

# Curriculum Vitae

## (1) Name and Address

### Dr. Hyo Choi

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 Dept. of Atmospheric Environmental Sciences  
 College of Natural Sciences, Kangnung National University  
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Hyo Choi is meteorologist, environmental scientist and physical oceanographer with over 30 years experiences in meso and micro scale modelling researches. His research interests cover a variety of fields in weather and climate change including severe weather, air quality modeling and analysis, meso and synoptic scale meteorology, extratropical and tropical cyclones and coastal ocean circulation and SST variability in collaboration with atmospheric, environmental science and physical oceanographic groups at universities and government institutions in Korea, Australia, the USA, Japan, China, Singapore, Iran and Turkey

## (2) Educational Qualifications

Degree	Period	Institution	Major Field
Ph.D.	1999 ~2004	College of Environmental Sciences, <b>Peking University</b> , Beijing 100871, The People's Republic of China	<b>Atmospheric Chemistry &amp; Environment Modeling</b> ( <i>Thesis</i> : Influence of large scale motion and atmospheric boundary layer upon duststorm generation and local particulate concentration)
Ph.D.	1980 ~1984	Dept. of Civil Engineering, <b>University of Texas at Austin</b> , Austin, TX 78712, USA.	<b>Coastal Meteorology and Numerical Modeling</b> ( <i>Thesis</i> : On the formation of nocturnal coastal surface wind speed maximum)
MS	1976 ~1978	Dept. of Meteorology, <b>Seoul National University</b> , Seoul 151-742, Korea	<b>Physical Oceanography/Marine Meteorology</b> ( <i>Thesis</i> : Study on numerical prediction of wind waves under the rapidly development of extra-tropical cyclone in the East Sea)
BS	1968 ~1972	Dept. of Meteorology, <b>Seoul National University</b> , Seoul 151-742, Korea	<b>Meteorology</b>

## (3) Research Fields

Applied meteorological modeling, Air pollution dispersion modeling, and coastal ocean process as following phenomena:

- 1) Severe weather – gust and wind storm, typhoon, heavy rainfall, heavy snowfall, flood, fog, urban heat waves
- 2) Air pollution modeling – dust-storm transport modeling, air quality management on aerosol and gas
- 3) Oceanography & Climate – coastal lows, ocean waves prediction, coastal current modeling
- 4) Antarctic climate – Artic & Antarctic climate, weather forecasting and analysis, low-level jet, Antarctic expedition

## (4) Research Projects (Since 2000)

- 0 2008-Present Generation mechanism and prediction of windstorm in the mountainous coast -- (Korean Meteorological Administration)
- 0 2007-Present Comparison of temporal high concentrations of particulate matter (PM) to the concentrations of gases (CO, NO<sub>x</sub>) during dust-storm period – (Korean Research Foundation)
- 0 2006-2007 Relation between PM1, PM2.5 and PM10 concentrations and atmospheric boundary layer in the mountain and coast before and after Yellow Sand event – (Korean Research Foundation)
- 0 2006-Present Generation mechanism and prediction of windstorm in the mountainous coast -- (Korean Meteorological Administration)

- Administration)
- 0 2002-2006 Prediction technology on heavy snowfall in Kangwon province -- (Korean Meteorological Administration)
  - 0 1999-2002 Analysis of marine meteorological environment and prediction technology – (Korean Meteorological Administration)
  - 0 1999-2000 Relation between rainfall and development of atmospheric boundary layer in the mountainous coast during Korean flood period -- (Korean Meteorological Administration)
  - 0 1998-2000 Development of Prediction technology on physical oceanic environment and ocean circulation for the optimum selection of artificial fishing farm -- (Regional Research Center-Kangnung National University/Korea Science & Engineering Foundation)

## (5) Awards

- 0 **Meritorious Prize** : by President of Kangnung National University, Korea, November 11, 2008
- 0 **2006 Academic Award** : by Kangnung National University, Korea, February 9, 2007
- 0 **2000 Outstanding Intellectuals of the 21st Century** : by International Biographical Centre, United Kingdom, June, 2005
- 0 **Meritorious Prize** : by Korean Environmental Sciences Society, Korea, May 21, 2004
- 0 **Meritorious Prize** : by Administrator of Korean Meteorological Administration, Korean Government, March 20, 1999
- 0 **The 9th Scientific & Technological Prize on Excellent Paper** : by Korean Federation of Science & Technology Societies, Korea, April 30, 1999
- 0 **National Order-Magnolia** : by Korean Government, Korea, December 24, 1986
- 0 **Meritorious Prize-Chungmu Gold Prize** : by Sea Explorers of Korea, Korea, January 31, 1986

