

史兴毕博士简历

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教育背景:

博士 (Ph.D., 1970) - 美國公教大學 (The Catholic University of America, Washington, D.C.), 主修流體力學和熱質傳導

碩士 (M.S., 1964) - 美國愛阿華大學 (University of Iowa, Iowa City), 主修水文 和水利工程

學士 (B.S., 1960) - 國立台灣大學 (National Taiwan University, Taipei), 主修土木工程

代表性在职进修学科:

碩士 (M.S, 1989) - 美国霍浦斯金大学 (Johns Hopkins University)
主修電腦科学 (Computer science)

遙測: Global Positioning System (George Washington University, 1998);
Ocean Color (SeaWiFS/SeaDAS tutorials, NASA, 1995);
Synthetic Aperture Radar with remote sensing applications
(George Washington University, 1993);

資料分析: Wavelet: Theorey and Applications (Applied Technology Institute, 1994);
Applied time series analysis (Continuing Education Institute, 1983);
Random processes in ocean and coastal engineering
(George Washington University, 1974).

電腦數字程式模擬: Computer modeling of estuary flow (Massachusetts Institute of Technology, 1974).

海洋工程儀器應用及技術: Applications & techniques of ocean engineering
instrumentation (George Washington University, 1973);
Underwater acoustics (Westinghouse Electric Corporation,
Oceanic Division, 1973).

研發項目管理: R&D contracting management (U.S. Federal Government, 1985)

工作经历:

1. 海洋科技顧問 (Oceantech Consulting, 2009 - 目前)

服務項目: 台灣氣象局海象中心 (海洋觀測及研癸, 2000-2010); 及成功大學近海水文中心 (海洋觀測及研癸, 1997-1999); 美國海洋與大氣總署 (海洋局與南韓海洋局

即时港湾观测合作项目科技顾问, 2007-目前); 加勒比海 巴贝都斯岛(Barbados Island) 能源开发计划 (参与撰写由国际 Castalia Strategic Advisors 公司和 Stantec 顾问公司主持, 给美洲开发银行的建议书, 2010)

2. 美国联邦政府海洋与大气总署 (NOAA): 资深物理科学家(Physical Scientist), 任职海洋局(NOS)下的物理海洋产品与服务中心 (Center for Operational Oceanographic Products and Services, 1978-2009), 负责观测仪器的研发与使用。主持项目成果包括:
 - 海洋局科学主任 (Chief Scientist) 属下技术小组 (Technology Working Group) 的连络人 (Coordinator, 2008-2009), 筹办定期小组讨论会, 评审海洋局技术需求.
 - NOAA小型公司新科技研发项目(Small Business Innovative Research Program) 管理委员会委员 (2007-2009). 工作包括撰写, 评审, 及主持研发计划; 直接参与的项目包括用GPS测海水位的浮球仪, 微波雷达测距仪(水位或桥下空档), 多频率雷达海面流场测量仪, 数位照像机观测能见度, 远程(450m)水平面ADCP测流仪.
 - 改进及研发NOAA水位测量系统(1978-2009). 成果包括测量系统误差分析, 数位(digital) 压力式测量系统及它测估水密度之应用, 声学式测量系统, 测量系统校验(波浪水道/wave channel, 水循环槽/circulation water channel, 和水循环管道/circulation water tunnel; 及实地/field), 微波雷达仪校验.
 - 改进ADCP测流系统 (精度, 可靠性, 操作及维护效率, 1995-2009). 成果包括实验室校验/拖船水道和水循环槽; 锚定式系统设计; 海底平台设计; 即时资料传送系统设计(包括水下声学仪器, 无线电, 卫星, 及无线电话).
 - ADCP测波浪系统研发 (2000-2009). 成果包括ADCP测波之性能校验 (波浪池/wave basin, 与实地), 即时观测系统设计和实地操作校验, 资料收取.
 - NOAA 和美国地质调查局 (USGS) 两项水文工作合作小组连络人 (Instrumentation Working Group and Committee on Hydrology, Coordinator, 1987-2009). 举办定期研讨会, 讨论共科技合作项目及新开展 (水位, 水流, 水质, 及气象资料观测).
 - NOAA 和南韩海洋局(Korea Hydrographic and Oceanographic Administration) 港湾即时观测系统合作项目, 美方连络人及技术指导 (2008-2009).
 - 船拖抽水式水质测量系统设计(Underway Towed Pumping System, 1981-1983). 产品用来支援美国环保部(EPA)调查纽泽西州近海部城市排污 (ocean dumping of city waste) 对水质的影响.

