

楊元森的發表著作 (更新日期: 2011 年 6 月)

Yuan-Sen Yang's Publication list (Updated: Jun., 2011)

期刊論文

Journal papers (accepted/published)

Yang, Y. S., Huang, C. W., & Wu, C. L. (2011). "A Simple Image-based Strain Measurement Method for Measuring the Strain Fields in an RC-Wall Experiment," *Earthquake Engineering & Structural Dynamics*, accepted. (SCI/EI)

Yang, Y. S., Hsieh, S. H., Hsieh, T. J. (2011). "Improving coarse-grained parallel sub-structuring efficiency by using a dual-level approach," *ASCE Journal of Computing in Civil Engineering*, accepted. (SCI/EI)

Hsieh, T. J. & Yang, Y. S. (2011). "Visualizing the Seismic Spectral Response of the 1999 Chi-Chi Earthquake using Volume Rendering Technique," *ASCE Journal of Computing in Civil Engineering*, accepted. (SCI/EI)

Yang, Y. S., Yang, C. T., Hsieh, S. H., Lin, L. X., & Tsai, K. C. (2011). "A Translator Approach For Distributed Earthquake Engineering Hybrid Simulation Across Heterogeneous Environments," *Journal of the Chinese Institute of Engineers*, accepted. To publish in Vol. 34. (SCI/EI)

Chang, S. Y., Yang, Y. S., & Shu, C. W. (2011). "A family of explicit algorithms for general pseudodynamic testing," *Earthquake Engineering & Engineering Vibration*. (accepted) (SCI/EI)

Tu, Y. H., Chuang, T. H., Liu, P. M., Yang, Y. S. (2010). "Out-of-plane Shaking Table Tests on Unreinforced Masonry Panels in RC Frames," *Engineering Structures*, Vol. 32, No. 12, pp. 3925-3955. (SCI/EI)

Wu, C. L., Kuo, W. W., Yang, Y. S., Hwang, S. J., Elwood, K. J., Loh, C. H., & Moehle, J. P. (2009). "Collapse of a Nonductile Concrete Frame: Shaking Table Tests," *Earthquake Engineering & Structural Dynamics*. Vol. 38, No. 2, pp. 205-224. (SCI/EI) (Funded by NSC)

Lu, K. C., Loh, C. H., Yang, Y. S., Lynch, J. P. (2008). "Real-time Structural Damage Detection using Wireless Sensing and Monitoring System," *Smart Structures and Systems*. Vol. 4, No. 6, pp. 759-778. (SCI/EI)

Yang, Y. S., Hsieh, S. H., Tsai, K. C., Wang, S. J., Wang, K. J., Cheng, W. C. and Hsu, C. W. (2007). "ISEE: Internet-based Simulation for Earthquake Engineering. Part I: Database Approach," *Earthquake Engineering & Structural Dynamics*, Vol. 36, No. 15, pp. 2291-2306. (SCI/EI). (Funded by NSC 91-2711-3-319-200)

Wang, K. J., Tsai, K. C., Wang, S. J., Cheng, W. C. and Yang, Y. S. (2007). "ISEE: Internet-based Simulation for Earthquake Engineering. Part II: Application Protocol Approach," *Earthquake Engineering & Structural Dynamics*, Vol. 36, No. 15, pp. 2307-2323. (SCI/EI). (Funded by NSC 91-2711-3-319-200)

Yang, Y. S., Chang, Y. Y., Wang, S. J., Wang, K. J., Weng, Y. T., Lin, M. L., Cheng, W. C., Tsai, K. C., Lau, D. and Hsieh, S. H. (2006), 'A Remote Collaborative Seismic Design and Simulation on Large-scale DSCFT Piers,' *Journal of Hunan University*, Vol.33, No. 3, pp.40-46. (EI) (Funded by NCREE/NARL funded mainly by NSC)

Wang, K. J., Wang, S. J., Yang, Y. S. Cheng, W. C., Chang, Y. Y., Weng, Y. T., Lin, M. L., Tsai, K. C. and Lau, D. T. (2006), 'Networked Collaborative Pseudo-Dynamic Testing,' *Journal of Hunan University*, Vol. 33, No. 3, pp.18-26. (EI) (Funded by NCREE/NARL funded mainly by NSC)

