# 二 OO 三
# 第一届上海国际路面工程会议: 设计, 材料, 施工, 维护以及管理

主办单位: 中国旅美交通协会 (NACOTA)
同济大学
上海市公路协会

海外报告团成员简介

上海国际会议中心

**2003 年 11 月 11-15 日**

## 张 仲 捷

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张仲捷博士现任美国 Louisiana 州交通研究中心首席研究工程师, 并加盟于美国 Louisiana 州立大学研究生院(Affiliated Faculty Member)。除本人的研究项目外，他主要从事研究中心内岩土和道路工程科研项目的管理工作。他分别毕业于西安公路学院、上海同济大学、和美国 Louisiana 州立大学，并获得土木工程的学士、硕士、和博士学位。有在美国和中国大学、科研机构、公司、和政府部门从事教学、科研、设计、管理、和工程咨询的经验。

张仲捷博士的主要研究领域是道路和岩土工程。在此领域有超过二十年的工作经历和经验。就职于 Louisiana 州交通部后，还曾担任过州城市交通规划工程师（二年）、路面设计工程师（四年）、桥梁管理系统工程师（1 年半）。在道路交通工程的领域有着实际的工作经验。

张仲捷博士主要着重于日常生产活动中的应用研究，解决实际问题。他的研究成果曾陆续发表于美国土木工程师协会（ASCE）学报、美国试验材料学会（ASTM）学报、和其它刊物与会议论文集。

# CHEN DAR-HAO

DAR-HAO CHEN, Ph.D., P.E.
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**APT System Manager,** Material and Pavement Section, Construction Division

**Ph.D.** in Civil Engineering (Geotechnical/Pavement Engineering), University of Oklahoma, GPA 4.0/4.0, December 1994.

- Responsible for a statewide superheavy load and load zone program.
- Establish a world renowned accelerated pavement testing (APT) program to evaluate pavement response and performance. Responsible for all aspects of research and development of instrumentation for test sites, analysis of test data, determination of pavement remaining life and the best rehabilitation strategy. Collecting, processing, analyzing, and archiving all data generated from the Texas Mobile Load Simulator (TxMLS). TxMLS is a state-of-the art accelerated pavement testing device designed to simulate real traffic loading using modern truck tires, wheels, and suspensions for the determination of pavement remaining life and the best pavement rehabilitation strategy. TxMLS project costs to date exceed $12 million.
- Perform forensic studies and other special projects using state-of -art non-destructive testing techniques to test, analyze and characterize pavement sections. Forensic studies are performed to determine (1) the causes of the failure; (2) the extent of the problem; (3) the prevention; (4) rehabilitation techniques.
- Develop rehabilitation and maintenance strategies (both flexible and rigid) for Texas DOT Districts with funds exceeding $200 million dollars.
- Direct, monitor and supervise Texas DOT's research projects as a Research Project Director, Project Advisor and Project Manager with funds exceeding $15 million dollars.
- Serving as a Research Project Director and Principle Investigator for National Pooled-Fund Study SPR-2(205) "Model Calibrations with Local Accelerated Pavement Test Data and Implementation for Focused Solutions to NAFTA Problems" with budget of $780,000.
- Panel Member for National Academy, Cooperative Highway Research Program, Transportation Research Board, Washington D.C.
- Committee Member A2K05 for Modeling Techniques in Geomechanics, Transportation Research Board, Washington D.C.
- Committee Member A2K01 for Soils and Rock Instrumentation. Transportation Research Board, Washington D.C.
- Author of more than 60 technical papers published in the International/national Journals