- 大学授课: 水利工程学兼任教授 (The Catholic University of America, 1981-1983). 教授水利工程学; 博士後研究及讲师 (Carnegie Mellon University, 1970-1972). 撰编生物 流体力学教材及讲授; 主持人体心脏人工膜门/artificial heart valve 校测实验, 包括心脏功能模型设计, 及膜门功能校测; 改进煤矿工作人员的防塵口罩 (dust respirator).
- 3. 美国海军海洋工程特别项目办公室, 新科技癸展计划工程师 (Advanced Concept Specialist, U.S. Naval Ocean Engineering Special Project Office, 1977). 主持下一代海洋工作船设计项目, 拟定设计要求; 深海锚定式系统电脑模拟分析.
- 4. 美国西屋电气公司海洋分公司, 资深工程师 (Westinghouse Electric Corp., Oceanic Division, Senior Engineer, 1973-1976). 参与海洋船舶动力学方面多种研究项目包括特别船舶航行性能; 低流体阻力下航体设计; 镙旋浆设计及实验室 (高速水循环管道) 功能校测; 海流数值模拟研癸及使用.
- 5. 美国私人船舶动力研究公司, 副科学研究员 (Hydraulics, Inc., Associate Research Scientist, 1962-1964). 高速水翼艇水翼研究 (Hydrofoil research), 包括水翼设计及空化 (cavitation) 现象观测 (室高速水循环槽, 和水循环管道).

工作奖与荣誉:

- 美国商务部/NOAA 铜牌奖(推展海流观测技术, 对美国商务部/NOAA 海洋流测量项目有优秀贡献), 2008.
- 美国机械工程师学会海洋分会 (ASME Ocean, Offshore and Arctic Engineering Division) 特殊服务奖 (等办国际学术会议, 召集科技研讨小组, 专业书刊副编辑, 文稿评审), 2005.
- 美国商务部/NOAA 银牌奖(研癸水位测量科技, 对美国商务部/NOAA 水道测量项目有优秀贡献), 1994.
- 美国商务部/NOAA 服务优良奖 (1980, 1984, 1987, 1988, 1989, 2009).
- 美国机械工程师学会院士 (American Society of Mechanical Engineers, Fellow), 1998 - 终身
- 美国地球物理联合会会员 (American Geophysical Union), 1990 - 2012.
- 美国西格玛科学研(荣誉)学会 (Sigma Xi Scientific Research Society), 1964 - 2012.
- 美国马利兰州专业(机械与土木工程师) (Professional Engineer, State of Maryland, U.S.A.), 1978 - 2012.

专业服务:

- 副编辑 (Associated editor of professional journals - Journal of Energy Resources Technology, Journal of Offshore Mechanics and Arctic Engineering, Journal of Applied Mechanics Review), 1988-2009.

- 评审员 (Reviewer for Journal of Oceanic & Atmospheric Technology, Journal of Hydraulic Engineering, Journal of IEEE Ocean Engineering, Journal of Waterway, Port, Coastal and Ocean Engineering, Journal of Marine Technology, U.S. National Science Foundation's research proposals, and U.S. Department of Agriculture SBIR R&D proposals), 1986-2011.
- 学术会议筹备及召集人(organizer and session chair of professional conference, workshop and session, e.g., American Geophysical Union special workshop, ASME Ocean Engineering Symposium, IEEE 6th Working Conference on Current Measurement), 1986-2011.
- 学会会长 (美国机械工程学会海洋工程分会/Ocean Engineering Division of the American Society of Mechanical Engineers, 1987; 美国美华海洋大气学会/Chinese American Oceanic and Atmospheric Association), 1999.

代表性著作 (全部著作共50多篇):

