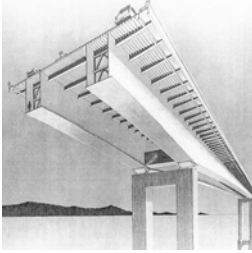




# 2008 INTERNATIONAL ORTHOTROPIC BRIDGE CONFERENCE

For updated information and to register, please visit [www.orthotropic-bridge.org](http://www.orthotropic-bridge.org) or [asce@asce-sacto.org](mailto:asce@asce-sacto.org)

**August 25 to 29, 2008**  
**INTERNATIONAL**  
**ORTHOTROPIC BRIDGE**  
**CONFERENCE**  
**SACRAMENTO, CALIFORNIA, USA**  
Hosted by American Society of Civil  
Engineers, Sacramento Section



The Orthotropic Bridge Tour includes the San Mateo Hayward, Golden Gate, and new San Francisco Oakland Bay Bridge Bridges

## PROGRAM

TUESDAY, AUGUST 26, 2008

### OPENING COMMENTS (8:15 - 8:30)



Steel-and-Light Doorway Bridge

### DESIGN - 1 (8:30 - 10:10)

- OBC-08-01 — Design and Construction of the Orthotropic Steel Deck Bridge in Elin Pelin, Bulgaria  
Doncho Partov and Radan Ivanov, VSU "Lyuben Karavelov", Sofia, Bulgaria
- OBC-08-02 — Orthotropic Steel Deck Bridges in Korea  
Dong-Ho Choi, Yong-Sik Kim and Hoon Yoo, Hanyang University, Seoul, Korea
- OBC-08-03—The New Steel-and-Light Doorway for the City of Padua,  
Roberto Zanon and Francesco Caobianco, NET Engineering, Monselice, Italy



Gwangan Bridge in Korea

### INTERMISSION - VENDOR ROOMS OPEN



Mr. Seim

### DESIGN - 2 (10:40 - 11:55)

- OBC-08-04 — Estimation of Compressive strength of Trapezoidal-Shaped Ribs in Orthotropic Decks  
WanChun Jen and Ben T Yen, Jacobs Civil, Inc., New Jersey, USA
- OBC-08-05 — The Slope Deflection Method for Orthotropic Bridge Decks  
Hans, De Backer, Amelie Outier, Corneel Delesie and Philippe Van Bogaert; Ghent University, Gent, Belgium
- OBC-08-06 — Analysis of Distress Characters and Design of Steel Orthotropic Bridge Decks Pavement in China  
Wei Xu and Xiao-ning Zhang, South China University of Technology, Guangzhou, China

### LUNCHEON KEYNOTE (11:55 - 13:30)

- OBC-08-07 — We Shall Use No Technology Before Its Time  
Charles Seim, Consultant, California, USA

### MAINTENANCE AND REHABILITATION - 1 (13:30 - 15:10)

- OBC-08-08 — Nondestructive Evaluation of Fatigue Cracks in Steel Bridges by Infrared Thermography  
Yui Iauimi, Takahide Sakagami and Shiro Kuboand, Osaka University, Osaka, Japan; Takashi Tamakoshi, National Institute for Land & Infrastructure Management, Ibaraki, Japan
- OBC-08-09 — A New Rehabilitation Method for Inside Corrosion of Stiffeners with Hollow Shape  
KERSTEN LATZ, WISMAR UNIVERSITY OF TECHNOLOGY, WISMAR, GERMANY
- OBC-08-10 — Counter Measures against Fatigue Cracks on Orthotropic Bridge Decks of Tokyo Metropolitan Expressways  
Kazuhiro Tsuno and Yasumiki Yamamoto, Metropolitan Expressway Company Limited, Tokyo, Japan; Nobuaki Takiguchi, Japan Bridge Association, Tokyo, Japan
- OBC-08-11 — HAZARD CLASSIFICATION FOR ORTHOTROPIC PLATES AND SUSTAINABLE REPAIR METHOD USING STEEL-ELASTOMER-STEEL SANDWICH (SPS)  
Markus Feldmann and Achim Geßler, RWTH Aachen University, Aachen, Germany; Gerhard Sedlacek, and Michael Paschen, Sedlacek & Partner, Aachen, Germany

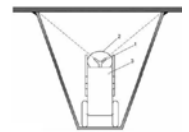


Rehabilitation by Latz

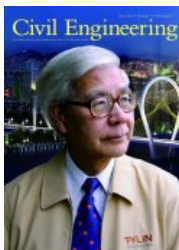
### INTERMISSION - VENDOR ROOMS OPEN

### MAINTENANCE AND REHABILITATION - 2 (15:45 - 17:00)

- OBC-08-12 — A New Procedure and Device for the Examination of Stiffeners with Hollow Shape  
Jens Hölterhoff, Wismar University of Technology, Wismar, Germany
- OBC-08-13 — Redecking Issues For the Walt Whitman Bridge  
Sante Camo, Qi Ye, Vijay Pandya and Richard Prior, Weidlinger Associates, Inc., New York, USA
- OBC-08-14 — Enhancing the Fatigue Strength of Trough to Deck Plate Joint in Bridge Decks Using Ultrasonic Impact Treatment (UIT)  
Henk Kolstein, Delft University of Technology, Delft, Netherlands; Robbert de Ridder, Applied Ultrasonics Europe, Netherlands; Frank van Dooren; Delft University of Technology, Delft, Netherlands



