CURRICULUM VITAE

Name: Kleareti Tourpali

Title: Associate Professor, Physics Department, Aristotle University of Thessaloniki, Greece

Degrees: BSc in Physics, University of Ioannina, Department of Physics, Greece, 1985

PhD in Atmospheric Physics, Physics department, University of Thessaloniki, Greece, 1994

Languages: English, Nederlands

Areas of Scientific Research

- Atmospheric Physics and Global Change
- Large scale atmospheric circulation
- Natural and anthropogenic variability of Climate, the ozone layer and related effects on atmospheric circulation, climate and Ultraviolet radiation
- Solar activity variations and related atmospheric and climatic effects
- Surface solar radiation variability and future projections

ACADEMIC EMPLOYMENT / RESEARCH MOBILITY

Research Assistant at the Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki (1990-2001).

Visiting researcher at the School of Meteorology, FU-Berlin, Germany (1994)

Visiting researcher at the National Center for Atmospheric Research (NCAR), Boulder, Co USA (1995).

Visiting researcher at the Meteorology Department, University of Reading, UK (1999).

Post Doc Researcher at the Institute of Marine and Atmospheric Research (IMAOU), RijksUniversiteit Utrecht, and at KNMI, the Netherlands (1999 – 2001).

Lecturer, Physics Department, Aristotle University of Thessaloniki, (2004 – 2009)

Assistant Professor, Physics Department, Aristotle University of Thessaloniki, (2010 – 2016)

Associate Professor, Physics Department, Aristotle University of Thessaloniki, (2016 – 2020)

Professor, Physics Department, Aristotle University of Thessaloniki, (2020 – today)

TEACHING EXPERIENCE

1. "Applied Mathematics" and "Statistics for Economists" DEI – Arts, Science and Technology Foundation course, 1999.
2. 2004 – today

   3 courses per year at undergraduate level (Atmospheric Physics, Physics of the Atmospheric Environment, Atmospheric technology)

3 courses per year at the Graduate School on Environmental Physics, Physics Dept. Aristotle University of Thessaloniki (Physics of the Atmosphere and the Environment, Environmental Statistics, Planetary change)

Research experience

Coordinator of 1 research project, funded by EU and national funds

Participant in 22 (EU-funded) research projects, as researcher (coordinator/PI in 1).

Published work

Peer-reviewed international scientific journals: 74

Co-author in WMO and SPARC Assessment Reports: 6

Citations to published work (excluding self-citations): 3106 (2983) and h-index 32 (Scopus, accessed on 6/4/2026)

Reviewer in international scientific journals (11), Invited speaker at international conferences

