

YenYu Lin 林彥宇, Ph.D.

Curriculum Vitae

Dept. of Construction Engr.
824 高雄市燕巢區大學路一號

National Kaohsiung University of Science and Technology
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EDUCATIONAL HISTORY

Doctor of Philosophy in Civil Engineering 2012
University of Washington, Seattle WA
Dissertation: Eco-decision Making for Pavement Construction Projects
Advisor: Dr. Stephen T. Muench

Master of Science in Civil Engineering 2004
National Cheng Kung University, Tainan, Taiwan
Thesis: Analysis of cracks initiation and fatigue life of asphalt concrete (in Mandarin)
Advisor: Dr. Jian-Shiuh Chen

Bachelor of Science in Civil Engineering 2002
National Cheng Kung University, Tainan, Taiwan

REASERCH INTERESTS

- Engineering performance of roadway materials
 - Life Cycle Assessment of construction materials and infrastructure
 - Carbon footprint of infrastructure estimation and inventory
 - Sustainability rating system and sustainable practices for roadways
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EMPLOYMENT HISTORY

Construction Engineering Dept., NKUST, 2017.02-present
Assistant Professor

Environmental Engineering Dept. I, Sinotech Engineering Consultants, Ltd 2013.02-2017.01
Project Director

Dept. Of Civil And Environmental Engineering, UW 2007.09-2012.11
Graduate Research Associate

Railway Engineering Dept., Sinotech Engineering Consultants, Ltd 2007.01-2007.08
Engineer

Business Dept., Hwang Chang General Contractor Co., Ltd 2006.06-2006.12
Associate Engineer

AWARDS AND HONORS

- 鋪面工程傑出論文獎，中華鋪面工程學會，2018
- Outstanding Young Engineer, Sinotech Engineering Consultants, Ltd, 2016
- Best Paper Award, First International Conference on Transportation Infrastructure Materials, 2016.
- Paul B. Liao Endowed Regental Fellowship (Tuition waiver and stipend), 2007~2009.
- Citation of Distinguished Reserve Officer, Minister of National Defense, R.O.C., 2005.
- Presidential Award of National Cheng Kung University (first of class), 2002~2004.

AFFILIATIONS AND OTHER APPOINTMENTS

- Invited Reviewer, Journal of the Chinese Institute of Civil and Hydraulic Engineering., 2020
 - Invited Reviewer, International Journal of Pavement Research and Technology, 2020
 - Invited Reviewer, International Journal of Pavement Research and Technology, 2019
 - Invited Reviewer, Proceedings of EASTS, 2019
 - Organizing Committee, the 110th Road Engineering Association of Asia and Australasia (REAAA) Council Meeting & 7th Business Forum, 2018.06~2019.04
 - 諮詢委員，監察院調查”豪雨導致市區道路坑洞及路基下陷” 學者專家諮詢會議，2019.05
 - 常務理事，臺灣人道關懷建築協會，2019~迄今
 - 諮詢委員，內政部建築研究所 107 年度創新低碳綠建築環境科技計畫，學者專家諮詢會議，2018.05 & 2018.11
 - Deputy Director of Young Engineer and Professional, Chinese Society of Pavement Engineering, 2018.11~present
 - Young Engineer and Professionals Committee, Chinese Road Federation, 2018.06~present
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- 委員，達”道”宜居專案，高雄市政風處，2017.02~2017.06
 - Greenroads Foundation, Advisory Council, 2017.02~2020.03
 - Invited Reviewer, Proceedings of EASTS, 2017
 - Industry Expert, Collaborative Teaching Program, National Taiwan University of Science and Technology, 2015-2016
 - Invited Reviewer, Journal of Cleaner Production, 2015.
 - Technical Committee of The American Center for Life Cycle Assessment, 2010-2012.

