

Curriculum Vitae

(1) NAME & ADDRESS

Dr. Hyo Choi (Full Professor)
 Dean of Graduate School
 Gangneung-Wonju National University
 Gangneung Campus, Gangwondo 210-702,
 Republic of Korea
 Tel: +82-10-7240-0357, +82-33-640-2073, 2077, 2959, 2676
 Fax: +82-33-640-2083, +82-33-652-0356
 E-mail: du8392@hanmail.net
 Web: <http://atmos.gwnu.ac.kr/ch>
<http://www.gwnu.ac.kr>
<http://www.gwnu.ac.kr/knuen/index.do>



Hyo Choi is meteorologist, environmental scientist and physical oceanographer with over 30 years experiences in modeling researches. His research interests cover a variety of fields in Weather and climate change including Severe weather, Flood, Fog, Meso & synoptic scale meteorology, Extra-tropical and tropical cyclones, Health GIS, GIS and Modeling, Air quality modeling and analysis, and Coastal ocean circulation, Sea surface temperature & Chlorophyll variability in collaboration with Meteorology, Atmospheric environmental science and Physical oceanography groups at universities and government institutions in Korea, USA, England, Germany, Iran, Turkey, India, Australia, Thailand, Malaysia, Singapore, Hong Kong, Taiwan, China, Japan, Chile and Mexico, etc.. He has been President of Korean Environmental Sciences (Korea) and Asia-Oceania Geosciences Society (AS section; Singapore), Deputy Director General of IBC (UK) and others. He has been also acting as Editor-in-Chief of 4 international journals (Singapore, India, Korea) and Editor of 10 International Journals (USA, England, Singapore, India, Nigeria, Malaysia, Korea).

(2) EDUCATIONAL QUALIFICATIONS

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

(3) EMPLOYMENT

1988-present:--**Gangneung-Wonju National University (Korea):** **Dean of Graduate School**(2009-present), Full Professor(1994-Present), Associate Professor(1988-1994); Coastal Meteorology, Atmospheric Chemistry and Modeling, Oceanic Environment modeling and Analysis, Ocean waves and current modeling
 2003-2005:----- **East Sea Fisheries Research Institute, National Fishery Research & Development Institute (NFRDI), Ministry of Maritime Affairs & Fisheries (Korea):** **Fishery Researcher**(Nominated by President of Korean Government); Ocean environment modeling and analysis for fisheries
 1997-1999:----- **East Sea Fisheries Research Institute, National Fishery Research & Development Agency (NFRDA), Ministry of Maritime Affairs & Fisheries (Korea):** **Fishery Researcher**(Nominated by President of Korean Government); Ocean environment modeling and analysis for fisheries
 1984-1988:---- **Korea Ocean Research & Development Institute (KORDI), Korea Advanced Institute of Science & Technology (KAIST), Ministry of Science & Technology (Korea):** **Overseas Invited Senior Researcher;** Physical Oceanography and Marine Meteorological modeling and analysis
 1981-1983:---- **Dept. of Civil Engineering, University of Texas at Austin (USA):** **Research Assistant;** Coastal meteorology

(4) PROFESSIONAL LEADERSHIP (Abridged. SERVICES)

