reliability of adaptive tests*. Paper presented at the annual conference of the National Council on Measurement in Education (NCME), Online
- Li, J., Liu, C., & Han, K. T. (2020, September). *Compromised Item Detection for Computerized Adaptive Testing*. A presentation delivered at the annual meeting of Association of Test Publishers.
- Pan, Y., Lee, S. & Han, K. (2020). *Understanding Different Ways to Compute Measurement Errors and Score Reliability for Adaptive Tests*. Paper

accepted at the annual conference of National Council on Measurement in Education, San Francisco, CA.

- Choe, E., & Han, K. T. (2019, April). *Determining Optimal Bounds of IRT Scores for Developing a Meaningful Score Scale*. Paper delivered at the annual meeting of National Council on Measurement in Education, Toronto.
- Shi, Y., & Han, K. T. (2019, April). *Response Time Processes in Computerized Adaptive Testing*. Paper delivered at the annual meeting of National Council on Measurement in Education, Toronto.
- Shi, Y., De Boeck, P. & Han, K. T. (2019, April). *Heterogeneity of Response Time on Task Effect in Computerized Adaptive Testing*. Paper delivered at the annual meeting of National Council on Measurement in Education, Toronto.
- Han, K. T. (2019, March). *Multistage testing: theory and practice*. A presentation delivered at the annual meeting of Association of Test Publishers, Orlando, FL.
- Han, K. T. (2018, September). *Options to allow test takers to review and change responses in CAT*. A presentation delivered at the annual meeting of European Association of Test Publishers, Athens, Greece.
- Han, K. T. (2018, February). Executive assessment based on multistage testing with cross-sectional routing. A presentation delivered at the annual meeting of Association of Test Publishers, San Antonio, TX.
- Han, K. T. (2017, April). Executive assessment based on multistage testing with cross-sectional routing. A paper presented at the annual meeting of American Educational Research Association, San Antonio, TX.
- Meng, H., Han, K. T., & Guo, F. (2017, April). Using new items operationally in Adaptive Tests. A paper presented at the annual meeting of American Educational Research Association, San Antonio, TX.
- Lee, C. & Han, K. T. (2017, April). Evaluating effectiveness of standard error of score estimation as a CAT termination criterion. A paper presented at the annual meeting of American Educational Research Association, San Antonio, TX.
- Meng, H., Han, K. T., & Guo, F. (2016, July). Conquer the IRT hurdle for adaptive test designs. A presentation delivered at the biannual meeting of International Test Commission, Vancouver, British Columbia.
- Han, K. T. (2015, September). Happy CAT: Options to allow test takers to review and change responses in CAT. A keynote speech delivered at the annual meeting of International Association of Computerized Adaptive Testing, Cambridge, United Kingdom.



- Han, K. T., Guo, F., & Talento-Miller, E. (2015, September). Multistage testing with routing based on performance on different test sections. Paper presented at the annual meeting of International Association of Computerized Adaptive Testing, Cambridge, United Kingdom.
- Lee, C., & Han, K. T. (2015, September). Evaluating effectiveness of standard error of score estimation as a termination criterion in CAT. Paper presented at the annual meeting of International Association of Computerized Adaptive Testing, Cambridge, United Kingdom.
- Han, K. T. (2015, July). Maximum likelihood score estimation method for short-length tests and computerized adaptive tests. Paper presented at the International Meeting of Psychometric Society, Beijing, China.
- Han, K. T., & Rudner, L. M. (2014). Item pool construction using mixed integer quadratic programming (MIQP). *GMAC Research Report RR-14-01*, June 9, 2014.
- Han, K. T., & Paek, I. (2014, July). *Comparison of software for uni- and multi-dimensional IRT model estimation*. Paper presented at the biannual meeting of the International Test Commission, San Sebastian, Spain.
- Han, K. T. (2014, July). Evaluating relationship among subtests using structural equation modeling. *Assess dimensionality in order to optimize design and scores*. Presentation delivered at the biannual meeting of the International Test Commission, San Sebastian, Spain.
- Han, K. T. (2014, April). *Sharing research and beyond*. Presentation delivered at the annual meeting of the National Council on Measurement in Education, Philadelphia, PA.
- Han, K. T., & Paek, I. (2014, April). *A comparison of commercial software for multidimensional IRT modeling*. Paper presented at the annual meeting of the National Council on Measurement in Education, Philadelphia, PA.
- Han, K. T. (2014, March). Using structural equation modeling approach to investigate latent factor structure across subtests. *In assess the underlying statistical structure of your test in order to optimize design and scores*. Presentation delivered at the annual meeting of the Association of Test Publishers, Scottsdale, Arizona.
- Kim, H., Park, J.-I., Park, E. A., Seo, M., & Han, K. T. (2013). Comprehensive improvement planning of assessment for enhancing creativity and character education. *Korea Institute for Curriculum and Evaluation Research Report RRE 2013-20*, December 31, 2013.
- Han, K. T. (2013, April). *Impact of Violation of the Missing-at-Random Assumption on Item Calibration and Recalibration for Multidimensional Adaptive Testing*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