PUBLICATIONS

Journal Publications

- Liao, Min-Chih, Mujib Rahman, Tsun-Jen Lo and Yen-Yu Lin (2019), "Rheological Characteristics of Crumb Rubber Modified Asphalt", Journal of Eastern Asia Society for Transportation Studies, (Accepted for Publication).
 - Chen, Jian-Shiuh, C.T. Lee, Yen-Yu Lin, (2018) "Characterization of a Recycling Agent for Restoring Aged Bitumen," Journal of Materials in Civil Engineering, Volume 30 Issue 8, August 2018 (SCI)
 - Min-Chih Liao, Yen-Yu Lin and Tseng, M., (2018) "Laboratory Evaluation of Aging on Engineering Properties of Fine-Graded Porous-Asphalt Concrete," Journal of Testing and Evaluation, Vol. 46, No. 1, 2018 (SCI)
 - Min-Chih Liao, Yen-Yu Lin, (2017) "Rutting Performance of Porous Asphalt Concrete for Heavy Duty Pavement," Journal of Eastern Asia Society for Transportation Studies, Vol.12, April 2018.
 - Jian-Shiuh Chen, Han-Chang Ho, Yen-Yu Lin, (2017) "Production, Construction, Properties, and Performance of a Test Road with High Reclaimed Asphalt Pavement Content," Transportation Research Record: Journal of the Transportation Research Board, No.2633, Vol. 3, November 2017 (SCI)
 - Chen, Jian-Shiuh, C.T. Lee, Yen-Yu Lin, (2017) "Influence of Engineering Properties of Porous Asphalt Concrete on Long-Term Performance," Journal of Materials in Civil Engineering, Volume 29 Issue 4, April 2017 (SCI)
 - Chen, Jian-Shiuh, P. Y. Chu, Yen-Yu Lin, K. Y. Lin (2007), "Characterization of Binder and Mix Properties to Detect Reclaimed Asphalt Pavement Content in Bituminous Mixtures", Canadian Journal of Civil Engineering, Vol. 34, No. 5, pp.581 – 588 (SCI)
 - 胡憲倫、林彥宇、許珮蓓、黃琬淇、周武雄、黃慶耀，「台灣公共工程碳足跡推動之現況及展望」，土木水利雙月刊，第四十一卷第六期，第 58-64 頁，2014。
 - 黃琬淇、林彥宇、周武雄、許珮蓓、楊伊萍，道路工程碳足跡盤查規範制度與實務應用，中興工程季刊，第 125 期，第 86-94 頁，2014。
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Conference Proceedings

- Min-Chih Liao, Yen-Yu Lin, "Rutting Performance of Porous Asphalt Concrete for Heavy Duty Pavement," International Conference of Eastern Asia Society For Transportation Studies, Ho Chi Minh City, Vietnam, September 2017
 - Min-Chih Liao, Kun-Chih Sia, Yen-Yu Lin, "Rheological Properties of Bitumen Blended with Natural Asphalt at Low Shear Conditions," International Conference on Road and Airfield Pavement Technology, Hong Kong, August 2017
 - Min-Chih Liao and Yen-Yu Lin, "Pavement Performance Evaluation of Porous Asphalt Concrete Overlay," 10th International Conference on Road and Airfield Pavement Technology, 2017, Hong Kong.
 - Min-Chih Liao and Yen-Yu Lin, "Engineering Properties of PAC Thin Surfacing for Pavement Rehabilitation," 2nd IRF Asia Regional Congress & Exhibition, Kuala Lumpur, Malaysia, 16-20, October, 2016.
 - Min-Chih Liao and Yen-Yu Lin, "Laboratory Evaluation of Cold-mix Porous Asphalt Concrete (CM-PAC) Patching Materials", 8th International Conference on Maintenance and Rehabilitation of Pavements (MAIREPAV8), Singapore, 2016.
 - Jian-Shiuh Chen; Cheng-Te Lee; Yen-Yu Lin, "Laboratory and Field Evaluation of Porous Pavement," First International Conference on Transportation Infrastructure Materials, Xi'an, China, 2016. (Best Paper Award)
 - Steve Muench, Yen-Yu Lin, Si Katara, and Amit Armstrong, "Roadprint: Practical Pavement Lifecycle Assessment (LCA) Using Generally Available Data," International Symposium on Pavement LCA, Davis, California, USA, 2014.
 - Muench, S.T.; Martinez Caraballo, E., Lin, Yen-Yu, Gutub, S., Willoughby, K. and Uhlmeyer, J., "Impact on Emissions and Energy Consumption of Evolving Pavement Materials Practices from 1990 to 2010: A Washington State Department of Transportation Case Study." TRB Annual Meeting, TRB, National Research Council, Washington, D.C., 2014
 - 鍾凱羽、黃隆昇、林彥宇(通訊作者), "不同孔隙之多孔隙瀝青混凝土降溫行為之研究", 工程永續與土木防災研討會, 2019。
 - 陳保展、羅國峯、林彥宇、許珮蒨、王寧沂, "西濱快速公路八棟寮至九塊厝新建工程之鋪面工程全生命週期排碳特性分析", 第十九屆鋪面工程學術研討會, 2017。
 - 許焜奮、曾國鴻、林彥宇(通訊作者), "鋪面型式及黏層對層間黏結力影響之研究", 第十九屆鋪面工程學術研討會, 2017。
 - 夏明勝、林彥宇、許珮蒨、周武雄、曠永銓, 「臺灣西濱快速公路碳足跡盤查作業實務及展望」, 第三屆兩岸四地公路交通發展論壇, 香港, 2014。
-

- 林彥宇、許珮蓓、周武雄，「鋪面工程溫室氣體排放量評估與減量策略研析」，第二屆兩岸四地公路交通發展論，台灣，2013。

Manuals

- Contributing author, Pilot Test Version, Compendium of System Planning and Processes, Project Delivery and Operations & Maintenance Criteria, Sustainable Highway Self-evaluation Tool, FHWA, 2011.
- Contributing author, Greenroads Manual v1.5, University of Washington, 2011.
- Contributing author, Greenroads Manual v2.0, Greenroads Foundation, 2015.