- 0 Dean:** Graduate School, Gangneung-Wonju National University, Korea (2009-Present)
- 0 Deputy Director General:** International Biographical Centre (IBC), England (2005-Present)
- 0 International Advisory Committee Member:** "5th International Symposium on Advances in Science & Technology", Mashhad, Iran, May 12-17, 2011
- 0 Scientific Committee Member:** "1st International Conference on Managing Ecosystem Health of Tropical Seas: Environmental Management of Coastal Ecosystems, Putrajaya, Malaysia, 19-21, October 2010
- 0 Chair of Organizing Committee:** "5th Program of East Asian Cooperative Experiment(PEACE)", Gangneung, Korea, 11-12 September 2010
- 0 President:** Atmospheric Science Section, Asia-Oceania Geosciences Society (AOGS-43 Nations) (2006-2008) (Vice President: 2005-2006 and 2008-2009)
- 0 International Scientific & Advisory Committee Member:** "7th International Conference on Air Quality Science & Application" Istanbul, Turkey, 24-27, March, 2009
- 0 Scientific Working Group Member:** "Pacific Ocean Remote Sensing Conference (PORSEC)": Measurement process, (2008-Present)
- 0 Environmental Affinity Industry Inspection Council Member:** Ministry of Environment, Korea (2005-2007)
- 0 Final Evaluation Deliberation Council Member on Next Generation Project:** Korea Institute of Environmental Science & Technology (KIEST), Korea (2004-2004)
- 0 Co-President:** "3rd International Symposium on Air Quality Management", Istanbul, Turkey, 26-30 September 2005
- 0 Council Member of Korean Environmental Sciences Association:** Korea (2004-2005)
- 0 Fishery Researcher (Nominated by President of Korean Government);** East Sea Fisheries Research Institute, National Fishery Research & Development Institute(NFRDI), Ministry of Maritime Affairs & Fisheries, Korea (2003-2005)
- 0 President:** "International Symposium on Clean Environment". Cheonan, Korea, 21-22 November 2003
- 0 Agriculture, Fisheries & Ocean Sectional Council Member:** Korean Research Foundation, Korea (2003-2004)
- 0 Representative President among Environmental Sciences Societies in Korea:** "2003 Korean Scientific Festival-EXPO for Juvenile Science & Engineering Majors and Courses", Korean Science Foundation, Ministry Science & Technology, Korean Government, Korea , August 13-17, 2003,
- 0 Program Committee Member:** International Conference & Young Scientists on Computational Information Technologies for Environmental Sciences, Tomsk, Russia, August, 2003
- 0 Councilor:** Korean Federation of Science & Technology Society, Korea (2002-2003)
- 0 Representative President among Environmental Sciences Societies in Korea:** "2002 Scientific EXPO for Middle School Students", Korean Science Foundation, Ministry of Science & Technology, Korea, August 13-17, 2002
- 0 President:** Korean Environmental Sciences Society, Korea (2002-2003) (Vice President: 1998-2002)
- 0 Representative President among Environmental Sciences Societies in Korea,** Environment, Energy & Ecology Symposium, "2002 World Congress of Korean and Korean-Ethnic Scientists & Engineers", Korean Federation of Science & Technology Society, Korea, July, 10-14, 2002
- 0 Director:** Korean Meteorological Society, Korea (2000-2001)
- 0 Guest Invited Professor:** Environmental Science Center, Peking University, China (1999-1999)
- 0 Fishery Researcher (Nominated by President of Korean Government);** East Sea Fisheries Research Institute, National Fishery Research & Development Agency(NFRDA), Ministry of Maritime Affairs & Fisheries, Korea (1997-1999)
- 0 International Scientific Committee Member:** "International Marine Science Conference", Kuala Terengganu, Malaysia, August 25-27, 1997
- 0 Guest Invited Researcher:** Meteorological Research Institute, Japan Meteorological Agency, Japan (1997-1997).
- 0 Guest Invited Researcher:** Institute of Oceanography, Chinese Academia Sinica, China (1995-1995)
- 0 Scientific Committee Member:** International Symposium on Metropolitan Devel. & Envir., China, October 22-23, 1994
- 0 Education Courses Deliberation Council Member:** Ministry of Education, Korea (1994-1999)
- 0 Ocean Reservation Consulting Council Member:** Ministry of Environment, Korea (1992-1994)
- 0 Representative:** Korea Environmental Science & Research Association, Korea (1991-1993)
- 0 Ocean Reservation Council Member:** Marine Police Administration, Ministry of Domestic Affairs, Korea (1990-1992)
- 0 Director General:** Donghae Coastal Region Research Institute, Kangnung National University, Korea (1989-1991)
- 0 Professor:** Department of Atmospheric Environmental Sciences, Kangnung National University (Gangneung-Wonju National University), Korea (1988-Present)
- 0 Chairman:** Department of Atmospheric Sciences, Kangnung National University, Korea (1988-1990)
- 0 Investigator, Korean Antarctic Expedition Team:** Korean Government, King George Island, Antarctica (1987-1987)
- 0 Korean Government Representative:** SCAR committee (Antarctic Science & Policy), Sandiego, USA (1986-1986)
- 0 Korean Government Representative:** Intergovernmental Meeting (Antarctic Science & Policy), Racine, USA (1986-1986)
- 0 Investigator, 1st Korean Antarctic Expedition Team:** Korean Government, King George Island, Antarctica (1985-1985)
- 0 Overseas Invited Senior Researcher:** Korea Ocean Research & Development Institute (KORDI), Korea Advanced Institute of Science & Technology (KAIST), Ministry of Science & Technology, Korea (1984-1988)
- 0 Session chair & convenor of international conferences:** more than 80 times