- Han, K. T. (2013, April). *Evaluating item parameter drift in computerized adaptive testing*. Presentation delivered at the annual meeting of the National Council on Measurement in Education, San Francisco, CA.
- Han, K. T., & Guo, F. (2013). An approach to assembling optimal multistage testing modules on-the-fly. *GMAC Research Report RR-13-01*, March 4, 2013.
- Han, K. T. (2013, February). A series of computer software tools for test simulations. Presentation delivered at the annual meeting of the Association of Test Publishers, Hollywood, FL.
- Han, K. T., & Guo, F. (2012, August). *Multistage testing by shaping a module at each stage*. Presentation delivered at the annual meeting of the International Association for Computerized Adaptive Testing, Sydney, Australia.
- Han, K. T. (2012, August). Simulation tools for various computerized adaptive tests. *In a framework and approaches to develop an in-house CAT with freeware and open sources*. Presentation delivered at the annual meeting of the International Association for Computerized Adaptive Testing, Sydney, Australia.
- Talento-Miller, E., Han, K. T. & Guo, F. (2012, August). Impact of pre-test item position on calibration and ability estimation. Paper presented at the annual meeting of the International Association for Computerized Adaptive Testing, Sydney, Australia.
- Han, K. T., & Rudner, L. M. (2012, July). *Free tools for learning and applying item response theory*. Presentation delivered at the annual meeting of the International Test Commission, Amsterdam, Netherlands.
- Han, K. T., & Guo, F. (2012, July). *Robustness of the full-information maximum likelihood method for adaptively administered test data*. Presentation delivered at the annual meeting of the International Test Commission, Amsterdam, Netherlands.
- Han, K. T. (2012, April). *A new item selection criterion to incorporate item efficiency level in computerized adaptive testing*. Paper presented at the annual meeting of the National Council on Measurement in Education, Vancouver, British Columbia.
- Talento-Miller, Han, K. T. & Guo, F. (2012, April). *Analysis of embedded pretest items by position*. Paper presented at the annual meeting of the National Council on Measurement in Education, Vancouver, British Columbia.
- Han, K. T., Rudner, L. M., Guo, F., & Talento-Miller, E. (2012, February). Detecting item parameter drift in computerized adaptive testing. *In the item generation and calibration in computerized adaptive testing*. Presentation delivered at the annual meeting of the Association of Test Publishers, Palm Spring, CA.

- Han, K. T., Guo, F., Talento-Miller, E., & Rudner, L. M. (2011, October). *Recalibrating items using adaptively administered response data*. Paper presented at the annual meeting of the International Association for Computerized and Adaptive Testing, Pacific Grove, CA.
- Han, K. T. (2011, April). *Item pocket approach to allow response review and change in computerized adaptive testing*. Paper presented at the annual meeting of the National Council on Measurement in Education, New Orleans, LA.
- Wells, C. S., Keller, L., & Han, K. T. (2011, April). *Minimizing the effect of model misfit on the invariance property for the three-parameter logistic model*. Paper presented at the annual meeting of the National Council on Measurement in Education, New Orleans, LA.
- Talento-Miller, E., Guo, F., & Han, K. T. (2011, April). *Examining test speededness by Native Language*. Paper presented at the annual meeting of the National Council on Measurement in Education, New Orleans, LA.
- Talento-Miller, E., Han, K. T., & Guo, F. (2011). Guess again: the effect of correct guesses on scores in an operational CAT program. *GMAC Research Report RR-11-04*, March 14, 2011.
- Han, K. T. (2011, March). Identifying item needs for item pool construction using the mixed integer programming, *In the future of testing: technological innovations that you can expect*. Presentation delivered at the annual meeting of the Association of Test Publishers, Phoenix, AZ.
- Han, K. T., & Guo, F. (2011). Potential impact of item parameter drift due to practice and curriculum change on item calibration in computerized adaptive testing. *GMAC Research Report RR-11-02*, January 1, 2011.
- Han, K. T. (2010, July). *Discussion of three-parameter logistic model: What is the best guess at the guessing parameter?* Paper presented at the annual meeting of the International Test Commission, Hong Kong, China.
- Han, K. T., & Guo, F. (2010, July). *Impact of compromised items on item pool calibration*. Paper presented at the annual meeting of the International Test Commission, Hong Kong, China.
- Talento-Miller, E., Guo, F., & Han, K. T. (2010, July). *Examining test speededness by Native Language*. Paper presented at the annual meeting of the International Test Commission, Hong Kong, China.
- Talento-Miller, E., Han, K. T., & Guo, F. (2010, June). *The effect of correct guesses on scores in an operational CAT program*. Paper presented at the annual meeting of the International Association for Computerized and Adaptive Testing, Arnhem, Netherlands.

