Academic Staff Resume

Name: Keith K. C. Chow
Title: Assistant Professor
Space Science Institute

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Academic Qualification:

PhD in Mathematics, Hong Kong University of Science & Technology (HKUST)
MPhil in Mathematics, HKUST
BEng (Hons) in Mechanical Engineering, Middlesex University, UK

Teaching Area

General Mathematics： LinearAlgebra， Differential Equations，Calculus
Atmospheric Science

Research Area

Numerical modeling of planetary atmospheres, climate dynamics , general circulation and dust storms on Earth and Mars

Working Experience

Jan. 2016 -Present : Assistant Professor, Sapce Science Institute, Macau University of Science & Technology
Jan. 2009 -Jan. 2016 : Lecturer, Department of Mathematics, HKUST.
Jun. 2009 - Jun. 2011: Adjunct Assistant Professor, HKUST Fok Ying Tung Graduate School.
Nov. 2007 - Nov. 2008: Research Assistant Professor / Research Associate, HKUST Fok Ying Tung Graduate School
Feb. 2006 - May 2006: Visiting Scientist, Abdus Salam International Centre for Theoretical Physics, Italy.
Feb. 2003 - Sep. 2007: Senior research assistant / Instructor, Dept. of Physics & Materials Science, City University of Hong Kong
Nov. 2001 - Sep. 2002: Postdoctoral Research Assistant, National Oceanography Centre, Southampton, UK.

Research Projects

Co-Investigator, Dust climate associated with mesoscale dynamics in the atmosphere of Mars, FDCT funded project (080/2015/A3)

Professional Certification and Awards

Journal Reviewer:
Nature, International Journal of Climatology, Climate Dynamics, Journal of Geophysical Research, Journal of Climate, Atmospheric Environment

Professional Society Membership

Member: American Geophysical Union.

Academic Publication

Journal Articles (selected):

Xiao, J., Chow, K. C., Chan, K. L., 2018: Dynamical Processes of Dust Lifting in the northern Mid-latitude region of Mars during the Storm Season. *Icarus* , v317, 94-103.

Chow, K. C., Chan, K. L., Xiao, J., 2018: Dust Activity over the Hellas Basin of Mars during the Period of Southern Spring Equinox. *Icarus* , v311, 306 - 316.

Xiao, J., Z. M. Tan, K. C. Chow, 2018: Structure and formation of convection of secondary rainbands in a simulated typhoon Jangmi (2008). *Meteorology and Atmospheric Physics* , doi.org/10.1007/s00703-018-0599-0.

Chow, K. C., L. SU, J. C. H. Fung, H. Ma, A. K. H. Lau, 2014: Numerical Modeling of a Strong Dust Event over the South China Region in March 2010. *Meteorology and Atmospheric Physics* . v126, 119-138.

Chow, K. C. and J. C. L. Chan, 2010: A dual-scheme approach of cumulus parameterization for simulating the Asian summer monsoon. *Meteorological Applications* , v17, 287-297.

Lu, X., K. C. Chow, T. Yao, J. C. H. Fung, and A. K. H. Lau, 2009: Seasonal variation of the land sea breeze circulation in the Pearl River Delta region. *Journal of Geophysical Research - Atmosphere* , v114, D17112, doi:10.1029/2009JD011764.

Chow, K. C. and J. C. L. Chan, 2009: Diurnal variations of circulation and precipitation in the vicinity of the Tibetan Plateau in early summer. *Climate Dynamics,* v32, 55-73.

Chow, K. C., H. W. Tong, and J. C. L. Chan, 2008: Water vapor sources associated with the early summer precipitation over China. *Climate Dynamics* , v30, 497-517.

Chow, K. C., J. C. L. Chan, J. S. Pal, and F. Giorgi, 2006: Convection suppression criteria applied to the MIT cumulus parameterization scheme for simulating the Asian summer monsoon. *Geophysical Research Letters,* v33, L24709, doi: 10.1029/2006GL028026.

Chow, K. C. and K. L. Chan, 2003: Angular momentum transports by moving spiral waves. *Journal of the Atmospheric Sciences* , v60, 2004-2009.

Chow, K. C., K. L. Chan, and A. K. H. Lau, 2002: Generation of moving spiral bands in tropical cyclones. *Journal of the Atmospheric Sciences* , v59, 2930-2950.

Conference Papers (selected):

Chow, K. C., K. L. Chan, J. Xiao, 2018: Sublimation Flow in the Southern Hemisphere of Mars, International Symposium on Lunar and Planetary Science 2018, Macau, 12 -15 June, 2018

Chow, K. C., K. L. Chan, J. Xiao, 2017: Regular Dust Climate on Mars. 3rd Beijing International Forum on Lunar and Deep-space Exploration (LDSE 2017), Beijing, China, 19 -22 September, 2017

Chow, K. C., K. L. Chan, J. Xiao, 2017: Modeling of Dust Climate on Mars. Asia Oceania Geosciences Society (AOGS) 14th Annual Meeting, Singapore, 06-11 August, 2017

Chow, K. C., K. L. Chan, 2017: Prevailing Dust Storms over the Hellas Basin on Mars around southern Spring Equinox. Sixth International Workshop on the Mars Atmosphere: Modelling and Observations, Spain, 17 -20 Jan., 2017

Chow, K. C., K. L. Chan, 2016: Numerical Modeling of the Atmospheric Circulation and Dust Cycle on Mars, International Symposium on Lunar and Planetary Science 2016, Wuhan, 9 -10 June, 2016