Yang, Y. S. and Hsieh, S. H. (2002). "Iterative Mesh Partitioning Optimization for Parallel Nonlinear Finite Element Analysis with Direct Substructuring," *Computational Mechanics*, Vol. 28, No. 6, 456-468. (SCI/EI) (Funded by NSC89-2211-E-002-038)

Hsieh, S. H., Yang, Y. S., and Hsu, P. Y. (2002). "Integration of General Sparse Matrix and Parallel Computing Technologies for Large-scale Structural Analysis," *Journal of Computer-Aided Civil and Infrastructure Engineering*, Vol. 17, 437-452. (SCI/EI) (Funded by NSC87-2211-E-002-034)

Hsieh, S. H., Yang, Y. S., and Tsai, P. L. (2002). "Iterative Mesh Partitioning Strategy for Improving the Efficiency of Parallel Substructure Finite Element Computations," *Structural Engineering and Mechanics*, Vol. 14, No. 1, 57-70. (SCI/EI) (Funded by NSC88-2211-E-002-018)

Chou, K. W., Hsieh, S. H., Tsai, I. C., and Yang, Y. S. (2002). "An Object-Oriented Design for Modeling Multi-point Constraints in Finite Element Analysis," *Bulletin of the College of Engineering*, Vol. 85,

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Hsieh, T. J., Chang, C. H., Chen, W. Y., Chen, Y. L., Chang, Y. L., Liang, W. Y., Yang, Y. S., Yeh, S. C. "Visual Processing and Manipulation of LIDAR Point Clouds on a Tiled DisplayWall," submitted to an SCI/EI indexed journal.

Yang, Y. S., Tsai, K. C., Elnashai, A. S. "Online Optimization Method for Pseudo-dynamic Tests with Multiple Identical Substructures," submitted to an SCI/EI indexed journal.

**研討會論文 (2002-2011)****Conference papers (2002-2011)**

楊元森，黃仲偉，吳俊霖，劉易欣，葉育綸 (2011). 「牛鬥橋現地實驗之橋柱應變場與裂縫分析」，牛鬥橋現地實驗研討會，民國 100 年 4 月 27 日，台北，台灣。

Yang, Y. S., Huang, C. W., Wu, C. L. (2011). "Image-based Measurement Techniques for Earthquake Engineering," *Proceedings of the 9<sup>th</sup> Pacific Conference on Earthquake Engineering*, Paper No. 159, Apr. 14-16, 2011, Auckland, New Zealand.

Yang, Y. S., Huang, C. W., Wu, C. L., Chen, B. T., Tsai, J. F. (2010). "Stereo Image-based Method for Strain and Crack Measurement," *Proceedings of the 10<sup>th</sup> National Conference of Structural Engineering*, Paper No. 21, Tao-yuan County, Taiwan.

Yang, Y. S., Tsai, K. C., Elnashai, A. S. (2010). "A Multi-substructure Pseudo-Dynamic Test using Online Updating Method," *Proceedings of the 10<sup>th</sup> National Conference of Structural Engineering*, Paper No. 281, Tao-yuan County, Taiwan.

Hsieh, T. J., Yang, Y. S. (2010). "A Novel Visualization Approach for Seismic Spectral Response using Advanced Volume Rendering Technology," *Proceedings of the 10<sup>th</sup> National Conference of Structural Engineering*, Paper No. 243, Tao-yuan County, Taiwan.

許國志，楊元森 (2010). 「使用 GPGPU 技術加速地震工程分析軟體 OpenSees 運算速度」，第十屆結構工程研討會，民國 99 年 12 月 1-3 日，桃園，台灣。

Tsai, J. F., Yang, Y. S., Huang, C. W., Chen, B. T., Wu, C. L. (2010). "Application of Three-dimensional Computer Vision in Strain Measurements," *Proceedings of the 10<sup>th</sup> National Conference of Structural Engineering*, Paper No. 21, Tao-yuan County, Taiwan. (in Chinese)

Wu, C. L., Yang, Y. S., Hwang, S. J., Loh, C. H. (2010). "Dynamic Collapse of Reinforced Concrete Columns," *Proceedings of the 2010 US-CANADA Joint Conference on Earthquake Engineering*, Toronto, Canada, Jul. 25-29, 2010.

