Curriculum Vitae

Chang Seok Lee, Ph.D.

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Education

2012–2018 **Hanyang University, Seoul, Republic of Korea**

Doctor of Philosophy

Thesis: Analytical model for non-ductile moment frames with masonry infill walls and retrofit method using friction dampers

2006–2012 **Hanyang University, Seoul, Republic of Korea**

Bachelor of Engineering

Employment History

2024–present **Honam University, Gwangju, Republic of Korea**

Assistant Professor

2021–2024 **Hanyang University, Seoul, Republic of Korea**

Research Assistant Professor

2018–2021 **Hanyang University, Seoul, Republic of Korea**

Postdoctoral Researcher

Member of Scientific Committee

2022/12–present **Korea Concrete institute Committee**: Slabs and Walls

2023/01–2024/12 **Korea Concrete institute Committee**: Terminology

Awarded Research & Industry Grants

2021/06–2024/05 **National Research Foundation of Korea**: Basic Science Research Program (70 Million Won/year)

Technical Skills and Interests

Developer Tools C, C++, TCL, Python, MATLAB

Software Skills OpenSees, MIDAS-GEN, SAP2000, LaTeX

Areas of Interest Seismic performance assessment, Numerical simulation, Hysteretic model

Teaching

2023/09–2023/12	**Hanyang University, Republic of Korea**
	Structural Reliability and Risk (Instructor, 3-hr/week)
2023/03–2023/06	**Hanyang University, Republic of Korea**
	Reinforced Concrete Engineering (Instructor, 3-hr/week)
2022/03–2022/06	**Hanyang University, Republic of Korea**
	Engineering Mechanics (Instructor, 3-hr/week)
2021/09–2022/02	**Andong National University, Republic of Korea**
	Dynamics of Structures (Instructor, 3-hr/week)
2019/09–2019/12	**Institute for Future Talents, Hanyang University, Republic of Korea**
	Reinforced Concrete (Instructor, 3-hr/week)
2019/08–2019/10	**Institute for Future Talents, Hanyang University, Republic of Korea**
	Structural Analysis (Instructor, 6-hr/week)
2019/05–2019/08	**Institute for Future Talents, Hanyang University, Republic of Korea**
	Structural Analysis (Instructor, 3-hr/week)
2019/03–2019/06	**Dongyang Mirae University, Republic of Korea**
	Reinforced Concrete (Instructor, 6-hr/week)
2018/09–2018/12	**Institute for Future Talents, Hanyang University, Republic of Korea**
	Reinforced Concrete (Instructor, 3-hr/week)

Publications : SCIE (Science Citation Index Expanded)