(5) EDITORIAL BOARDS

1) Editor-in-Chief:

- 0 "Current Development in Oceanography", Pushpa Publishing Co. (India) (2010-present);
- 0 "Far East Journal of Ocean Research", Pushpa Publishing Co. (India) (2007-2009);
- 0 "Advances in Geosciences, V.5", World Scientific Publishing Co. (Singapore) (2005-2006);
- 0 "Journal of Korean Environmental Sciences Society-English version", Korean Environmental Sciences Society (Korea) (2002-2003)

2) Editor:

- 0 "International Journal of Environment & Pollution-Special issue", Inderscience Publishers (England) (2009-Present)
- 0 "Disaster Advances", Environmental Disaster Research Institute, (India) (2009-Present)
- 0 "International Journal of Water Resources & Environmental Engineering", Academic Journals (Nigeria) (2009-Present)
- 0 "International Geoinformatics Research & Development Journal", University Putra Malaysia (Malaysia) (2009-Present);
- 0 "The Open Atmospheric Science Journal", Bentham Science (USA) (2007-Present);
- 0 "Far East Journal of Ocean Research", Pushpa Publishing Co.(India) (2007-2009);
- 0 "Advances in Geosciences, V. 9", World Scientific Publishing Co. (Singapore) (2006-2007);
- 0 "Geospatial Today" (India) (2002-2003);
- 0 "Damage & Fracture Mechanics", Wessex Institute of Technology (England) (1999-2001);
- 0 "Advanced in Fracture Mechanics", Wessex Institute of Technology (England) (1996-1998),

(6) AWARDS/HONORS

1) Awards:

- 0 2009 Outstanding Presentation of Paper: Korean Society of Environmental Engineers, Korea, 2009
- 0 Meritorious Prize : Kangnung National University, Korea, 2008
- 0 2006 Academic Award : Kangnung National University, Korea, 2007
- 0 2000 Outstanding Intellectuals of the 21st Century: International Biographical Centre, England, 2005
- 0 Meritorious Prize : Korean Environmental Sciences Society, Korea, 2004
- 0 Meritorious Prize : Administrator of Korean Meteorological Administration, Korean Government, 1999
- 0 9th Scientific & Technological Prize on Excellent Paper: Korean Federation of Science & Technology Societies, Korea, 1999
- 0 National Order-Magnolia : Korean Government, Korea, 1986
- 0 Meritorious Prize-Chungmu Gold Prize : Sea Explorers of Korea, Korea, 1986

2) Honors:

- 0 Keynote Speaker: 5th International Symposium on Advances in Science & Technology (5th SASTech)", Mashhad, Iran, May 12-17, 2011
- 0 Plenary lecturer: "1st International Conference of Disaster Prevention Technology and Management 2010 (DPTM 2010)", Chongqing, China, October 23-25, 2010
- 0 Keynote Speaker: "3rd International Conference on Health GIS (Health GIS 2009)", Hyderabad, India, July 24-26, 2009
- 0 Keynote Speaker: "International Marine Science Conference", Kuala Terengganu, Malaysia, August 25-27, 1997
- 0 Guest Professorship : State Key Laboratory of Environmental Simulation & Pollution Control, Peking University, Beijing, China (2005-2007)
- 0 Guest Invited Professorship : Environmental Science Center, Peking University, China (1999-1999)
- 0 Guest Invited Researchship: Meteorological Research Institute, Japan Meteorological Agency, Japan (1997-1997)
- 0 Guest Invited Researchship: Institute of Oceanology, Chinese Academia Sinica, China (1995-1996)
- 0 Guest Invited Researchship: Meteorological Research Institute, Japan Meteorological Agency, Japan (1994-1994)