陳北亭，楊元森，黃仲偉，吳俊霖 (2009). 「雙相機影像量測系統於結構實驗之應用」，中華民國力學學會第三十三屆全國力學會議，民國 98 年 11 月 13-14 日，台灣。

Yang, Y. S., Tsai, K. C., Hsieh, S. H., & Elnashai, A. S. (2009). "Collaborations between NCREE in Taiwan and MAE Center in USA on Transnational Distributed Hybrid Simulation on Earthquake Engineering," *Proceedings of the High Performance Computing (HPC) Asia 2009*, Kaohsiung, Taiwan, March 3-5, 2009, pp. 619-626.

Yang, Y. S., Huang, C. W., Chen, B. T., & Wu, C. L. (2008). "Image-based Surface Strain Field Measurement of a Post-Tensioned RC-Wall Cyclic Test," *Eleventh East Asia-Pacific Conference on Structural Engineering & Construction (EASEC-11)*, Taipei, Taiwan, November, 2008.

Ohsaki, M., Kasai, K., Thiagarajan, G., Yang, Y. S., & Komiya, Y. (2008). "3-D Analysis Methods for 2007 Blind Analysis Contest," *Proceedings of the 14<sup>th</sup> World Conference on Earthquake Engineering*, Paper ID: S17-03-007, Beijing, China, October 12-17, 2008.

Yang, Y. S., Tu, W. H., Yang, C. T., Lin, L. X., Hsieh, S. H., & Tsai, K. C. (2008). "Frameworks for NCREE Data Model and Internet-based Simulations on Earthquake Engineering," *Proceedings of the 14<sup>th</sup> World Conference on Earthquake Engineering*, Paper ID: S17-03-001, Beijing, China, October 12-17, 2008.

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<p>Yang, Y. S., Yang, C. T., Lin, L. X., Hsieh, S. H., &amp; Tsai, K. C. (2008). "Bridging NCREE-ISEEdb and UI-SimCor for Networked Hybrid Simulations," <i>Proceedings of the NEES 6<sup>th</sup> Annual Meeting</i>, Portland, Oregon, USA, June 18-20, 2008.</p>
<p>Tung, S. H., Shih, M. H., &amp; Yang, Y. S. (2008). "Application of the Digital-Image-Correlation Technique to Measure the Deformation of a Seismic Retrofitted Column for a Two-Storey Building," <i>Proceedings of the Ninth International Conference on Computational Structures Technology</i>, Athens, Greece, September 2-5, 2008.</p>
<p>施明祥、童士恒、楊元森 (2008), 「現地試驗影像量測」, 校舍耐震補強現地試驗成果研討會, 2008年1月25日, 台北, 台灣。</p>
<p>Tsai, K. C., Wu, C. C., Lin, P. H., Wu, C. L., Lin, C. C. J., Yang, Y. S. and Lin, P. Y. (2007). "International Collaboration for Earthquake and Typhoon Hazard Mitigation," <i>Proceedings of the 2nd International Conference on Urban Disaster Reduction</i>, Taipei, Taiwan, Nov. 27-29, 2007.</p>
<p>Hsieh, S. H., Yang, C. T., Lin, L. X., Yang, Y. S. and Tsai, K. C. (2007). "Bridging NCREE-ISEEdb and UI-SimCor for Hybrid Earthquake Engineering Simulations across Heterogeneous Environments," <i>Proceedings of the 9<sup>th</sup> Seminar on Earthquake Engineering for Building Structures (SEEBUS 2007)</i>.</p>
<p>Lin, M. L., Weng, Y. T., Yang, Y. S., Wang, S. J., Chen, P. C., Tsai, K. C., Lau, D., Chang, Y. Y. and Khoo, H. A. (2007). "Networked Hybrid Tests of a 4-Pier Double-skinned CFT Bridge," <i>Proceedings of the 9<sup>th</sup> Canadian Conference on Earthquake Engineering</i>, Ottawa, Ontario, Canada, Jun. 26-29, 2007.</p>
<p>Lin, M. L., Weng, Y. T., Yang, Y. S., Wang, S. J., Chen, P. C., Chang, Y. Y., and Tsai, K. C. (2007). "Seismic Behavior of Large-scale DSCFT Bridge Columns," <i>Proceedings of the 9<sup>th</sup> Canadian Conference on Earthquake Engineering</i>, Ottawa, Ontario, Canada, Jun. 26-29, 2007.</p>
<p>楊元森 (2006). "高速平行運算於大型工程計算之應用," <i>2006 近代工程計算論壇</i>, 台北, 台灣, 民國 95 年 12 月 21-22 日.</p>
<p>Tu., W. H., Yang, Y. S., Cheng, W. C., Hsieh, S. H. and Tsai, K. C. (2006). "Development of Management System for Experimental Data at NCREE," <i>Proceedings of the 4<sup>th</sup> International Conference on Earthquake Engineering</i>, Paper No. 253, Taipei, Taiwan, October 13-14, 2006.</p>
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<p>Yang, Y. S., Wang, S. J., Wang, K. J., Lin, M. L., Weng, Y. T., Cheng, W. C., Chang, Y. Y., Tsai, K. C., Lau, D. T., Hsieh, S. H., Lin, F. P. and Lin, S. Y. (2006). "Network System for A Transnational Collaborative Pseudo-dynamic Experiment on A DSCFT-pier Bridge System," <i>Proceedings of the 8<sup>th</sup> National Conference on Earthquake Engineering (8NCEE US)</i>, Paper No. 810, San Francisco, California, USA, April 17-21, 2006.</p>
<p>Yang, Y. S., Wu, C. L., Loh, C. H., Lin, C. H., and Chao, S. H. (2006). "Dynamic Gravity Load Collapse of Non-ductile RC Frames II: Computational Approach," Paper No. 783, <i>Proceedings of the Eighth National Conference on Earthquake Engineering (8NCEE US)</i>, San Francisco, California, USA, April 17-21, 2006.</p>
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Hsieh, S. H., Tsai, K. C., and Yang, Y. S. (2004). "A Collaboration Platform for Internet-based Pseudo-Dynamic Experiments with Real-time Web-based Data Sharing," <i>Proceedings of Symposium on Natural Disasters Reduction</i> , Nov. 5-6, 2004, Hong Kong, China.
Wang, S. J., Wang, K. J., Yang, Y. S., Cheng, W. C., Yeh, C. C., and Tsai, K. C. (2004). "Networked Pseudo-dynamic Testing Part II: Application Protocol Approach," Paper No. 1548, <i>Proceedings of the Thirteenth World Conference on Earthquake Engineering</i> , Aug. 1-6, 2004, Vancouver, Canada.
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Yang, Y. S., Hsieh, T. J., Yang, C. M., Hsu, K. C. (2011). "GPGPU Parallelism on an Object-Oriented Earthquake Engineering Simulation System 1st Year Report (an internal technical report)," submitted to National Science Council, Taiwan.
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研究計畫 (僅列 2006 年之後)(最後更新日期: 2011 年 06 月)