## (6) Career

- 2008. 06.-Present **Editor**, Special issue, "International Journal of Environment & Pollution", Inderscience Publishers, **United Kingdom (Publication in 2009)**
- 2007. 11.-Present **Editor**, Editorial Board, "The Open Atmospheric Science Journal", Bentham Science Publishers, **U.S.A.**
- 2007. 03.-Present **Editor-in-Chief**, Editorial Board, "Far East Journal of Ocean Research", **India**
- 2006. 09.-Present **Editor**, Editorial Board, "Far East Journal of Ocean Research", **India**
- 2006. 07.-Present **President**, "Atmosphere Science Section", AGOS (Asia - Oceania Geosciences Society-65 nations), **Singapore** (2005. 06.-2006. 7.: **Vice President**)
- 2006. 06.-2007. 07. **Editor-in-Chief**, Editorial Board, "Advances in Geosciences, Vol. 5", World Scientific Publication Co. (WSPC), **Singapore**
- 2005. 09.-Present **Deputy Director General**, International Biographical Center (IBC), **United Kingdom**
- 2005. 04.-Present **Member**, Environmental Affinity Industry Inspection Council, Ministry of Environment, Korean Government, Korea
- 2005. 01.-2007. 12. **Guest Invited Professor**, State Key Laboratory of Environmental Simulation & Pollution Control, Peking University, Beijing, **The People's Republic of China**
- 2004.10.-2004.10. **Member**, Final Evaluation Deliberation Council on Next Generation Project, Korea Institute of Environmental Science & Technology (KIEST), Korea
- 2004. 09.-2005. 10 **Co-President**, " 3rd International Symposium on Air Quality Management of Global, Regional & Urban Scales", Sept.26-30, 2005, Istanbul, **Turkey**
- 2004. 01.-2005.12 **Councilor**, Korean Environmental Sciences Association, Korea
- 2004. 01.-Present **Honorable President**, Korean Environmental Sciences Society, Korea
- 2003.11.-2004.09. **Editor-in-Chief**: Special issue, "Korean Journal of Environmental Sciences": Vol. 13, No. 8", (English version), Korea.
- 2003. 11.-2003.11. **President**, International Symposium on Clean Environment, Nov. 21-22, Cheonan, Korea
- 2003. 09.-2004.12. **Member**, Agriculture, Fisheries & Ocean Sectional Council, Korean Research Foundation, Korea
- 2003. 08.-2005. 08. **Fisheries Researcher (nominated by President of Korean Government)**, National Fishery Research & Development Institute, Ministry of Maritime Affairs & Fisheries, Korean Government ,
- 2003. 07.-2003. 08. **Representative President of Environmental Sciences Societies in Korea**, "2003 Korean Scientific Festival-EXPO for Juvenile Science & Engineering Majors and Courses", August 13-17, Korean Science Foundation, Ministry Science & Technology, Korean Government, Korea
- 2003. 02.-2003. 08. **Program Committee member**, "International Conference & Young Scientists on Computational Information Technologies for Environmental Sciences (CITES-2003)", **Russia**