SELECTED PUBLICATIONS IN INTERNATIONAL SCIENTIFIC JOURNALS

1. Zerefos, C.S., K. Tourpali, A.F. Bais, "Further studies on a possible volcanic signal to the ozone layer", ***J. Geophys. Res.***, 99, D-12, 2541-2546, 1994
2. Zerefos, C. S., K. Tourpali, B. R. Bojkov, D. S. Balis, B. Rognerund and I. S. A Isaksen, "Solar Activity - Total Ozone Relationships: Observations and Model Studies with Heterogeneous Chemistry", ***J. Geophys. Res.***, vol. 102, D1, 1561-1569, 1997
3. Tourpali, K., X. X. Tie, C. S. Zerefos and G. Brasseur, "Decadal Evolution of Total Ozone Decline: Observation and Model Results", ***J. Geophys. Res.***, vol 102, 20, 23,955-23,962, 1997.
4. Zerefos, C. S., K. Tourpali, I.S.A. Isaksen, and C. J. E. Schuurmans, " Long term solar induced variations in total ozone, stratospheric temperatures and the tropopause", ***Advances in Space Research***, 27, 12,1943-1948, 2001.
5. Tourpali, K., CJE Schuurmans, R. van Dorland, B. Steil, and C. Brühl, "Stratospheric and tropospheric response to enhanced solar UV radiation: A model study", ***Geophysical Research Letters,*** 30(5), 1231, 2003.
6. Tourpali K, Schuurmans CJE, Van Dorland R, Steil B, Brühl C, Manzini E. Solar Cycle Modulation Of The Arctic Oscillation In A Chemistry-Climate Model, ***Geophysical Research Letters***,32 (17): Art. No. L17803 Sep 3 2005
7. Tourpali, K., Zerefos CS, Balis, D., AF Bais, The 11-year solar cycle in stratospheric ozone: Comparison between Umkehr and SBUVv8 and effects on surface erythemal irradiance, ***J. Geophys Res - Atmos*** 112 (12), art. no. D12306, 2007
8. Austin, J., Tourpali,K., Rozanov, E., H. Akiyoshi, S. Bekki, G. Bodeker, C. Bruhl N. Butchart, M. Chipperfield, M. Deushi, V.I. Fomichev, M.A. Giorgetta, L. Gray, K. Kodera, D. Kinnison, E. Manzini, D.Marsh, K. Matthes, T. Nagashima, K. Shibata10, R.S. Stolarski, H.Struthers, W. Tian, Coupled chemistry climate model simulations of the solar cycle in ozone and temperature, ***J. Geophys Res-Atmos,*** 113, D11306, doi:10.1029/2007JD009391, 2008
9. Tourpali, K., Bais,A. F., Kazantzidis, A., Zerefos, C.S., Akiyoshi,H., Austin,J., Brühl,C., Butchart,N., Chipperfield,M.P., Dameris, M., Deushi,M., Eyring,V., Giorgetta, M. A., Kinnison, D. E., Mancini, E., Marsh, D. R., Nagashima, T., Pitari, G., Plummer, D. A., Rozanov, E., Shibata, K., and Tian, W.: Clear sky UV simulations in the 21st century based on ozone and temperature projections from Chemistry-Climate Models, ***Atmos. Chem. Phys.,*** 9, 1165-1172, 2009
10. Balis D, Bojkov R, Tourpali K., and Zerefos, CS, Characteristics of the ozone decline over both hem spheres, ***Int. J. of Remote Sensing***, 30, 15-16, 3887-3895 **,** 2009
11. Kazantzidis, A., K. Tourpali, A.F. Bais, Variability of cloud-free ultraviolet dose rates on global scale due to modeled scenarios of future ozone recovery, ***Photochem. Photobiol.***,86, 117-121, 2010
12. Bais AF, Tourpali K, Kazantzidis A, Akiyoshi H, Bekki S, Braesicke P, Chipperfield MP, Dameris M, Eyring V, Garny H, Iachetti D, Jöckel P, Kubin A, Langematz U, Mancini E, Michou M, Morgenstern O, Nakamura T, Newman PA,

Pitari G, Plummer DA, Rozanov E, Shepherd TG, Shibata K, Tian W, Yamashita Y., Projections of UV radiation changes in the 21st century: impact of ozone recovery and cloud effects. ***Atmos. Chem. Phy.*** 11: 7533-7545. DOI: 10.5194/acp-11-7533-2011, 2011