計畫名稱：使用平行運算技術及實用之物理運算方程式撰寫電腦程式模擬建築物內外之火煙物理現象並以3D特效方式呈現供電腦動畫程式做後續使用

出資單位：森鴻數位聯合公司

執行單位：國立台北科技大學

計畫編號：技術移轉案－北科大研總字第1007900098號

執行期間：2011/3-2011/12

擔任職務：主持人 (與謝東儒教授共同擔任)

主要工作：使用平行運算技術及實用之物理運算方程式撰寫電腦程式模擬建築物內外之火煙物理現象

計畫經費：600,000元

計畫名稱：長跨徑預力混凝土橋梁之結構健康診斷方法研究

出資單位：中華顧問工程司

執行單位：國立台北科技大學

計畫編號：中華顧問工程司研究計畫

執行期間：2011/1-2011/12

擔任職務：共同主持人 (主持人：宋裕祺教授)

主要工作：影像量測之現地量測之規劃與執行

計畫經費：1,380,018元

計畫名稱：地震工程模擬之GPGPU超多核心平行化研究 (三年期)

執行單位：國立台北科技大學

計畫編號：國科會NSC 99-2221-E-027 -042 -MY3

執行期間：2010/8-2013/7

擔任職務：主持人

主要工作：研究方向規劃、GPGPU有限元素系統分析/設計/開發/測試、報告撰寫、論文投稿

計畫經費：1,465,000元

計畫名稱：地震量測資料3D繪圖技術與視覺分析系統研發

執行單位：國立台北科技大學

計畫編號：國科會NSC 99-2221-E-027 -098

執行期間：2010/8-2011/7

擔任職務：共同主持人 (主持人：謝東儒教授)