Adjunct Professor: Changsha University of Science and Technology

# ABADIE, CHRIS

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I am a life resident of Baton Rouge, Louisiana and 1982 graduate of LSU, Louisiana State University in Civil Engineering. My initial experience was in the area of Quality Control and Acceptance, with the Louisiana DOTD, Department of Transportation and Development Materials Testing Laboratory, working for seven years with cementitious materials, Portland cement concrete admixtures and reinforcing steel. After working five years in the private industry as a consultant/ project manager for the petrochemical industry, I returned to LTRC/DOTD as a Bituminous Research Engineer. Over the last 10 years I have seen the development and implementation of polymer modified asphalt, Stone Mastic Asphalt, Crumb Rubber mixtures, along with Superpave Binder and Mixture specifications. It has truly been an exciting time to work in this field. I have the pleasure of serving on three TRB, Transportation Research Board Committees; A2F05, Flexible Pavement Construction; AC305, Maintenance of Bituminous Surfaces; A2D02, Non bituminous materials for bituminous mixtures, I also enjoy my member association in AAPT, Association of Asphalt Paving Technologists and the South East Asphalt User Producer Group. Currently, I am LTRC's Materials Research Administrator and manage our research in the areas of Asphalt and Concrete Materials and Structural Research. My wife Linda and I have two wonderful daughters, Ellen 16 and Kelly 11. I want to thank you for the opportunity to share my Superpave implementation experience with you at this conference.

# BAKER, JOE T.

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August, 1993, Joe Baker was appointed director of the Louisiana Transportation Research Center, a joint venture of the Louisiana Department of Transportation and Development and Louisiana State University. He received a B.S. degree in civil engineering from Louisiana State University in 1971 and has been a registered professional engineer in Louisiana since 1975.

His initial experience with a large consulting engineering firm involved Baker in all aspects of the design of interstate and primary highways. After joining DOTD in 1971, he worked for 16 years as testing engineer in the management of testing, evaluation, and quality assurance programs for transportation materials.

In 1987, Baker joined LTRC as director of technology transfer, managing training programs for 5600 DOTD employees, the implementation of research, the coordination of the DOTD Strategic Planning Program, and the provision of technical assistance to local government agencies through the center's Local Technical Assistance Program.

He currently serves as the Transportation Research Board state representative for Louisiana and is a member of the AASHTO Research Advisory Committee, ASTM Committee D.04, the American Society for Nondestructive Testing, and the American Society for Metals, the American Concrete Institute, and the Louisiana Society of Professional Engineers.

# 陳 建 旭

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陳建旭目前擔任台灣成功大學土木系教授之工作，也是該校 1984 年的畢業生，爾後赴美國進修，分別於 1990、1994 年取得喬治亞理工學院和賓州州立大學的碩士、博士學位，工作經驗包含賓州交通研究中心研究助理、聯邦公路總署研究中心研究學者、亞州理工學院助理教授和伊利諾州州立大學香檳分校訪問學者，1992 年於維吉尼亞州成為註冊工程師。主要研究領域為鋪面工程和材料，針對改性瀝青提出兩相理論模式，建議改性瀝青最佳拌合比；分析粒料特性對瀝青混凝土工程性質之影響；評估石膠泥瀝青混凝土和排水鋪面之績效；建立鋪面力學－經驗設計方法；探討再生瀝青混凝土於熱拌料中的含量檢驗。發表國際期刊 30 多篇，擔任公共工程中心瀝青試驗室負責人，多項重要鋪面研究案主持人。

# 邱垂德

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邱垂德博士於 1962 年生於臺灣桃園，成功大學畢業後即任職於熱拌瀝青廠擔任品管主任，1989 年取得中央大學土木工程碩士學位，碩士論文題目為「瀝青混凝土之瀝青含量及粒料級配變異之研究」；1991 年獲美國佛羅里達大學(University of Florida)網羅赴美進修，負責瀝青材料之耐久性研究，並於 1994 年取得佛羅里達大學土木工程博士學位，博士論文題目為「Investigation of Laboratory Asphalt Aging Processes for Development of an Effective Procedure to Characterize Asphalt Durability」。1994 年 8 月起任教於中華大學土木系，教授土木材料，鋪面工程、鋪面管理系統、及高等鋪面材料等課程，並指導研究生在國科會、工程會、環保署、國道新建工程局、及公路總局等單位的經費支助下，進行鋪面檢測技術、瀝青路面再生、新式面層材料、廢輪胎橡膠鋪面、泡沫瀝青、及垃圾焚化底碴拌製瀝青混合料等相關研究，實際鋪設再生瀝青路面、廢輪胎橡膠瀝青路面、及 SMA 試驗路面，發表相關論文超過 30 篇，並擔任行政院公共工程委員會推動瀝青混凝土資源再生之相關委員會委員，負責引進再生瀝青混凝土的檢驗方法，目前亦為中華鋪面工程學會理事及臺灣區瀝青工業同業公會技術顧問。