Device by  
Holterhoff



Dr. Tang

### BANQUET KEYNOTE (18:30 - 20:00)

- OBC-08-15 — Engineering - A Science or An Art?  
Man-Chung Tang, TY Lin International, California, USA

WEDNESDAY, AUGUST 27, 2008

### FATIGUE - 1 (8:30 - 10:10)

- OBC-08-16 — Effect of Fabrication Procedure on Fatigue Resistance of Rib-to-Deck Welded Joints in Steel Orthotropic Bridge Decks  
Chia-Ming Uang, Hyoung-Bo Sim, Univ. of California, San Diego, California, USA; Charles Sikorsky, California Department of Transportation, California, USA
- OBC-08-17 — Bending Fatigue Tests on Trough to Deck Welded Details of Orthotropic Steel Deck  
Samol Ya, Kentaro Yamada and Toshiyuki Ishikawa; Nagoya University, Nagoya, Japan
- OBC-08-18 — Fatigue Behaviour of Cutout in Crossbeam for Closed Rib Orthotropic Deck

Donato Abruzzese, Antonio Grimaldi, Zhonghui Qian; University of Rome "Tor Vergata", ROME - Italy  
OBC-08-19 — Fatigue Test Research on Detail of Orthotropic Deck Bridges in China  
Yuling Zhang, China Academy of Railway Sciences, Beijing, China; Xuezhong Xin, China Railway Ministry, Beijing, China;  
Xiaoguang Liu, China Academy of Railway Sciences, Beijing, China

**DESIGN – 3 (8:30 - 10:10)**

OBC-08-38 — The Five-Point Bending Test: A Way to the Dimensioning of the Asphalt Layer on Steel Orthotropic Decks

Adrien Houel, CETE Lyon, Bron Cedex, France; Laurent Arnaud, ENTPE, Vaulx-en-Velin cedex, France

OBC-08-41 — California's New Orthotropic Steel Box Girder Suspension Bridges

Eugene Thimhardy, California Department of Transportation, California, USA

OBC-08-42 — Orthotropic Deck Design and Fabrication for Fatigue - Some Recommendations from Research

Xiaohua H. Cheng, New Jersey Department of Transportation, New Jersey, USA; Jun Murakoshi, Public Works Research Institute, Tsukuba City, Japan



CA Bridge byThimhardy

**INTERMISSION - VENDOR ROOMS OPEN**

**FATIGUE - 2 (10:40 - 11:55)**

OBC-08-20 — Fatigue Life Prediction of U-rib to Crossbeam Joints Using Fracture Mechanics Approach

Dong-Ho Choi, Ho-Sung Na, Hanyang University, Seoul, Korea; Hang-Yong Choi, Seoyeong Engineering Co., Ltd, Seoul, Korea

OBC-08-21 — Life Time Evaluation of Orthotropic Steel Bridge Decks

Koichi Sugioka, University of Canterbury, Christchurch, New Zealand

OBC-08-22 — Review of the Fatigue Behaviors and Finite Element Analysis of Orthotropic Steel Bridge Decks

Chunsheng Wang, Yacheng Feng; Changan University, Shaanxi; China

**WEARING SURFACE - 1 (10:40 - 11:55)**

OBC-08-23 — Research on Steel Fiber Reinforced Concrete Pavement on Orthotropic Steel Deck

Jun Murakoshi, Naoki Yanadori, and Takashi Ui, Public Works Research Institute, Tsukuba City, Japan

OBC-08-24 — Orthotropic Steel Bridge Decks in China with Epoxy Asphalt Pavements

Robert Gaul; ChemCo Systems, Inc., California, USA

OBC-08-25 — Reduction of Traffic Induced Stress Using Reinforced High Strength Concrete

Henk Kolstein, Delft University of Technology, Delft, Netherlands; Henk Sliedrecht, Ministry of Transport, Netherlands

**LUNCHEON KEYNOTE (11:55 - 13:30)**

OBC-08-26 — Review of Orthotropic Steel Deck Bridges and Some Fatigue Cracks and Retrofitting Measures in Japan

Kentarō Yamada, Nagoya University, Nagoya, Japan



Dr. Yamada

**RESEARCH (13:30 - 15:10)**

OBC-08-27 — The Effect of Stiffener Distortion of Orthotropic Bridge Decks on Stress Concentrations and Load Dispersal Behaviour

Corneel Delesie, Hans De Backer and Philippe Van Bogaert, Ghent University, Gent, Belgium

OBC-08-28 — Experimental Study on Durability of Orthotropic Steel Decks and Deckplate Thickness

M. Ishio and T. Tamakoshi, National Institute for Land & Infrastructure Management, Ibaraki, Japan; J. Murakoshi, Public Works Research Institute, Ibaraki, Japan; A. Kawabata, JFE Engineering Corporation, Yokohama, Japan