- Han, K. T. (2010, May). *Comparison of Non-Fisher-Information Item Selection Criteria in Fixed-Length CAT*. Paper presented at the annual meeting of the National Council on Measurement in Education, Denver, CO.
- Han, K. T., & Rudner, L. M. (2010, May). Implementing the Mixed Integer Programming for Constructing Item Pools for Computerized Adaptive Testing Program, *In Implementation issues in automated test assembly*. Paper presented at the annual meeting of the National Council on Measurement in Education, Denver, CO.
- Talento-Miller, E., Han, K. T., & Guo, F. (2010, April). *Mythbusters: a practical look at the effect of position of correct responses on a computerized adaptive test*. Paper presented at the annual meeting of the National Council on Measurement in Education, Denver, CO.
- Han, K. T. (2010, February). Evaluating efficiency of item selection methods and item needs, *In understanding item use and predicting item needs for computerized adaptive testing*. Presentation delivered at the annual meeting of the Association of Test Publishers, Orlando, FL.
- Han, K. T. (2009, June). Gradual maximum information ratio approach to item selection in computerized adaptive testing. *GMAC Research Report RR-09-07*, June 25, 2009.
- Han, K. T., Wells, C. S., & Hambleton, R. K. (2009, July). *Impact of item parameter drift on pseudo-guessing parameter estimates and test equating*. Paper presented at the annual meeting of the Psychometric Society, Cambridge, UK.
- Han, K. T. (2009, June) *Gradual maximum information ratio approach to item selection in computerized adaptive testing*. Paper presented at the GMAC 2009 Computer Adaptive Testing Conference, Minneapolis, MN.
- Kim, J., & Han, K. T. (2009, April). *New approaches to test equating when construct response items are used as linking items*. Presentation delivered at the annual meeting of the National Council on Measurement in Education, San Diego, CA.
- Han, K. T., & Wells, C. S. (2008, July). *Impact of multidirectional item parameter drift on test equating and proficiency estimates*. Paper presented at the international meeting of Psychometric Society, Durham, NH.
- Lee, J. H., & Han, K. T. (2008, July). *Optimizing the number of items for each module in multi-stage testing*. Presentation delivered at the international meeting of Psychometric Society, Durham, NH.
- Zenisky, A.L., Han, K. T., Yoo, H., Smith, Z. R., & Patton, J. (2008). Evaluation of the CATs content balancing algorithm (*Center for Educational Assessment Report No. 682*). Amherst, MA: University of Massachusetts, School of Education.