# FANG, YING WU

Dr. Yingwu Fang
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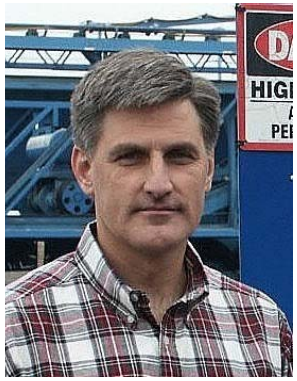
Dr. Fang received a Ph.D. and a Master's degree in Pavement Engineering, and a Bachelor's degree in Engineering Mechanics. As an expert in pavement related researches, database design, database administration, and computer software development, Dr. Fang's expertise covers the following areas:

Pavement Management and Maintenance, Pavement Mechanics, Materials Test, Pavement Instrumentation and Field Pavement Test, Mechanistic Pavement Response Analysis, Environmental Influence on Pavements, Pavement Rehabilitation, Database Design and Administration, Database Application Development, Software Development.

Dr. Fang has published tens of technical papers in professional journals and conference proceedings, has given more than 40 technical presentations in conferences, universities, the FAA working group meetings, and Federal Highway Expert Technical Group Meetings. Dr. Fang has also developed several engineering computer software packages. Some of such applications have been widely used in North America and one of them is on commercial market.

Dr. Fang has been active in the professional society. He is a registered professional engineer in Maryland and has been certified as Certified Visual Basic Programmer, Certified Oracle Programmer, Certified Oracle Database Administrator, Certified Oracle Internet Application Developer, and Certified Oracle Application Developer. Dr. Fang is also a peer reviewer of technical papers for the International Journal of Pavement Engineering, Transportation Research Board, etc. Some of Dr. Fang's professional affiliations include:

Member of Transportation Research Board, 1998 to date
Member of Committee A2B04 – Pavement Rehabilitation, 2002 to date
Member of American Society of Civil Engineers, 1996 to date
Member of American Society for Testing and Materials, 1996 to date
Member of Committee C-04 – Road and Paving Materials, 1996 to date
Institute of Transportation Engineers, Student Member, 1990-1994



# KING, WILLIAM "BILL"

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Bill is 45 years of age, born in Shreveport, La. married and has one son and one daughter. A graduate from Louisiana State University (LSU) with a Bachelor of Science degree in Civil Engineering, December, 1981.

Dec. 1981 - Employed by the Bridge Design section of the Louisiana Department of Transportation and Development, designing bridges.

March 1998 - Moved to the Louisiana Transportation Research Center in March, 1988, as Research Engineer Supervisor in the Pavement Research area.

July 1996 - Hired to current position to manage LTRC's Pavement Research Facility, home of the Accelerated Loading Facility (ALF).

Member of the Transportation Research Board (TRB) A2B09 Committee on Accelerated Pavement Testing.

Served on Louisiana's Transportation Engineering Conference committee for six years.

Publications Include:

Evaluation of Stone/RAP Interlayers Under Accelerated Loading (Construction Report), LTRC

Comparative Performance of Rubberized Hot Mix Under Accelerated Loading (Construction Report), LTRC.

Design and Construction of a Bonded Fiber Concrete Overlay of CRCP, LTRC.

Personal interest include most types of recreational sports, traveling, and woodworking.