1. Shih, H.H., 2010: "Ocean and coastal observations: challenges and opportunities," Joint 2010 CWB Weather Analysis-Forecasting and COAA 5th International Ocean-Atmospheric Conference, Taipei, Taiwan
2. Shih, H.H., J. Sprenke, D. Trombley, J. Cassidy, and T. Mero, 2009: "Real-time current and wave monitoring using acoustic and Iridium satellite links," Proc. 28th International Conf. on Ocean, Offshore and Arctic Engineering, Hawaii
3. Shih, H.H., 2008: "Recent development in oceanographic in-situ measurement," Proc. 29th International Conf. on Ocean, Offshore and Arctic Engineering, Estoril, Portugal
4. Shih, H.H., R. Brennan, and M. Cisternelli, 2006: "GPS-tracked buoy for water level measurements," Proc. 25th International Conf. on Offshore Mechanics and Arctic Engineering, Hamburg, Germany
5. Shih, H.H. and B. Strong, 2005: "Wave and current data measured by a bottom mounted ADCP in the Chesapeake Bay during hurricane Isabel in September 2003," ADCP in Action Workshop, San Diego, CA, U.S.A.
6. Shih, H.H., C. Long, M. Bushnell, and K. Hathaway, 2005: Inter-comparison of wave data between Triaxys directional wave buoy, ADCP, and other reference wave instruments," Proc. 24th International Conf. on Offshore Mechanics and Arctic Engineering, Halkidiki, Greece.
7. Shih, H.H., J. Sprenke, G. French and W.C. Boicourt, 2004: "Wireless data communication for ocean bottom instrumentation," Proc. 23rd International Conf. on Offshore Mechanics and Arctic Engineering, Vancouver, Canada
8. Shih, H.H., 2003: "Triaxys directional wave Buoy Test Plan," NOAA/NOS/COOPS, Technical Report
9. Shih, H.H. and B. Strong, 2002: "Laboratory study of ADCP wave measurements," 21st International Offshore Mechanics and Arctic Engineering, Oslo, Norway
10. Bourgerie, R.W., T. L. Garner and H.H. Shih, 2002: "Coastal current measurements using an ADCP in a streamlined sub-surface mooring buoy", MTS/IEEE Oceans'02.
11. Woods, D., C. Shipley and H.H. Shih, 2000: "Radar bridge clearance sensor", IEEE 2000 International Radar Conf., Alexandria, VA, U.S.A.

12. Shih, H.H., C. Payton, J. Sprenke, T. Mero, 2000: "Towing basin speed calibration of acoustic Doppler current profiling instruments," Proc. Joint Conf. on Water Resources Engineering and Water Resources Planning and Management, MN, U.S.A.
13. Huang, N.E., H.H. Shih, Z. Shen, S.R. Long, and K.L. Fan, 2000: "The Ages of Large amplitude coastal seiches on the Caribbean coast of Puerto Rico," J. of Physical Oceanography, 30, No. 8
14. Huang, N.E., M.L. Wu, H.H. Shih, et al, 1998: "The empirical mode decomposition and the Hilbert spectrum for nonlinear and non-stationary time series analysis," Proc. Royal Society, Mathematical, Physical and Engineering Sciences, March Issue
15. Shih, H.H., Williams, R, Sun, C. and Popstefanija, I.P., 1997: "A field experiment with ocean surface current sensing microwave radar," IEEE/MTS Oceans'97, Nova Scotia, Canada
16. Shih, H.H., M.A., M.A. Basileo, 1996: "Extraction of wave information from NOAA's water level measurement network," Proc. MTS/IEEE Oceans'96, Ft. Lauderdale, FL., U.S.A.
17. Porter, D.L. and H.H. Shih, 1996: "Investigations of temperature effects on NOAA's next generation water level measurement system," J. Atmospheric and Oceanic Technology, 13, No. 3
18. Shih, H.H., Moss, M.K. and J.C. Dixon, 1995: "A new water level gauge for cold regions application," Proc. 14th International Conference on Offshore Mechanics and Arctic Engineering, Copenhagen, Denmark
19. Shih, H.H. and L. Baer, 1991: "Some errors in tide measurement caused by dynamic environment," *Tidal Hydrodynamics*, B. Parker (Ed.), John Wiley & Sons, Inc. pp. 641-671
20. Shih, H.H., 1986: "Design of bubbler water level gages for dynamics environment," Proc. Symposium on current Practices and New Technology in Ocean Engineering, p. 411-418
21. Shih, H.H., 1981: "Error models for stilling well-float type tide gauges," Proc. MTS/IEEE Oceans'81, Boston, MA, U.S.A.
22. Shih, H.H., 1970: "Selective withdrawal in rotating fluids," *Ph.D. Thesis*, published with H.P. Pao in "Selective withdrawal in rotating fluids," Vol. 49, 1973; and "Selective withdrawal and blocking wave in rotating fluids," Vol. 57, 1973, J. of Fluid Mechanics.

专利:

超音式水流仪 (Ultrasonic flow meter, U.S. Patent #30900, 1977, developed while working at Westinghouse Electric Corp., Oceanic Division.)

(史兴毕, 2/7/2012)