OBC-08-29 — Field Investigations and Measurements of Orthotropic Steel Decks to Draft Efficient Method of Stock Management

D. Uchida, Mitsui Engineering & Shipbuilding Co., Ltd., Tokyo, Japan; S. Inokuchi, Yokogawa Bridge Corporation, Chiba, Japan; A. Kawabata, JFE Engineering Corporation, Yokohama, Japan; M. Ishio, and T. Tamakoshi, National Institute for Land & Infrastructure Management, Ibaraki Japan

OBC-08-30 — Field Measurement and Development of an Experimental System for Fatigue-Cracking from Weld Roots between Deck Plate and U-rib in Orthotropic Steel Decks

S. Inokuchi, Yokogawa Bridge Corporation, Chiba, Japan; S. Kainuma, Kyushu University, Fukuoka, Japan; A. Kawabata, JFE Engineering Corporation, Yokohama, Japan; D. Uchida, Mitsui Engineering & Shipbuilding Co., Ltd., Tokyo, Japan

S. Inokuchi, Yokogawa Bridge Corporation, Chiba, Japan; S. Kainuma, Kyushu University, Fukuoka, Japan; A. Kawabata, JFE Engineering Corporation, Yokohama, Japan; D. Uchida, Mitsui Engineering & Shipbuilding Co., Ltd., Tokyo, Japan

**WEARING SURFACE - 2 (13:30 - 15:10)**

OBC-08-31 — THE PLANNING AND DESIGN OF GWANGYANG SUSPENSION BRIDGE WITH EPOXY ASPHALT IN KOREA

Sang-Hoon Shin, Pil-Jo Yu, Do-Jun Back, Yooshin Engineering Corp. Seoul, Korea; David H. Im; Cablebridge, Seoul, Korea;

OBC-08-32 — Design of a Deck Surfacing for the Longest Cable-Stayed Bridge in the World: the Sutong Bridge

Yao Bo and Cheng Cheng; Southeast University, Nanjing, China

OBC-08-33 — Importance of Interface Layer on Behavior and Durability of Orthotropic Steel Decks

Sofia Teixeira de Freitas, M.H. Kolstein and F.S.K. Bijlaard, Delft University of Technology, Delft, Netherlands

OBC-08-34 — Concrete Overlays to Improve the Fatigue Life of Movable Orthotropic Steel Bridges

C.R. Braam, M.H. Kolstein and A. Romeijn, Delft University of Technology, Delft, Netherlands; P. Buitelaar, Contec ApS, Højbjerg, Denmark



Sutong Bridge - Bo & Chen

**INTERMISSION - VENDOR ROOMS OPEN**

**WEARING SURFACE - 3 (15:45 - 17:00)**

OBC-08-35 — Alternative Waterproof System and Wearing Course on Orthotropic Bridge Decks and Approaches

Doug Zuberer, Chase Construction Products, Massachusetts, USA

OBC-08-36 — Application of the Reinforced High Performance Concrete Overlay on Orthotropic Steel Bridge Decks

Peter Buitelaar, Contec ApS, Højbjerg, Denmark; René Braam, Delft University of Technology, Delft, Netherlands;

Netherlands;

OBC-08-37 — Estimation of the Wearing Course Influence on the Orthotropic Steel Bridge Deck Behavior from Simulations of the French Five-Point Bending Test

Simon Pouget, Cédric Sauzéat and Hervé Di Benedetto, Université de Lyon, aulx-en-Velin, France; François Olard; EIFFAGE Travaux Publics, Corbas Cedex, France

Simon Pouget, Cédric Sauzéat and Hervé Di Benedetto, Université de Lyon, aulx-en-Velin, France; François Olard; EIFFAGE Travaux Publics, Corbas Cedex, France

Simon Pouget, Cédric Sauzéat and Hervé Di Benedetto, Université de Lyon, aulx-en-Velin, France; François Olard; EIFFAGE Travaux Publics, Corbas Cedex, France

**MAINTENANCE AND REHABILITATION - 3 (15:45 - 17:00)**

OBC-08-39 — Auckland Harbour Bridge Fatigue Assessment and Monitoring

Ian Billings and Michael Beamish, Beca Infrastructure Ltd, Auckland, New Zealand; Philip Tindall,

Hyder Consulting Ltd, London, UK

OBC-08-40 — Emergency Repairs to Union Pacific Railroad Bridge

Mansoor Ahsan; Bridgefarmer & Associates, Texas, USA



UPRR Bridge by Ashan

**OTHER KEY ASCE OBC 2008 CONFERENCE EVENTS**

August 25, 2008	Monday [8 hours] Welding Inspection of Orthotropic Bridges Workshop
August 28, 2008	Thurs [8 hours] Intro to new FHWA Orthotropic Bridge Manual [free to attendees]
August 29, 2008	Friday [8 hours] LFRD Highway Bridge Design Workshop
August 30, 2008	Saturday Orthotropic Bridge Tour [approximately 8 am to 9 pm ]