(7) RESEARCH PROJECTS (Since 2000)

- 0 2006-Present: Generation mechanism and prediction of windstorm in the mountainous coast -- (Korea Meteorological Administration)
- 0 2009-2010: Effects of local atmospheric and oceanic circulations and sea surface temperature on the coastal fog formation -- (Korea Science and Engineering Foundation; KOSEF)
- 0 2007-2008: Comparison of temporal high concentrations of particulate matter (PM) to the concentrations of gases (CO, NO_x) during dust-storm period – (Korea Research Foundation; KRF)
- 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 – (Korea Research Foundation; KRF)

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

(8) RESEARCH & TEACHING FIELDS

He has experiences in teaching and research in the fields of Meteorology, Atmospheric Environment and Oceanography for B.S., M.S. and Ph.D. degrees in Korea Advanced Institute of Science and Technology, Seoul National University, Ewha Womans University, Hanyang University, Inha University, Kangnung National University, Gangneung-Wonju National University, Asian Institute of Technology (Thailand), University of Singapore (Singapore) and Peking University (China).

TEACHING: 0 Atmospheric Environmental Engineering, 0 Atmospheric Boundary Layer Meteorology, 0 Air Pollution Meteorology, 0 Environmental Impact Assessment, 0 Marine Meteorology, 0 Navigation Meteorology & Experiment, 0 Advanced Marine Meteorology, 0 Dynamical Oceanography & Experiment, 0 Advanced Ocean Sciences, 0 Advanced Dynamical Oceanography, 0 Advanced Physical Oceanography

RESEARCH: Applied meteorological modeling, Air pollution dispersion modeling, and Coastal ocean process as

- 1) Severe weather – gust & wind storm, typhoon, heavy rainfall, heavy snowfall, flood, fog, urban heat waves, cold 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, cold sea outbreak
- 4) Antarctic climate – Arctic & Antarctic climate, weather forecasting and analysis, low-level jet, Antarctic expedition

(9) ABILITY OF LANGUAGES

0 Speaking: English, Korean, Chinese, Japanese
 0 Writing : English, German, Korean, Chinese, Japanese

(10) PUBLICATIONS (Abridged since 2004)

He edited 4 books and since 1983, about 300 articles were presented in Journals and International Conferences held in USA, England, Germany, Netherlands, Austria, Russia, Spain, Australia, Argentina, Turkey, Iran, India, Thailand, Malaysia, Singapore, China, Hong Kong, Taiwan, Japan, Korea, etc.