Research report

- Muench, S.T.; Martinez, E. and Lin Yen-Yu, Determining Changes in Greenhouse Gas Emissions (1990-2010) due to Pavement Technology. WA-RD 838.1. Washington State Department of Transportation (WSDOT), Olympia, WA, 2015

Software

- Lin, Yen-Yu, Muench, S.T. and Pavia Systems, Inc. Roadprint. Pavement life cycle assessment (LCA) online application.(2013)

OTHER SCHOLARLY ACTIVITY

Invited Presentation and Lecture

- “LCA GWP of Roadway Construction,” MAA, 2020.06
 - “綠道路設計介紹”，交通部公路總局技術座談，材料試驗所，2019.04
 - “Sustainability of Roadway Engineering,” Workshop, CE Dept., NKUST, 2018.08
 - “Carbon Footprint Inventory for Road: The Practice in Taiwan,” 7th REAAA Business Forum, 2019.04
 - “Introduction of Carbon Footprint Inventory and Life-Cycle Analysis of Highways,” Seminar, KAUS, 2018.05
 - “混凝土新思維-碳足跡”，晉瑜混凝土技術講座，2018.03
 - “國內水利機關節能減碳及碳管理作為”，水利設施工程減碳創新經驗分享講座，經濟部水利署，2017.11
 - “綠道路評估系統簡介”，工程碳管理與綠道路教育訓練，台灣區國道新建工程局第二區工程處，2016.07
 - “Lesson learned from highway carbon footprint inventory and verification – experience of Taiwan,” 7th International Highway Technology Summit, Shanghai, 2015.04
 - “Experience on Carbon footprint inventory of Westshore Expressway in Taiwan,” 3rd Cross Strait Highway and Traffic Conference, Hong Kong, 2014.11
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- “Toward Low Carbon Design–Carbon Management of the Suhua Highway Improvement Project,” CICHE International Round Table Meeting Sustainable Innovation Low Carbon Design and Eco-City, Taipei, 2013.12
 - “溫室氣體、生命週期評估與工程碳足跡應用”，中興工程基金會-工程實務校際專題演講，國立台灣大學，2014.10
 - “溫室氣體、碳足跡與生命週期評估”，鼎漢國際工程顧問股份有限公司，2013.04
 - “GHG emission evaluation and reducing strategy of pavement construction,” 2nd Cross Strait Highway and Traffic Conference, Taipei, 2013.11
 - “Lifecycle Assessment Framework and Inventory for Pavement Construction,” Graduate Student Seminar, University of Washington, 2010.09
 - “Lifecycle Assessment Framework and Inventory for Pavement Construction,” Graduate Student Seminar, University of Washington, 2010.09

Funded Research Projects

科技部計畫

- 計畫主持人，水淬高爐石粉填充料細度對於密級配瀝青混凝土水敏感性之影響 (2020.08~2022.07)

教育部計畫

- 協同主持人，義築桃花源-港都山線人文新風貌營建計畫，大學社會責任實踐計畫 (2018.01~2019.12)
- 協同主持人，安居桃花源·港都山線韌性城鄉營建計畫，大學社會責任實踐計畫 (2020.01~2022.12)
-

產學合作計畫

- 主持人，世誠營造股份有限公司-國立臺灣藝術大學多功能活動中心新建工程碳排放盤查作業 (2017.05~2019.09)
- 主持人，中興工程顧問股份有限公司-西濱快速公路八棟寮至九塊厝新建工程(交通部公路總局西濱快速公路南區臨時工程處)委託工程碳管理暨碳足跡盤查輔導及查證服務工作-碳足跡盤查輔導與分析(2017.04~2018.12)
- 主持人，環興科技股份有限公司-國道4號臺中環線豐原潭子段(交通部國道新建工程局)-綠道路先導評估及認證作業(2017.04~2018.10)
- 主持人，環興科技股份有限公司(交通部公路總局西濱快速公路北區臨時工程處)-碳足跡應用於快速公路地工合成材料之研究委託服務工作(2017.04~2018.08)