1. Lee CS, Mangalathu S, Jeon JS**, 2024**, Machine learning–assisted drift capacity prediction models for reinforced concrete columns with shape memory alloy bars. *Computer-Aided Civil and Infrastructure Engineering*, **39**(4):595–616; DOI: 10.1111/mice.13112.
2. Park Y, Lee CS, Jeon JS**, 2024**, Hysteretic model parameters for seismic performance assessment of cyclically degraded reinforced concrete columns. *Soil Dynamics and Earthquake Engineering*, **179**:108519; DOI: 10.1016/j.soildyn.2024.108519.
3. Lee CS, Jeon JS**, 2023**, Risk-based seismic design of diagonal self-centering shape-memory alloy wire-based bracing system in multi-column bent bridges. *Engineering Structures*, **289**:116295; DOI: 10.1016/j.engstruct.2023.116295.
4. Lee CS, Jeon JS**, 2023**, Seismic risk-based optimization of tension-only shape-memory alloy device for steel moment-resisting frames. *Engineering Structures*, **296**:116976; DOI: 10.1016/j.engstruct.2023.116976.
5. Shturmin S, Lee CS, Jeon JS**, 2023**, Lumped plasticity model for simulating the inelastic earthquake response of CFT columns. *Journal of Constructional Steel Research*, **211**:108196; DOI: 10.1016/j.jcsr.2023.108196.
6. Lee CS, Choi E, Jeon JS**, 2022**, Estimating the plastic hinge length of rectangular concrete columns reinforced with NiTi superelastic shape memory alloys. *Engineering Structures*, **252**:113641; DOI: 10.1016/j.engstruct.2021.113641.
7. Lee CS, Jeon JS**, 2022**, Drift limit state predictions of rectangular reinforced concrete columns with superelastic shape memory alloy rebars. *Journal of Building Engineering*, **54**:104546; DOI: 10.1016/j.jobe.2022.104546.
8. Lee CS, Jeon JS**, 2022**, Phenomenological hysteretic model for superelastic NiTi shape memory alloys accounting for functional degradation. *Earthquake Engineering & Structural Dynamics*, **51**(2):277–309; DOI: 10.1002/eqe.3566.
9. Lee CS, Jeon JS**, 2022**, Probabilistic residual deformation prediction model for rectangular reinforced concrete columns. *Earthquake Engineering & Structural Dynamics*, **51**(9):1994–2015; DOI: 10.1002/eqe.3650.
10. Alvi MH, Lee CS, Jeon JS**, 2021**, Model development and seismic performance evaluation of rectangular reinforced concrete columns with short lap splices in existing building frames. *Engineering Structures*, **245**:112922; DOI: 10.1016/j.engstruct.2021.112922.
11. Han SW, Lee CS, Cho ES**, 2021**, Modeling parameters and acceptable plastic chord rotations for diagonally reinforced concrete coupling beams. *Journal of Building Engineering*, **44**:102650; DOI: 10.1016/j.jobe.2021.102650.
12. Lee CS, Han SW**, 2021**, An Accurate Numerical Model Simulating Hysteretic Behavior of Reinforced Concrete Columns Irrespective of Types of Loading Protocols. *International Journal of Concrete Structures and Materials*, **15**(1):5; DOI: 10.1186/s40069-020-00446-5.
13. Lee CS, Jeon JS**, 2021**, Adaptive hysteretic model for reinforced concrete columns including variations in axial force and shear span length. *Earthquake Engineering & Structural Dynamics*, **50**(15):4001–4031; DOI: 10.1002/eqe.3543.
14. Lee CS, Park Y, Jeon JS**, 2021**, Model parameter prediction of lumped plasticity model for nonlinear simulation of circular reinforced concrete columns. *Engineering Structures*, **245**:112820; DOI: 10.1016/j.engstruct.2021.112820.
15. Han SW, Koh H, Lee CS**, 2020**, Fragility functions of different groups of diagonally reinforced concrete coupling beams (DRCBs). *Bulletin of Earthquake Engineering*, **18**(1):165–187; DOI: 10.1007/s10518-019-00693-2.
16. Han SW, Lee CS**, 2020**, Cyclic behavior of lightly reinforced concrete moment frames with partial- and full-height masonry walls. *Earthquake Spectra*, **36**(2):599–628; DOI: 10.1177/8755293019899960.
17. Han SW, Lee CS**, 2020**, Cyclic behavior of RC OMF beam-corner column joints under unidirectional and bidirectional loadings. *Engineering Structures*, **224**:111304; DOI: 10.1016/j.engstruct.2020.111304.
18. Han SW, Koh H, Lee CS**, 2019**, Accurate and Efficient Simulation of Cyclic Behavior of Diagonally Reinforced Concrete Coupling Beams. *Earthquake Spectra*, **35**(1):361–381; DOI: 10.1193/060717EQS108M.
19. Han SW, Lee CS, Paz Zambrana MA, Lee K**, 2019**, Calibration Factor for ASCE 41-17 Modeling Parameters for Stocky Rectangular RC Columns. *Applied Sciences*, **9**(23):5193; DOI: 10.3390/app9235193.
20. Lee CS, Han SW**, 2019**, Cyclic behaviour of lightly-reinforced concrete columns with short lap splices subjected to unidirectional and bidirectional loadings. *Engineering Structures*, **189**:373–384; DOI: 10.1016/j.engstruct.2019.03.108.
21. Han SW, Kang JW, Lee CS**, 2018**, Cyclic behavior of diagonally reinforced slender HPFRCC coupling beams with reduced diagonal and transverse reinforcement. *Composite Structures*, **206**:550–562; DOI: 10.1016/j.compstruct.2018.08.079.

22. Han SW, Kang JW, Lee CS**, 2018**, Seismic Behavior of Slender HPFRCC Coupling Beams with Limited Transverse Bars. *Earthquake Spectra*, **34**(1):77–98; DOI: 10.1193/021116EQS030M.

23. Han SW, Lee CS, Han CH, Moon KH**, 2018**, Cyclic behaviour of slender diagonally reinforced coupling beams with various amounts of transverse reinforcement. *Magazine of Concrete Research*, **70**(13):671–684; DOI: 10.1680/jmacr.16.00429.

24. Lee CS, Han SW**, 2018**, Computationally effective and accurate simulation of cyclic behaviour of old reinforced concrete columns. *Engineering Structures*, **173**:892–907; DOI: 10.1016/j.engstruct.2018.07.020.

25. Lee CS, Sung MS, Han SW, Jee HW**, 2018**, Computationally Efficient and Accurate Simulation of Cyclic Behavior for Rectangular HSS Braces. *International Journal of Steel Structures*, **18**(4):1125–1138; DOI: 10.1007/s13296-018-0071-5.

26. Moon KH, Han SW, Lee CS**, 2017**, Seismic retrofit design method using friction damping systems for old low- and mid-rise regular reinforced concrete buildings. *Engineering Structures*, **146**:105–117; DOI: 10.1016/j.engstruct.2017.05.031.