- Sireci, S. G., Baldwin, P., Martone, D., Laguilles, A. Z., Lam, W., Lewis, C., Han, K. T., & Hambleton, R. K. (2008). Massachusetts adult proficiency tests technical manual: Version 2 (*Center for Educational Assessment Report No. 677*). Amherst, MA: University of Massachusetts, School of Education.
- Liang, T., Han, K. T., & Baldwin, P. (2008, March). *Computer software for graphical residual analysis*. Poster presented at the meeting of the National Council on Measurement in Education, New York, NY.
- Liang, T., Han, K. T., & Hambleton, R. K. (2008). ResidPlots: Computer program for data-model fit and residual analysis [computer program]. Amherst, MA: University of Massachusetts Amherst, Center for Educational Assessment. Retrieved January 12, 2008, from <http://www.umass.edu/remf/software/residplots/>
- Han, K. T., Xu, X., & von Davier, M. (2008, January). *Investigating the dimensionality of NAEP reading data using the general diagnostic model*. Paper presented at the International Conference on Learning Competency, Seoul, Korea.
- Han, K. T. (2008, January). *IRT test equating procedures using IRTEQ*. Paper presented at the International Conference on Learning Competency, Seoul, Korea.
- Han, K. T., & Sireci, S. G. (2007, October). *Statistical models for evaluating educational gain at the program level for adult basic education programs*. Paper presented at the meeting of the Northeastern Educational Research Association, Rocky Hill, CT.
- Liang, T., Sireci, S. G., Wells, C. S., & Han, K. T. (2007, October). *Evaluating item parameter drift in computerized adaptive testing*. Paper presented at the meeting of the Northeastern Educational Research Association, Rocky Hill, CT.
- Han, K. T., & Hambleton, R. K. (2007). User's Manual: WinGen (*Center for Educational Assessment Report No. 642*). Amherst, MA: University of Massachusetts, School of Education.
- Han, K. T. (2007). HSGen: Hierarchical Score Generator [computer program]. Amherst, MA: University of Massachusetts, Center for Educational Assessment. Retrieved June 22, 2007, from <http://www.umass.edu/remf/software/hsgen/>
- Han, K. T. (2007). Using 3-level hierarchical linear model for evaluating educational gain at the program level (*Center for Educational Assessment Report No. 628*). Amherst, MA: University of Massachusetts, School of Education.
- Han, K. T. (2007). WinGen2: Windows software that generates IRT parameters and item responses [computer program]. Amherst, MA: University of

Massachusetts Amherst, Center for Educational Assessment. Retrieved May 13, 2007, from <http://www.umass.edu/rempp/software/wingen/>

- Sireci, S. G., Wells, C. S., Baldwin, P., & Han, K. T. (2007, April). *Detection of item degradation: Evaluating item parameter drift in computerized-adaptive testing*. Paper presented at the meeting of the Society of Industrial and Organizational Psychology, New York, NY.
- Sireci, S. G., & Han, K. T., (2007, April). *Methods for evaluating the validity of test scores for English language learners*. Paper presented at the meeting of the American Educational Research Association, Chicago, IL.
- Han, K. T., & Wells, C. S. (2007, April). *Impact of differential item functioning (DIF) on test equating and proficiency estimates*. Paper presented at the annual meeting of the National Council on Measurement in Education, Chicago, IL.
- Sireci, S. G., Baldwin, P., Martone, D., & Han, K. T. (2007, April). *Determining cutpoints on a multi-stage test for federally established proficiency levels*. Paper presented at the annual meeting of the National Council on Measurement in Education, Chicago, IL.
- Han, K. T., Baldwin, P., & Sireci, S. G. (2006). Analyses of differential item functioning of potential MAPT items (*Center for Educational Assessment Report No. 616*). Amherst, MA: University of Massachusetts, School of Education.
- Han, K. T. (2006). Establishing educational gain levels on newly developed assessments for ABE (*Center for Educational Assessment Report No. 615*). Amherst, MA: University of Massachusetts, School of Education.
- Sireci, S. G., Baldwin, P., Martone, D., Laguilles, A. Z., Hambleton, R. K., & Han, K. T. (2006). Massachusetts adult proficiency tests technical manual (*Center for Educational Assessment Report No. 600*). Amherst, MA: University of Massachusetts, School of Education.
- Han, K. T. (2006, October). *WinGen: Windows software that generates IRT parameters and responses*. Presentation delivered at the meeting of the Northeastern Educational Research Association, Kerhonkson, NY.
- Han, K. T. (2006, June). *No such thing as content validity: is construct validity a safe zone?* Paper presented at the meeting of the Psychometric Society, Montreal, Canada.
- Han, K. T., Sireci, S. G., Wells, C. S., & Zenisky, A. L. (2006, April). *Methods for evaluating educational gains at the program level*. Paper presented at the meeting of the National Council on Measurement in Education, San Francisco, CA.
- Han, K. T., Sireci, S. G., Wells, C. S., & Zenisky, A. L. (2005, October). *Methods for evaluating educational gains at the program level*. Paper presented at

the meeting of the Northeastern Educational Research Association, Kerhonkson, NY.

Han, K. T. (2005, April). *A confirmatory factor analysis of the Revised Protestant Work Ethic Scale*. Poster presented at the meeting of the New England Educational Research Organization, Northampton, MA.