主要工作：系統分析/測試、協助報告撰寫、協助論文投稿

計畫經費：509,000元

計畫名稱：地震工程複合實驗技術:模型修正法研究(二)

執行單位：國家地震工程研究中心

計畫編號：NCREE 06098A5313-3

執行期間：2009/1-2009/12

擔任職務：主持人

主要工作：計畫主持、研究方向規劃、技術研發、軟體開發測試、成果報告撰寫、論文發表

計畫經費：80,000元(不含資訊設備耗材費用)

成果論文：完整研究報告1本，精簡研究報告1篇，研討會論文1篇。

計畫名稱：實驗影像量測技術研發:RC矩形梁實驗應變分析

執行單位：國家地震工程研究中心

計畫編號：NCREE 06098A5313-3

執行期間：2009/1-2009/12

擔任職務：主持人

主要工作：計畫主持、研究方向規劃、技術研發、軟體開發測試、成果報告撰寫、論文發表

計畫經費：120,000元(不含資訊設備耗材費用)

<p>成果論文：完整研究報告1本，精簡研究報告1篇。</p> <p>計畫名稱：地震工程複合實驗技術:模型修正法研究(一)</p> <p>執行單位：國家地震工程研究中心</p> <p>計畫編號：NCREE 06097A2003-3</p> <p>執行期間：2008/1-2008/12</p> <p>擔任職務：主持人</p> <p>主要工作：計畫主持、研究方向規劃、技術研發、國際合作交流、軟體開發測試、成果報告撰寫、論文發表</p> <p>計畫經費：80,000元(不含資訊設備耗材費用)</p> <p>成果論文：完整研究報告1本，精簡研究報告1篇，研討會論文1篇。</p>
<p>計畫名稱：實驗影像量測技術研發:RC牆應變分析</p> <p>執行單位：國家地震工程研究中心</p> <p>計畫編號：NCREE 06097A2003-4</p> <p>執行期間：2008/1-2008/12</p> <p>擔任職務：主持人</p> <p>主要工作：計畫主持、研究方向規劃、技術研發、國際合作交流、軟體開發測試、成果報告撰寫、論文發表</p> <p>計畫經費：120,000元(不含資訊設備耗材費用)</p> <p>成果論文：完整研究報告1本，精簡研究報告1篇，研討會論文2篇。</p>
<p>計畫名稱：地震工程複合實驗技術:我國ISEE與美國NEES之整合</p> <p>執行單位：國家地震工程研究中心</p> <p>計畫編號：NCREE 06096A2003-3</p> <p>執行期間：2007/1-2007/12</p> <p>擔任職務：主持人</p> <p>主要工作：計畫主持、研究方向規劃、技術研發、國際合作交流、軟體開發測試、成果報告撰寫、論文發表</p> <p>計畫經費：128,000元(不含資訊設備耗材費用)</p> <p>成果論文：完整研究報告1本，精簡研究報告1篇，研討會論文3篇，期刊論文1篇(審稿中)。</p>
<p>計畫名稱：實驗影像量測技術研發:位移追蹤量測</p> <p>執行單位：國家地震工程研究中心</p> <p>計畫編號：NCREE 06096A2003-4</p> <p>執行期間：2007/1-2007/12</p> <p>擔任職務：主持人</p> <p>主要工作：計畫主持、研究方向規劃、技術研發、國內合作交流、軟體開發測試、成果報告撰寫、論文發表</p> <p>計畫經費：72,000元(不含資訊設備耗材費用)</p> <p>成果論文：完整研究報告1本，精簡研究報告1篇，研討會論文2篇。</p>
<p>計畫名稱：地震工程實驗模擬技術與資訊格網系(三)</p> <p>執行單位：國家地震工程研究中心</p> <p>計畫編號：國科會NSC 95-2923-I-492-001</p> <p>執行期間：2006/12/1-2007/11/30</p> <p>擔任職務：共同主持人 (主持人：蔡克銓教授)</p> <p>主要工作：主導研究工作、研究方向規劃、技術研發、國內合作交流、軟體開發測試、成果報告撰寫、論文發表</p> <p>計畫經費：1,920,000元(不含資訊設備耗材費用)</p> <p>成果論文：完整研究報告1本，精簡研究報告1篇，研討會論文2篇。</p>