27. Han SW, Lee CS, Kwon HW, Lee KH, Shin MS**, 2015**, Behaviour of fibre-reinforced beams with diagonal reinforcement. *Magazine of Concrete Research*, **67**(24):1287–1300; DOI: 10.1680/macr.14.00194.

28. Han SW, Lee CS, Shin M, Lee K**, 2015**, Cyclic performance of precast coupling beams with bundled diagonal reinforcement. *Engineering Structures*, **93**:142–151; DOI: 10.1016/j.engstruct.2015.03.034.

29. Han SW, Lee CS**, 2014**, Evaluation of punching shear strength of voided transfer slabs. *Magazine of Concrete Research*, **66**(21):1116–1128; DOI: 10.1680/macr.14.00080.

30. Han SW, Lee CS, Kwon HW**, 2013**, Seismic performance evaluation for gravity-designed flat plate frames. *Magazine of Concrete Research*, **65**(18):1110–1127; DOI: 10.1680/macr.13.00110.

Publications : KCI (Korea Citation Index)

1. Lee CS, Jeon JS**, 2021**, Hysteretic Model for Superelastic NiTi Shape Memory Alloys. *Journal of Korean Society of Steel Construction*, **33**(6):373–381; DOI: 10.7781/kjoss.2021.33.6.373.

2. Han JM, Lee CS, Han SW**, 2020**, Load-displacement Response of Gravity Load Designed Reinforced Concrete Moment Frames with Various Height of Masonry Infill Walls. *Journal of the Earthquake Engineering Society of Korea*, **24**(1):39–47; DOI: 10.5000/EESK.2020.24.1.039.

3. Han SW, Chang YS, Lee CS**, 2020**, Testing of RC Corner Beam-column Joints under Bidirectional Loading. *Journal of the Earthquake Engineering Society of Korea*, **24**(4):189–196; DOI: 10.5000/EESK.2020.24.4.189.

4. Lee CS, Park YS, Han SW**, 2020**, Bidirectional Lateral Loading of RC Columns with Short Lap Splices. *Journal of the Earthquake Engineering Society of Korea*, **24**(1):19–27; DOI: 10.5000/EESK.2020.24.1.019.

5. Lee CS, Han SW**, 2019**, Development of Model Parameter Prediction Equations for Simulating Load-deformation Response of Non-ductile RC Columns. *Journal of the Earthquake Engineering Society of Korea*, **23**(2):119–129; DOI: 10.5000/EESK.2019.23.2.119.

6. Lee CS, Han SW, Koh H**, 2019**, Drift Ratio-based Fragility Functions for Diagonally Reinforced Concrete Coupling Beams. *Journal of the Earthquake Engineering Society of Korea*, **23**(2):131–140; DOI: 10.5000/EESK.2019.23.2.131.

7. Koh H, Han SW, Lee CS**, 2018**, Efficient Simulation of Hysteretic Behavior of Diagonally Reinforced Concrete Coupling Beams. *Journal of the Earthquake Engineering Society of Korea*, **22**(2):95–101; DOI: 10.5000/EESK.2018.22.2.095.

8. Lee CS, Heo CD, Koh H, Han SW**, 2018**, Cyclic Behavior of Existing RC Columns with Lap Splices under Biaxial Bending. *Journal of the Korea Concrete Institute*, **30**(5):473–480; DOI: 10.4334/JKCI.2018.30.5.473.

9. Koh H, Han SW, Heo CD, Lee CS**, 2017**, Calibration of Parameters for Predicting Hysteretic Behavior of Diagonally Reinforced Concrete Coupling Beams. *Journal of the Earthquake Engineering Society of Korea*, **21**(6):303–310; DOI: 10.5000/EESK.2017.21.6.303.

10. Lee Cs, Han SW, Ko G**, 2017**, Calibration Methodology for Predicting Hysteretic Behavior of Reinforced Concrete Columns Failed in Shear. *Journal of the Earthquake Engineering Society of Korea*, **21**(1):41–48; DOI: 10.5000/EESK.2017.21.1.041.

11. Han SW, Kim JY, Moon KH, Lee CS, Kim HJ, Lee KS**, 2014**, Seismic Behavior of Reinforced Concrete Moment Frames Retrofitted by Toggle Bracing System with High Density Friction Damper. *Journal of the Earthquake Engineering Society of Korea*, **18**(3):133–140; DOI: 10.5000/EESK.2014.18.3.133.

12. Moon KH, Jeon YR, Lee CS, Han SW**, 2012**, Evaluation of Performance of Korean Existing School Buildings with Masonry Infilled Walls Against Earthquakes. *Journal of the Earthquake Engineering Society of Korea*, **16**(6):37–46; DOI: 10.5000/EESK.2012.16.6.037.