



**Professor Phill-Seung Lee**

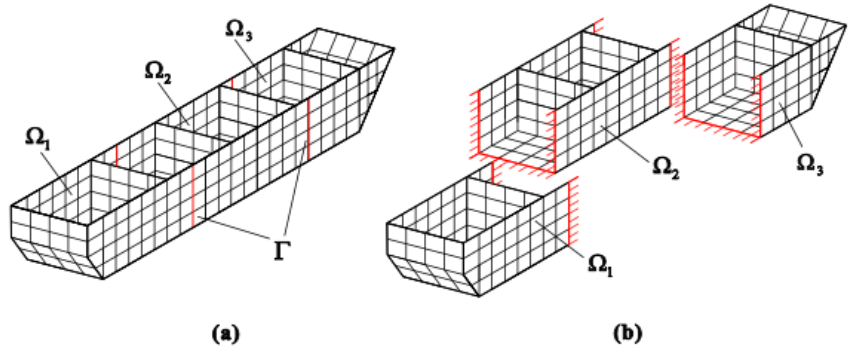


Fig. 1 Interface handling in the CB method:  
(a) Partitioned structure, (b) Fixed interface boundary treatment (Boo et al 2016)

From: Jeong-Ho Kim, Seung-Hwan Boo, Min-Han Oh and Phill-Seung Lee, On the reduction methods of structural finite element models, The 2017 World Congress on Advances in Structural Engineering and Mechanics (ASEM17), Seoul, Korea, August 28-September 1, 2017

See:

<https://scholar.google.com/citations?user=eIuWiOYAAAAJ&hl=en>

[https://www.researchgate.net/profile/Phill\\_Seung\\_Lee](https://www.researchgate.net/profile/Phill_Seung_Lee)

<https://www.semanticscholar.org/author/Phill-Seung-Lee/2702451>

<http://prabook.com/web/person-view.html?profileId=411180>

Ocean Systems Engineering  
Korea Advanced Institute of Science and Technology (KAIST)

### Biography:

Phill-Seung Lee, South Korean civil engineer, researcher. Achievements include research in finite element analysis of shell structures; research in inelastic large deformation analysis of 3D beam structures; patents for module type tuned mass damper system; patents for new type of floating concrete structures; patents for storage systems under water

### Education:

Massachusetts Institute of Technology, Cambridge, MA, USA Ph.D. Department of Civil and Environmental Engineering. (Sep 2000 - Sep 2003, Degree awarded: Feb 2004)

Korea Advanced Institute of Science and Technology, Daejeon, Korea; M.S. Department of Civil and Environmental Engineering. (Mar 1997 - Feb 1999)

Hanyang University, Seoul, Korea: B.S. Department of Civil Engineering. (Mar 1990 - Feb 1997, Military service: Dec 1991 - Mar 1994)

### Experience:

Korea Advanced Institute of Science and Technology, Daejeon, Korea Associate Professor. Division of Ocean Systems Engineering. (Feb 2009 -.)

Samsung Heavy Industries, Seoul, Korea: Manager. Marine Concrete Structure Team. (Oct 2005 - Jan 2009)  
McGill University, Montreal, QC, Canada: Postdoctoral Researcher. Department of Civil Engineering and Applied Mechanics. (May 2004 - Aug 2005)  
Massachusetts Institute of Technology, Cambridge, MA, USA: Postdoctoral Researcher. Department of Mechanical Engineering. (Nov 2003 - Apr 2004)  
Korea Institute of Construction Technology, Kyunggi, Korea: Researcher. Structural System Group. (Aug 1999 - Jun 2000)