- 0 Hyo Choi, 2011: Characteristics of Hourly Variation of Particulate Matter(PM_{10} , $PM_{2.5}$, PM_1) and Gaseous(CO , NO_x , O_x) Concentrations for Yellow Sand Event Period in Winter. *Journal of Climate Research*, 6(1), 218-236.
- 0 Hyo Choi and Mi Sook Lee, 2011: Shrunken atmospheric boundary layer affected high concentrations of PM_1 , $PM_{2.5}$ and PM_{10} at a coastal city for Yellow Sand period. *Research Journal of Chemistry and Environment*, accepted
- 0 Hyo Choi, Mi Sook Lee and Jin Do Chung, 2011: Impact of dusts from China on local high concentrations gas (CO , NO_x , O_x) and particulate matter (PM_1 , $PM_{2.5}$ and PM_{10}). *Research Journal of Chemistry and Environment*, accepted
- 0 Hyo Choi and Mi Sook Lee, 2011: Atmospheric boundary layer and scavenging by snow influenced upon diurnal particulate matter concentrations at a Korean eastern coastal city during Yellow Sand Event. *Research Journal of Chemistry and Environment*, accepted
- 0 Hyo Choi and Mi Sook Lee, 2011: Influence of fine dust particles transported from Gobi Desert upon local high particulate matter concentrations at Gangneung, Korea in spring. *Research Journal of Chemistry and Environment*, accepted
- 0 Hyo Choi and Mi Sook Lee, 2011: Abrupt high concentrations of particulate matters(PM_{10} , $PM_{2.5}$, PM_1) by strong wind in the boundary layer and lee side trapping in the mountainous coast under cyclogenesis. *Research Journal of Chemistry and Environment*, accepted
- 0 Hyo Choi and Soo Min Choi, 2011: Cooling of sea surface waters near Cheju Island responding to strong wind and geopotential tendency by a typhoon. *Aquatic Ecosystem Health and Management*, under review
- 0 Hyo Choi, 2011: Typhoon effect on severe change of air temperature in the mountainous coast. *Aquatic Ecosystem Health and Management*, under review
- 0 Hyo Choi, 2010: Extreme Cold sea outbreak near Cheju Island under strong wind and atmospheric pressure change by typhoon Rusa. *Disaster Advances*, 3(1), 31-42.

- 0 Hyo Choi and Soo Min Choi, 2010: Generation of windstorm in the eastern mountainous coast of Korea. *Disaster Advances*, **3(2)**, 24-34.
- 0 Hyo Choi, Doo Sun Choi and Soo Min Choi, 2010: Meteorological condition and atmospheric boundary layer influenced upon temporal concentrations of PM1, PM2.5 at a coastal city, Korea for Yellow Sand Event from Gobi Desert. *Disaster Advances*, **3(4)**, 309-315.
- 0 Hyo Choi and Soo Min Choi, 2010: Extremely heavy precipitation by Typhoon Rusa and orography in the Korean eastern coast. *Disaster Advances*, **3(4)**, 316-323.
- 0 Hyo Choi, Mi Sook Lee and Soo Min Choi, 2010: Wind storm generated by meso-scale cyclogenesis in the Korean eastern mountainous coast. *Disaster Advances*, **3(4)**, 324-333.
- 0 Hyo Choi, 2010: Impact of fine particulate matters transported from Gobi Desert to particulate concentrations (PM10, PM2.5, PM1) for Yellow Sand Event period in Fall-Case study of October 27, 2003. *Journal of Climate Research*, **5(3)**, 219~233.
- 0 Hyo Choi and Doo Sun Choi, 2010: Relationship of temporal variation of Gas (CO, NOx, O_x) and particulate matter (PM1, PM2.5 and PM10) concentrations at a coastal city. *Disaster Advances*, accepted.
- 0 Hyo Choi, 2009: Heavy snowfall by orography and wind shift in cold front crossing Korean eastern coast. *Disaster Advances*, **2(4)**, 35~48.
- 0 Hyo Choi, 2008: Comparison of PM1, PM2.5 and PM10 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 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*, **9**, 209~244.
- 0 Hyo Choi, 2006: An investigation of winter rainfall and snowfall in the mountain and coast. *Advances in Geosciences*, **5**, 113~123.
- 0 Hyo Choi, and Doo Sun Choi, 2006: Impact of regional circulation and heat budget to tropical night. *Advances in Geosciences*, **5**, 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. *Rep.* 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. *Journal of Oceanography*, **61(2)**, 359~367.
- 0 Hyo Choi, 2005: Characteristics of atmospheric circulation in the Sokcho coast. *Journal 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. *Rep. no.* 2002M, (Korean Meteorological Administration), 236~533.
- 0 Hyo Choi, 2004: *Recycling* of suspended particulates by atmospheric boundary depth and coastal circulation. *Journal of the Environmental Sciences*, **13**, 721~731.
- 0 Hyo Choi, 2004: Tropical night (nocturnal thermal high) in the mountainous coastal city. *Journal 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. *Rep.*, 2002M-001-01, (Korean Meteorological Administration), 431~500.