Sireci, S. G., Wells, C. S., Han, K. T., & Zenisky, A. L. (2005). Evaluating educational gains at the program level: Options and recommendations for the Massachusetts Department of Education's Office of Adult and Community Learning Services (*Center for Educational Assessment Report No. 559*). Amherst, MA: University of Massachusetts, School of Education.

*Invited Keynote / Seminars / Symposiums / Lecture / Workshops* Han, K. T. (2022, October). *Early Considerations for Computer Adaptive Testing for Standardized Assessment in Africa*. An invited speech at the annual meeting of Association of Computer Adaptive Testing in Africa.

Han, K. T. (2022, March). *Multistage Testing Simulations Using D-Scoring framework*. A 3-day workshop at National Center for Assessment in Saudi Arabia.

Zenisky, A., & Han, K. T. (2021, January). *Multistage Testing Course*. A 3-Week workshop organized by World Bank.

Han, K. T. (2020, July). *Computerized Adaptive Testing: theories and practices*. A workshop at the Korean Society for Educational Evaluation meeting.

Yoo, H., Oh, H.-J., & Han, K. T. (2019, April). *Software Packages for IRT-based Test Simulation: WinGen3, SimulCAT, MSTGen, and IRTEQ*. A pre-conference workshop led at the annual meeting of National Council on Measurement in Education, Toronto.

Yan, D., von Davier, A., Han, K. T. (2019, April). *Computerized multistage adaptive testing*. A pre-conference workshop led at the annual meeting of National Council on Measurement in Education, Toronto.

Lee, W.-C., Kim, H., & Han, K. T. (2018, July). *Tools for equating*. A pre-conference workshop provided at the bi-annual meeting of International Test Commission, Montreal, Canada.

Han, K. T. (2018, April). *Measurement problems – a look back to help us look ahead*. A presentation delivered at the annual meeting of National Council on Measurement in Education, New York.

Yan, D., von Davier, A., Han, K. T. (2018, April). *Computerized multistage adaptive testing*. A pre-conference workshop provided at the annual meeting of National Council on Measurement in Education, New York.

- Han, K. T. (2017, April). Recent innovations in adaptive testing. Presentation delivered at the annual meeting of American Educational Research Association, San Antonio, TX.
- April 7, 2017, 'Computerized multistage adaptive testing,' a pre-conference workshop with Duanli Yan and Alina von Davier at the annual meeting of National Council on Measurement in Education, San Antonio, TX.
- Han, K. T. (2016, October). Recent changes around self-regulated learning and future role of textbooks. A presentation delivered in a plenary session at the annual International Textbook Symposium, Seoul, S. Korea.
- April 9, 2016, A Presidential Address at the annual meeting of Korean-American Educational Researchers Association, Washington, DC.
- April 7, 2016, 'Computerized multistage adaptive testing,' a pre-conference workshop with Duanli Yan and Alina von Davier at the annual meeting of National Council on Measurement in Education, Washington, DC.
- Han, K. T. (2015). *Happy CAT: Options to allow test takers to review and change responses in CAT*. Keynote speech delivered at the annual meeting of International Association of Computerized Adaptive Testing, Cambridge, United Kingdom.
- September 14, 2015, 'Computerized multistage adaptive testing,' a pre-conference workshop with Duanli Yan and Alina von Davier at the annual meeting of International Association of Computerized Adaptive Testing, Cambridge, United Kingdom.
- August 18, 2015, 'The New Big Data: Human-Centered Analytics,' at a webinar for Georgetown University Alumni Association.
- July 12, 2015, 'Multistage Testing,' a pre-conference workshop at the International Meeting of Psychometric Society, Beijing, China.
- Sireci, S. G., & Han, K. T. (2015, April). *Contemporary problems in educational measurement (satirical session)*. Presentation delivered at the annual meeting of the National Council on Measurement in Education, Chicago, IL.
- December 4, 2014, 'Educational Research and Measurement: Past, Present, and Future,' a keynote speech at Krakow International Conference on Educational Research and Measurement. Krakow, Poland.
- October 8, 2014, 'Multistage Testing,' a pre-conference workshop at the annual meeting of International Association of Computerized Adaptive Testing.
- August 14, 2014, "Fundamentals of multidimensional item response theory" a seminar for graduate students in the Department of Psychology, Sung-Kyun-Kwan University, Seoul, S. Korea.