Bill is honored to have this opportunity to present Louisiana's Accelerated Pavement Testing Program to this International Conference on Pavement Engineering.

# 林 登 峰

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林登峰博士目前於義守大學土木工程系擔任副教授工作外，亦為高雄縣政府顧問及中華鋪面工程學會服務推廣委員會副主任委員。林登峰博士於 1997 年取得台灣國立中央大學土木工程學博士，曾擔任德林技術學院講師、義守大學助理教授、中華鋪面工程學會理事、中國工程師學會高雄分會會刊編輯、高雄市政府養護工程處施工計畫審查及工程品質審查小組委員等工作。林登峰博士近年研究範圍在於 SMA 鋪面、再生瀝青混凝土鋪面、UTW 鋪面、影像分析法應用於營建材料及資源再利用等方面，其研究成果中英文期刊 20 餘篇，研討會中英文論文 90 餘篇，技術報告 24 本。

# 廖 超

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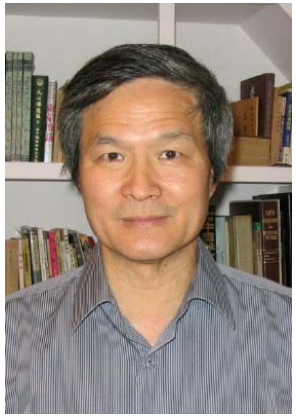
廖超博士，１９９７年毕业于美国德州大学　　１９９８年在美国德州大学爱尔帕索分校担任交通模拟实验室主任，从事层结构的动力响应，热波在层结构的传播，公路结构，公路维修，城市交通发展和城市规划的研究。２０００年在美国加州政府交通部第六分区担任道路几何设计工程师，主要设计立体交叉。　２００１年调往加州州政府交通总部担任工程材料研究员，从事对材料朔变，大规模混凝土结构散热问题研究。　自　２００１年９月始在宾州威廉诺瓦大学土木工程系当副教授，从微观观点探索材料界面的物理，化学，和结构特性，并且研究车流理论。　廖超博士拥有美国加州，新墨西哥州，和宾州的专业工程师执照。　他是美国土木工程学会会员，西格码－塞科学会会员，美国混凝土学会会员，美国工程材料学会会员，和美国物理学会会员。他被列入美国名人录“谁是谁”。他获得１９９８年美国土木工程学会交通工程期刊最佳研究论文奖，并且在多种国际知名研究期刊上发表许多有长远影响力的论文。



# 伍世信

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Shie-Shin Wu, PhD, PE, is currently a Senior Research Engineer at Ohio Research Institute for Transportation and the Environment, Ohio University. Areas of research are pavement performance, pavement management system, and pavement design and construction.

He had worked in North Carolina Department of Transportation for 32 years. Of these years, he served in the area of planning and geometric design for 12 years and in the pavement design, management and research for 20 years. In the last 20 years of his tenure, he was in charged of pavement design, pavement management system, pavement instrumentation, field data collection equipment, i.e., profiler, falling weight deflectometer (FWD), dynamic cone penetrometer (DCP), ground penetration radar (GPR), automated surface distress imaging, etc, and pavement research.

He is a member of National Academy of Science, Transportation Research Board (TRB), Expert Task Group, and served as member of several National Cooperation Highway Research Program (NCHRP) research projects panel and American Association of State Highway and Transportation Officials (AASHTO), Joint Task Force on Pavement.