### **Selected Publications:**

Jeong-Ho Kim, Seung-Hwan Boo, Min-Han Oh and Phill-Seung Lee, On the reduction methods of structural finite element models, The 2017 World Congress on Advances in Structural Engineering and Mechanics (ASEM17), Seoul, Korea, August 28-September 1, 2017  
Yeongbin Ko, Phill-Seung Lee and Klaus-Jorgen Bathe, "The MITC4+ shell element in geometric nonlinear analysis", Computers & Structures, Vol. 185, pp 1-14, June 2017,  
Yeongbin Ko, Phill-Seung Lee and Klaus-Jurgen Bathe, "A new MITC4+ shell element", Computers & Structures, Vol. 182, pp 404-418, April 2017  
Youngyu Lee, Hyeong-Min Jeon, Phill-Seung Lee and Klaus-Juergen Bathe, "The modal behavior of the MITC3+ triangular shell element", Computers & Structures, Vol. 153, pp 148-164, June 2015  
Hyeong-Min Jeon, Youngyu Lee, Phill-Seung Lee and Klaus-Juergen Bathe, "The MITC3+ shell element in geometric nonlinear analysis", Computers & Structures, Vol. 146, pp 91-104, January 2015  
Youngyu Lee, Phill-Seung Lee and Klaus-Juergen Bathe, "The MITC3+ shell element and its performance", Computers & Structures, Vol. 138, pp 12-23, July 2014  
Jin-Gyun Kim, Kang-Heon Lee and Phill-Seung Lee, "Estimating relative eigenvalue errors in the Craig-Bampton method", Computers & Structures, Vol. 139, pp 54-64, July 2014  
Hyeong-Min Jeon, Phill-Seung Lee and Klaus-Juergen Bathe, "The MITC3 shell finite element enriched by interpolation covers", Computers & Structures, Vol. 134, pp 128-142, April 2014  
Hong WT, Lee PS. Coupling flat-top partition of unity method and finite element method, Finite Elements in Analysis and Design, 67, 43-55. May 2013.  
Hong WT, Lee PS. Mesh based construction of flat-top partition of unity, Applied Mathematics and Computation, 219(16), 8687-8704, Apr 2013.  
Yoon K, Lee YG, Lee PS. A continuum mechanics based 3-D beam finite element with warping displacements and its modeling capabilities, Structural Engineering and Mechanics, 43-4, 411-437, Sep 2012.  
Lee YG, Yoon KH, Lee PS. Improving the MITC3 shell finite element by using the Hellinger- Reissner principle, Computers and Structures, 110-111, 93-106, Sep 2012.  
Thanh CD, Zi G, Lee PS, Rabczuk T, Song JH. Phantom-node method for shell models with arbitrary cracks. Computers and Structures, 92-93, 242-256, Feb 2012.  
Bathe KJ, Lee PS. Measuring the convergence behavior of shell analysis schemes, Computers and Structures, 89(3-4), 285-301, Feb 2011.  
Lee PS, Noh HC. Inelastic buckling behavior of steel members under reversed cyclic loading, Engineering Structures, 32(9), 2579-2595, Sep 2010.  
Lee PS, Bathe KJ. The quadratic MITC plate and MITC shell elements in plate bending, Advances in Engineering Software, 41(5), 712-728, May 2010.  
Noh HC, Lee PS, Choi CK. Variability of displacements and stresses at random variable state, Structural Engineering and Mechanics, 31(6), 751-754, Apr 2009.  
Lee PS, Noh HC, Choi CK. Geometry-dependent MITC method for a 2-node iso-beam element. Structural Engineering and Mechanics, 29(2), 203-221, May 2008.

Noh HC, Lee PS. Higher order stochastic field and application to first-order weighted integral formulation. *International Journal of Solids and Structures*, 44(11-12), 4120-4144, Jun 2007.

Lee PS, McClure G. Elastoplastic large deformation analysis of a lattice steel tower structure and comparison with full-scale tests. *Journal of Constructional Steel Research*, 63(5), 709- 717, May 2007.

Lee PS, Noh HC, Bathe KJ. Insight into 3-node triangular shell finite elements: the effects of element isotropy and mesh patterns. *Computers and Structures*, 85(7-8), 404-418, Apr 2007.

Lee PS, McClure G. A general 3D L-section beam finite element for elastoplastic large deformation analysis. *Computers and Structures*, 84(3-4), 215-229, Jan 2006.

Lee PS, Bathe KJ. Insight into finite element shell discretizations by use of the “basic shell mathematical model.” *Computers and Structures*, 83(1), 69-90, Jan 2005.

Lee PS, Bathe KJ. Development of MITC isotropic triangular shell finite elements. *Computers and Structures*, 82(11-12), 945-962, May 2004.

Bathe KJ, Chapelle D, Lee PS. A shell problem ‘highly-sensitive’ to thickness changes. *International Journal for Numerical Methods in Engineering*, 57(8), 1039-1052, Jun 2003.

Bathe KJ, Lee PS, Hiller JF. Towards improving the MITC9 shell element. *Computers and Structures*, 81(8-11), 477-489, May 2003.

Lee PS, Bathe KJ. On the asymptotic behavior of shell structures and the evaluation in finite element solutions. *Computers and Structures*, 80(3-4), 235-255, Feb 2002.

Choi CK, Lee PS, Park YM. Defect-free 4-node flat shell element: NMS-4F element. *Structural Engineering and Mechanics*, 8(2), 207-231, Aug 1999.