- 2002.10.-2003.12. Councilor, Korean Federation of Science & Technology Society, Korea  
 2002.10.-Present Member, Research Council, "International Biographical Center", **United Kingdom**  
 2002. 07.-2002. 08. **Representative President of Environmental Sciences Societies in Korea**, "2002 Scientific EXPO for Middle School Students", August 13-17, Korean Science Foundation, Ministry of Science & Technology, Korean Government, Korea  
 2002. 05.-2003.12. **President, Korean Environmental Sciences Society, Korea (Vice President-1998~2002)**  
 2002. 02.-2002. 07. **Representative President**, Environment, Energy & Ecology Symposium, "2002 World Congress of Korean and Korean-Ethnic Scientists & Engineers", July, 10 – 14, Korean Federation of Science & Technology Society, Korea  
 2002. 01.-2003. 08. **Editor**, Advisory Editorial Board, "Geospatial Today-International Journal", **India**  
 2000. 05.-2001.12. Director, Korean Meteorological Society, Korea  
 1999. 01.-1999. 02. **Guest Invited Professor**, Environmental Science Center, Peking University, **The People's Republic of China**  
 1999. 01.-2001. 01. **Editor**, Editorial Board, "Damage & Fracture Mechanics", Wessex Institute of Technology, **United Kingdom**  
 1997. 08.-1997. 08. **Member**, "International Scientific Committee, International Marine Science Conference", August 25-27, Kuala Terengganu, **Malaysia**  
 1997. 08.-1999. 07. **Researcher (nominated by President of Korean Government)**, National Fishery Research & Development Agency, Ministry of Maritime Affairs & Fisheries, Korean Government, Korea  
 1997. 07.-1997. 08. **Guest researcher**, Dept. of Applied Meteorology, Meteorological Research Institute, Japan Meteorological Agency, **Japan**  
 1996. 07.-1998. 06. **Editor**, Editorial Board, "Advanced in Fracture Mechanics", Wessex Institute of Technology, **United Kingdom**  
 1995.12.-1996. 01. **Guest Invited researcher**, Dept. of Physical Oceanography, Institute of Oceanography, Chinese Academia Sinica, **The People's Republic of China**  
 1995. 08.-1995. 08. Member, 5th Class Technology Examination Council, Ministry of Government Administration, Korean Government, Korea  
 1994. 07.-1994. 07. **Member, International Committee**, "Metropolitan Development and Environmental Symposium", Shanghai, **The People's Republic of China**  
 1994. 06.-1999. 05. Member, Education Courses Deliberation Council, Ministry of Education, Korean Government, Korea  
 1994. 07.-1994. 07. **Guest invited researcher**, Dept. of Applied Meteorology, Meteorological Research Institute, Japan Meteorological Agency, **Japan**  
 1994. 01.-1994. 02. **Guest researcher**, Dept. of Applied Meteorology, Meteorological Research Institute, Japan Meteorological Agency, **Japan**  
 1992. 03.-1994. 02. Member, Ocean Reservation Consulting Council, Ministry of Environment, Korean Government.  
 1991. 05.-1993. 05. **Representative**, Korea Environmental Science Research Association, Korea  
 1990. 03.-1992. 08. Member, Ocean Reservation Council, Marine Police Administration, Ministry of Domestic Affairs, Korea Government, Korea  
 1989.10.-1991. 09. **Director General**, Donghae Coastal Region Research Institute, Kangnung National University, Korea  
 1987. 04.-1987. 05. **Investigator**, Korean Antarctic Expedition Team (Before construction of Korean Antarctic Station-1988), King George Island, **Antarctica**  
 1986. 06.-1986. 06. **Government Representative**, Korean Government, SCAR committee (Antarctic Science & Policy), San Diego, **U.S.A.**  
 1986. 06.-1986. 06. **Government Representative**, Korean Government, Intergovernmental Meeting (Antarctic Science & Policy), Racine, **U.S.A.**  
 1985.11.-1985.12. **Investigator**, Scientist, Interpreter, The 1st Korean Antarctic Expedition Team (supported by Korean Government), King George Island, **Antarctica**  
 1984. 02.-1988. 02. **Senior Researcher** (Overseas Invited Scientist), Korea Ocean Research & Development Institute, **Korea Advanced Institute of Science & Technology (KAIST)**, Seoul, Korea (Physical Oceanography, Marine Meteorology, Ocean Environmental Modeling)

## **(7) Publications (since 2004)**

0 Hyo Choi, 2008: *Comparison of PM<sub>1</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> concentrations in a mountainous coastal city, Gangneung before and after the Yellow Dust event in spring.* **Journal of the Environmental Sciences**, **17(6)**, 633~645.

