

RESUME (Biographical Sketch)



NAME: Hiroshi TANAKA

Music Producer Name: Jimmy Crynen

BORN:

April 10, 1949, Japanese

CURRENT POSITION

Technical Consultant

Osaka Branch

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EDUCATION

B. Sci. Kyoto University, Japan 1972

M. Sci. Kyoto University, Japan 1975

Visiting Graduate Student. Princeton University, USA, 1984-5(academic year)

Doctor Degree of Engineering from Kyoto University, Japan, 1993

“Wind Stability of Long Span Bridges Using Unsteady Aerodynamic Derivatives”

PROFESSIONAL EXPERIENCE:

1975	Hitachi Zosen Corp. Bridge Design Dept.
1993	Deputy Director of Bridge Design Dept.
2000	Director of Coastal Marine Design Dept.
2005	Director of Disaster Prevention Eng. & GPS Tsunami Buoy
2006 - 2014	Samsung C&T Corporation (Incheon Bridge Project etc.)
2014 – Present	Yoshida-Gumi Co.Ltd.

AWARDS:

1984-1985	International Road Federation (IRF) Scholarship
2002	PROF.TANAKA AWARD (Best Paper's Medal for Bridge Structures) (Japan Society of Civil Engineers)

FIELD OF EXPERIENCE & RESEARCH:

Steel Structures, Wind & Earthquake Resistant Design, Structure-System-Identification, Structure Erection Control, Maintenance, Offshore Structures, Floating Bridges

MAIN ACHIEVEMENTS

- 1) Konohana Bridge (Self-Anchored Suspension Bridge with Inclined Hangers):

Status; Chief Designer (1983-1987)

Design of Girder, Analysis of Large Block Erection Method, Cable-tension Analysis and did these works at site, Main cable and hanger installation's supervisor from the view point of the analysis, Maintenance Planning for Life-time, Dynamic Tests at site were responsible.



- 2) Akashi Kaikyo Bridge (Suspension Bridge)

Status: Chief Analyst for Flutter Phenomena

This bridge has new type of flutter Phenomena called multi-mode flutter. Conventional flutter is consist of two modes (bending & twisting), but multi-mode flutter will occur to this bridge including lateral mode by Tanaka's method.

It is confirmed by the wind tunnel tests. Then

He was awarded "Prof. Tanaka's Prize" from JSCE in 1994.



- 3) Nakajima Shinkyo Bridge (Cable-Stayed Bridge)

Status: General Manager (1994-1996)

Cable tension adjustment was executed in day-time. Conventionally it is done in mid-night to eliminate temperature influence.

Then it saved construction fee and safety was hold.

This realized his cable tension adjustment algorism by Fuzzy theory.



4) Ikuchi Bashi Bridge (Cable-Stayed Bridge)

Status: In-house structure analysis development
Developed cable adjustment and system identification programs were used for the erection. Ikuchi Bashi Bridge was precisely constructed and Fuzzy method Was known as a good tool for the analysis.



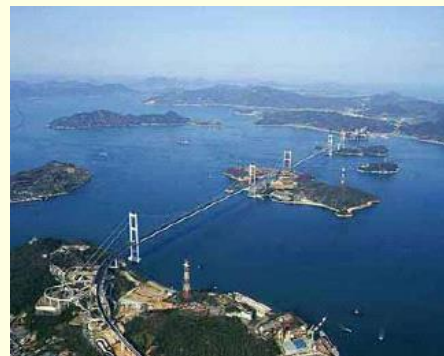
5) Tatara Ohashi Bridge (Cable-Stayed Bridge)

Status: Wind engineer (responsible for gust analysis)
Gust analysis was ordered to Hitachi Zosen.
My program was used for checking fatigue problem.
Longitudinal wind profile was considered because mountains around the bridge will produce incoherent wind. Therefore, this phenomenon was considered by the software.



6) Kurushima Bridge (Suspension Bridge)

Status: Deputy General Manager for Design (1995-1997)
Tower design and construction were responsible.
In addition dynamic vibration controller was installed on the tower to prevent flow induced vibration and gust vibrations. The controller was fuzzy controller and this method was proven to be excellent.



7) Yume-Mai Bridge (Floating Bridge)

Status: General Manager for the project (1993-2001)
This type floating bridge was first made in the world.
From the basic design to final construction was proceeded by his direction. After this construction, The manual "Guidelines for Design of Floating Bridges" was written by him and has been published from JSCE.



8) Incheon Bridge (Cable-stayed Bridge)

Status: Technical Consultant (2006-2008)
This bridge is the longest in Korea and the construction was very precise. Therefore TANAKA Prize was given to this bridge for excellence construction.



MEMBERSHIP

* *Japan Society of Civil Engineers (JSCE)*

MAIN BOOKS

- * Basis and Application of Cable and Space Structures (Chapter 9.4),
Steel Structures Series 11, JSCE, 1999 (in Japanese)
- * Guidelines for Design of Floating Bridges (Chapter 1, 7)
Steel Structures Series 13, JSCE, 2006 (in Japanese)

MAIN ENGLISH PAPERS

- Cable Tension Adjustment by Structural System Identification: Int. Conf. on Cable-Stayed Bridges, Bangkok, November 18-20, 1987
- New Cable Tension Adjustment Method For Suspended-Span Bridge: The Second East Asia-Pacific Conference on Structural Engineering & Construction, Chiang Mai, 11-13 January 1989
- New System Identification Technique Using Fuzzy Regression Analysis: IEEE, 1990
- Multi-Mode Flutter Analysis and Two & Three Dimensional Model Tests on Bridges with Non-Analogous Modal Shapes; Structural Eng./Earthquake Eng. Vol. 10 No. 2, July 1993
(Prof. Tanaka Prize was awarded to this paper)
- Flutter and Gust Response Analysis of the Messina Strait Bridge -Benchmark Study -: AWAS, August 2013
- Flutter Stability Analysis of Long Span Bridge Subject to Wind Load by Non-White Noise Process: AWAS, August 2013