# WU, CHUNG L.

Chung L. Wu, Ph.D., PE

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**EDUCATION**

Ph.D. in Civil Engineering, University of Florida, Gainesville, FL; December 1988
M.E. in Structural Engineering, University of Florida, Gainesville, FL; December 1985
B.S. in Civil Engineering, National Cheng Kung University, Tainan, Taiwan; June 1978

**PROFESSIONAL REGISTRATION**

Registered Professional Engineer in Florida, 1994 (0048195), Maryland, 1998 (23520)

**PROFESSIONAL AFFILIATIONS**

Transportation Research Board, 1989 to date.
Committee A2B02 - Rigid Pavement Design, 1998 to date
American Society of Civil Engineers, 1989 to date
Committee – Pavement in Highway Division, 1999 to 2002
American Concrete Institute, 1998 to date
Committee 325 – Concrete Pavements, 1998 to date
American Society for Testing and Materials, 1998 to date
Committee C-09 – Concrete and Concrete Aggregates, 1998 to date

**PROFESSIONAL EXPERIENCE AND RECORDS**

Dr. Wu has been actively involved in developing, improving and implementing technologies for highway and airfield pavements, and for industrial concrete slabs on grade. Specifically, his work areas include the following:

- Highway and airfield pavement evaluation, design, construction, and rehabilitation.
- Pavement management system development and implementation.
- Advanced concepts for pavement rehabilitation (thin-bonded whitetopping pavement).
- Evaluation, design and construction of heavily loaded warehouse floors, service areas, and container port facilities.
- Evaluation, design, and construction of roller compacted concrete pavements.
- Load testing, instrumentation, and condition surveys of concrete and asphalt pavements.
- Evaluation and testing of construction materials.
- Quality control/assurance of concrete and asphalt paving.
- Trouble-shooting pavement and floor design and construction problems.

Litigation services.

# WANG, LINBING

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Dr. Linbing Wang is a Professional Engineer and Assistant Professor in transportation and geotechnical engineering at the Department of Civil and Environmental Engineering of Louisiana State University and Southern University (Baton Rouge, LA 70803, email lwang@lsu.edu). He got his Ph.D. from Georgia Tech in pavement and geotechnical engineering, his MS from Tongji University, and his BS from Hohai University. He has 15 years' experience in research, teaching, design and consulting in pavement design and rehabilitation, materials characterization, geotechnical engineering and hydraulic engineering. In the last three years, Dr. Wang has led the efforts to establish a state-of-the-art laboratory in Quantitative Imaging and Computational Simulation. His expertise includes applying various imaging techniques including x-ray computerized tomography, optical imaging and infrared imaging; computational simulation techniques including FEM and DEM approaches; simple performance tests and simulative tests; and pavement management system to characterize, model and simulate pavement material properties (asphalt concrete, cement concrete and geomaterials) and pavement performance. Dr. Wang serves as Principal Investigator or Co-Principal Investigator of many research projects funded by the National Science Foundation, Federal Highway Administration, Department of Defense, Department of Agriculture, Sea Grant, Board of Regents of Louisiana, and Louisiana Department of Transportation and Development. Dr. Wang is a member of several NCHRP panels and TRB committees including A2J03 on Mineral Aggregates, A2D04 on Bituminous Mixture to Meet Structural Requirements, and A2K05 on Modeling Techniques in Geomechanics. He is also a member of the Association of Asphalt Paving Technologists, the ASCE Committee on Bituminous Materials, and the ASCE Granular Material Technical Committee.

# ZHANG, ZHANMIN

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Dr. Zhanmin Zhang is an Assistant Professor in transportation engineering at The University of Texas at Austin who has been actively conducting cutting-edge research in the engineering and management of pavements and infrastructure systems and the applications of advanced database and information systems to infrastructure management for more than 15 years in the United States and abroad. His current research interests include: infrastructure systems analysis and management, behavior and performance simulation of pavements and infrastructure systems, large-scale database and information systems, application of advanced technologies, and intelligent infrastructure systems.

Dr. Zhang earned a B.S. degree in civil engineering from Chang'an University in 1983 and then joined the faculty of The University. After being a faculty member for 7 years at Chang'an University, he returned to graduate school to earn a Master's degree and Ph.D. degree in civil engineering from The University of Texas at Austin in 1993 and 1996 respectively. He joined the Center for Transportation Research (CTR) at The University of Texas at Austin as a Research Associate upon receiving his doctoral degree. Following four years of research work at CTR, he joined the faculty of the Department of Civil Engineering at The University of Texas at Austin in September 2000.