- 0 H. Choi, Y.H. Zhang and K. H. Kim, 2008: *Sudden high concentration of TSP affected by atmospheric boundary layer in Seoul metropolitan area during duststorm period. **Environmental International**, 34(5), 635-647.*
- 0 Hyo Choi and Doo Sun Choi, 2008: *Concentration of PM10, PM2.5 and PM1 influenced by atmospheric circulation and atmospheric boundary layer in the Korean mountainous coast during duststorm. **Atmospheric Research**, 89, 330-337.*
- 0 H. Choi and Y.H. Zhang, 2008: *Prediction of duststorm evolution by vorticity theory. **Atmospheric Research** 89, 338-350.*
- 0 Hyo Choi, 2008: *Impact of typhoon Songda upon sea surface temperature near Cheju island. **Estuarine, Coastal and Shelf Science**, submitted.*
- 0 Hyo Choi and Doo Sun Choi, 2008: *Variation of SST in the eastern coastal sea induced by strong marine wind under the development of coastal low pressure. **Estuarine, Coastal and Shelf Science**, submitted.*
- 0 Hyo Choi, 2008: *Cold sea outbreak in the vicinity of Cheju island after passage of typhoon Rusa. **International Journal of Remote Sensing**, submitted.*
- 0 Hyo Choi and Doo Sun Choi, 2008: *Extreme heavy precipitation in Gangneung coastal city under the passage of typhoon Rusa, 2002. **International Journal of Remote Sensing**, submitted.*
- 0 Hyo Choi, 2008: *Upwelling driven by strong wind in the southeastern sea of Korea. **Acta Oceanologica Sinica**, submitted.*
- 0 Hyo Choi, 2008: *Impact of internal gravity waves developed on the mountainous coast upon sea surface temperature distribution. **Journal of Oceanography**, submitted.*
- 0 Hyo Choi and Milton S. Speer, 2007: *Influences of secondary chemical gas processes on PM1, PM2.5 and PM10 concentrations over the Korean coast. **Advances in Geosciences, Vol., 9**, World Scientific Press, Singapore, 209-244.*
- 0 Hyo Choi, 2006: *An investigation of winter rainfall and snowfall in the mountain and coast. **Advances in Geosciences, Vol. 5**, World Scientific Press, Singapore, 113-123.*
- 0 Hyo Choi, and Doo Sun Choi, 2006: *Impact of regional circulation and heat budget to tropical night. **Advances in Geosciences, Vol. 5**, World Scientific Press, Singapore, 125-134.*
- 0 H. Choi and M. S. Speer, 2006: *Effects of atmospheric circulation and boundary layer structure on the dispersion of suspended particulates in the Seoul metropolitan area. **Meteorology and Atmospheric Physics, 92 (3)**, 239-254.*
- 0 Hyo Choi and Milton S. Speer, 2006: *The influence of synoptic-mesoscale winds and sea surface temperature distribution on fog formation near the Korea western peninsula. **Meteorological Applications, 13(4)**, 347-360.*
- 0 Hyo Choi, 2006: *Development of prediction technique for local weather-Gangwon region heavy snowfall prediction skill development. **Report** no. 2002M-001-02, (Korean Meteorological Administration), 129-190.*
- 0 Hyo Choi and Yuan Hang Zhang, 2005: *Monthly variation of sea-air temperature difference in the Korean coast. **J. of Oceanography, 61(2)**, 359-367.*
- 0 Hyo Choi, 2005: *Characteristics of atmospheric circulation in the Sokcho coast. **J. of Environmental Sciences , 14(1)**, 41-51).*
- 0 Hyo Choi and Milton S. Speer, 2005: *Orographic effect on wind driven currents adjacent to the east coast of Korea. **Monthly Weather Review** (accepted)*
- 0 Hyo Choi, 2005: *Development of prediction technique for local weather-Gangwon region heavy snowfall prediction skill development. **Report** no. 2002M, (Korean Meteorological Administration), 236-533.*
- 0 Hyo Choi, 2004: *Recycling of suspended particulates by atmospheric boundary depth and coastal circulation. **J. of the Environmental Sciences, 13**, 721-731.*
- 0 Hyo Choi, 2004: *Tropical night (nocturnal thermal high) in the mountainous coastal city. **J. of the Environmental Sciences, 13**, 965-985.*
- 0 H. Choi, 2004: *Persistent high concentration of ozone during windstorm conditions in southern Korea. **Meteorology & Atmospheric Physics, 87**, 93-107.*
- 0 H. Choi, Y. H. Zhang and S. Takahashi, 2004: *Recycling of suspended particulates by the interaction of sea-land breeze circulation and complex coastal terrain. **Meteorology & Atmospheric Physics, 87**, 109-120.*
- 0 Hyo Choi, 2004: *Development of prediction technique for local weather-Gangwon region heavy snowfall prediction skill development. **Report** no. 2002M-001-01, (Korean Meteorological Administration), 431-500.*

\* (Since 1983, about 300 articles were presented in the Journals and International Conferences held in USA, England, Germany, Netherlands, Austria, Australia, Russia, Spain, Turkey, Argentina, India, Thailand, Malaysia, Singapore, Hong Kong, China, Taiwan, Japan, etc.)