November 25~29, 2013, 'Computerized adaptive testing,' a 20-hour course for the educational measurement study program. Organized by Jagiellonian University in Krakow, Poland. Funded by Educational Research Institute (the research and development unit of Ministry of National Education)

May 13~17, 2013, 'Computerized adaptive testing,' a 20-hour course for the educational measurement study program. Organized by Jagiellonian University in Krakow, Poland. Funded by Educational Research Institute (the research and development unit of Ministry of National Education)

November 9, 2012, 'Computerized adaptive testing,' a workshop in *Teach Your Children Well*, a conference to honor Ronald K. Hambleton. Hosted by University of Massachusetts Amherst.

August 3, 2012, 'Applications of IRT,' a seminar for the graduate students in the Department of Psychology, Sung-Kyun-Kwan University, Seoul, S. Korea.

July 31, 2010, 'Practical Issues with the Three Parameter Logistic Model,' a seminar for graduate students in the Department of Education, Yonsei University, Seoul, S. Korea. Funded by Department of Education, Korea (as a part of the 'Brain Korea 21' project).

July 29, 2010, 'Computer Programming for Psychometric Research,' a seminar for graduate students in the Department of Psychology, Sung-Kyun-Kwan University, Seoul, S. Korea. Funded by Department of Education, Korea (as a part of the 'Brain Korea 21' project).

May 12, 2009, 'Fundamentals of Computerized Adaptive Testing,' a seminar for graduate students in the Department of Psychology, Sung-Kyun-Kwan University, Seoul, S. Korea. Funded by Department of Education, Korea (as a part of the 'Brain Korea 21' project).

Jan. 24 ~ 29, 2008, 'Monte-Carlo Simulation Studies about DIF/IPD and Test Equating,' a workshop for graduate students in the Department of Psychology, Sung-Kyun-Kwan University, Seoul, S. Korea. Funded by Department of Education, Korea (as a part of the 'Brain Korea 21' project).

Jan. 9 ~ 12, 2007, 'Fundamentals of IRT and Applications,' a workshop for graduate students in the Department of Psychology, Sung-Kyun-Kwan University, Seoul, S. Korea. Funded by Department of Education, Korea (as a part of the 'Brain Korea 21' project).

*Professional  
Affiliations*

- National Council on Measurement in Education (NCME)
- Psychometric Society
- International Association for Computerized Adaptive Testing (IACAT)
- American Educational Research Association (AERA)
- Korean-American Educational Researchers Association (KAERA)
- International Testing Commission (ITC)
- Association of Test Publishers (ATP)

- Relevant Doctoral Coursework*
- Multidimensional Scaling by Prof. Stephen G. Sireci
  - Principals of Testing by Prof. Ronald K. Hambleton
  - Item Response Theory I, II by Prof. Ronald K. Hambleton
  - Multivariate Statistics I, II by Prof. Lisa Keller
  - Advanced Validity Theory by Prof. Stephen G. Sireci
  - Structural Equation Modeling by Prof. Craig S. Wells
  - Classical Testing Theory by Prof. Ronald K. Hambleton
  - SAS Programming by Prof. Anna Liu
  - Test Construction by Prof. Stephen G. Sireci
  - Fortran / S Plus Programming by Prof. Lisa Keller and Prof. Craig S. Wells
  - Hierarchical Linear Model by Prof. Aline G. Sayer
  - Non-parametric statistical analysis by Prof. Craig S. Wells
  - Educational Web Design: Creation & Evaluation by Prof. Mei Shih
  - Educational Research Methods by Prof. Ronald K. Hambleton
- Computer Languages / Software Packages*
- Microsoft Visual Studio .NET (C#.NET & Visual Basic .NET)
  - Linear / Mixed Integer Programming with CPLEX (+AIMMS)
  - Visual Basic 6 (for Microsoft Office Applications)
  - Fortran 90/95
  - IRT software packages (BILOG-MG, MULTILOG, PARSCALE, Winsteps, etc)
  - SAS / SPSS
  - SEM software packages (Mplus, Lisrel, AMOS)
  - HLM
  - S plus / R
  - Web developmental tools (Dreamweaver, Flash, Photoshop, ImageReady)
- Other Activities*
- USA National Indoor 2017 3<sup>rd</sup> place male/senior/recurve in VA Region
  - USA National Indoor 2015 1<sup>st</sup> place male/senior/recurve (guest)
  - USA National Indoor 2014 1<sup>st</sup> place male/senior/recurve (guest)
  - 2015, 2022 Virginia State Indoor championship 1<sup>st</sup> place recurve/male/senior
  - USA Archery Level 2 Certified Coach