As a Principal Investigator or Co-Principal Investigator, Dr. Zhang has conducted more than 15 major research projects sponsored by the Texas Department of Transportation (TxDOT) and the U.S. Department of Transportation through The University Transportation Center (UTC) in the last 5 years. The research projects cover a wide range of issues in the engineering and management of transportation infrastructure, such as the modeling of pavement behavior and performance, the forensic investigation of pavements, the characterization of transportation materials, and the application of advanced information systems for transportation infrastructure management.

Dr. Zhang serves as an executive member of the U.S. Department of Transportation's Southwest University Transportation Center (SWUTC). He is also a member of the Technical Advisory Panel (TAP) for the Research Management Committee 1 (RMC-1) of the Texas Department of Transportation. Dr. Zhang is a member of two technical committees of the U.S. National Research Council's Transportation Research Board (TRB): A2B01-Pavement Management Systems and A2F09-Application of Emerging Technology. In addition, Dr. Zhang has recently been named to the U.S. National Research Council's Committee on "Renewal of DOE Infrastructure" which serves the U.S. Department of Energy (DOE) in developing and implementing a corporate strategy for intelligent renewal of its infrastructure

Dr. Zhang is an author or co-author of more than 45 technical papers, reports, and articles. Dr. Zhang has frequently served as a technical reviewer for prestigious journals such as the *Transportation Research*, the *Journal of Transportation Engineering*, the *Journal of Infrastructure Systems*, and the *Transportation Research Record*.

# FREDERICK HUGO

Fred Hugo has specialized in pavement engineering and works internationally in that field. He is emeritus professor and Director of the *Institute for Transport Technology (ITT)* at the *Stellenbosch University* in South Africa and he manages the *Southern Transportation Centre of Development (STCD)* that is sponsored by the *National Department of Transport (NDOT)*. Concurrent with the above activities, Fred spent more than fourteen years of service as a Research Fellow at the *Center for Transportation Research (CTR)* at the University of Texas at Austin. He ended this tenure in February 2002. His current research is concentrated on the application of the third scale model Mobile Load Simulator (MMLS3).

He has worked as a contractor, a consultant, an academic and a researcher during his career of more than forty-five years. He is a leading authority on the effects of accelerated pavement testing (APT) and has worked in a number of African states, Europe, Israel, the United States and Canada. He is still very active as a consultant internationally and recently completed a synthesis on *Significant Findings from APT internationally* in collaboration with Dr Amy Epps Martin. This is a *NCHRP* project of the *Transportation Research Board (TRB)*.

Prof Hugo has published more than one hundred papers in Journals and Technical Proceedings and has won several awards (some with co-authors). He is also the recipient of a variety of awards in the field of pavement engineering, including the *SAICE/CAPSA* award for outstanding achievements in the field of asphalt technology (1990) and the award for Meritorious Research in 1995 by the *South African Institution of Civil Engineering (SAICE)*. He is a member of the South African Academy of Engineering (SAAE) and in that capacity he visited southwest China in November 2002. During this visit he initiated a bi-lateral agreement of co-operation between the South China University of Technology and the University of Stellenbosch, in South Africa.

Prof Hugo served as chairman and member of various committees of the *SAICE* and other professional societies and technical committees during his career. He is an Honorary Fellow and a Past President of the *SAICE* (1993). He also received the Chairman's Award for outstanding service to the Transportation Engineering Profession in 2001 from the Division of Transportation Engineering.

Prof Hugo is currently a member of the *Education and Training*, and the *APT* Committees of the *TRB*. He is a life member of the *Association of Asphalt Paving Technologists (AAPT)*. In 2002, he received an award of recognition from the *AAPT Board of Directors* for his many services to the Association in Research Efforts, Publishing and Discussion of Papers. He is also a member of the *Society for Asphalt Technologists in Southern Africa*.