13. Zerefos, C.S., Tourpali, K., Eleftheratos, K., Kazadzis, S., Meleti, C., Feister, U., Koskela, T., Heikkilä, A., Evidence of a possible turning point in solar UV-B over Canada, Europe and Japan, ***Atmospheric Chemistry and Physics***, 12 (5), pp. 2469-2477, 2012.
14. Ermolli I., Matthes K, Dudok de Wit T, Krivova NA, Tourpali K, Weber M, Unruh YC, Gray L, Langematz U, Pilewskie P, Rozanov E, Schmutz W, Shapiro A, Solanki SK, Thuillier G, Woods TN., "Recent variability of the solar spectral irradiance and its impact on climate modelling" ***Atmos. Chem. Phys.***,13, 3945-3977, 2013
15. Bais, A.F., Drosoglou, T., Meleti, C., Tourpali, K., Kouremeti, N. Changes in surface shortwave solar irradiance from 1993 to 2011 at Thessaloniki (Greece), ***International Journal of Climatology,*** 33,13, 2871-2876, 10.1002/joc.3636, 2013
16. Tourpali, K. and P. Zanis, Winter anticyclonic blocking effects over Europe during 1960-2000 from an ensemble of regional climate models, ***Clim. Res.,*** 57,1, 81-91, 10.3354/cr01169, 2013
17. Eleftheratos, K., S. Kazadzis, C. S. Zerefos, K. Tourpali, C. Meleti, D. Balis, I. Zyrichidou, K. Lakkala, U. Feister, T. Koskela, A. Heikkilä & J. M. Karhu: Ozone and Spectroradiometric UV Changes in the Past 20 Years over High Latitudes, ***Atmosphere-Ocean***, DOI: 10.1080/07055900.2014.919897, 2014
18. Zerefos, C. S., Tourpali, K., Zanis, P., Eleftheratos, K., Repapis, C., Goodman, A., Wuebbles, D., Isaksen, I. S. A., and Luterbacher, J.: Evidence for an earlier greenhouse cooling effect in the stratosphere before 1980 over the Northern Hemisphere, ***Atmos. Chem. Phys.***, 14, 7705-7720, doi:10.5194/acp-14-7705-2014, 2014.
19. Fountoulakis, I., A. F. Bais, K. Tourpali, K. Fragkos, *and* S. Misios, Projected changes in solar UV radiation in the Arctic and sub-Arctic Oceans: Effects from changes in reflectivity, ice transmittance, clouds, and ozone***, J. Geophys. Res. Atmos***., 119, 8073–8090, *doi:10.1002/2014JD021918.2014*
20. Bais, A. F., R. L. McKenzie, P. J. Aucamp, M. Ilyas, S. Madronich, G. Bernhard and K. Tourpali, Ozone depletion and climate change: Impacts on UV radiation**, *Photochem. Photobiol. Sci.*, 14**, 19-52, 2015
21. Mitchell, D. M., Misios, S., Gray, L. J., Tourpali, K., Matthes, K., Hood, L., Schmidt, H., Chiodo, G., Thiéblemont, R., Rozanov, E., Shindell, D. and Krivolutsky, A. Solar signals in CMIP-5 simulations: the stratospheric pathway. ***Q.J.R. Meteorol. Soc..*** doi:10.1002/qj.2530, in press, 2015
22. Hood, L. L., Misios, S., Mitchell, D. M., Rozanov, E., Gray, L. J., Tourpali, K., Matthes, K., Schmidt, H., Chiodo, G., Thiéblemont, R., Shindell, D. and Krivolutsky, A., Solar signals in CMIP-5 simulations: the ozone response***. Q.J.R. Meteorol. Soc..*** doi:10.1002/qj.2553, in press, 2015
23. Misios,S., Mitchell D. M., Gray L. J., Tourpali K., Matthes K., Hood L. L., Schmidt H., Chiodo G, Thieblemont R., Rozanov E., Krivolutsky A., Solar signals in CMIP-5 Simulations: Effects of Atmosphere-Ocean Coupling***, Q. J. R. Meteorol. Soc***., QJ-15-0113
24. Matthes et al., Matthes K., Funke B., Andersson M.E., Barnard L., Beer J., Charbonneau P., Clilverd M.A., Dudok De Wit T., Haberreiter M., Hendry A., Jackman C.H., Kretzschmar M., Kruschke T., Kunze M., Langematz U., Marsh D.R., Maycock A.C., Misios S., Rodger C.J., Scaife A.A., Seppala A., Shangguan M., Sinnhuber M., Tourpali K., Usoskin I., Van De Kamp M., Verronen P.T., Versick S., "Solar forcing for CMIP6 (v3.2)", ***Geoscientific Model Development,*** 10, 6, 2017
25. Haberreiter M., Scholl M., Dudok de Wit T., Kretzschmar M., Misios S., Tourpali K., Schmutz W., "A new observational solar irradiance composite", ***J. Geophys. Res.: Space Physics***, 122, 6, 2017
26. Andrady A., Aucamp P.J., Austin A.T., Bais A.F., Ballare C.L., Barnes P.W., Bernhard G.H., Bjorn L.O., Bornman J.F., Erickson D.J., De Gruijl F.R., Hader D.-P., Ilyas M., Longstreth J., Lucas R.M., Madronich S., McKenzie R.L., Neale R., Norval M., Pandey K.K., Paul N., Redhwi H.H., Robinson S.A., Rose K., Shao M., Sinha R.P., Solomon K.R., Sulzberger B., Takizawa Y., Torikai A., Tourpali K., Williamson C.E., Wilson S.R., Wangberg S.-A., Worrest R.C., Young A.R., Zepp R.G., "Environmental effects of ozone depletion and its interactions with climate change: Progress report, 2016", ***Photochem. Photobiol. Sci***, 16, 2, 2017
27. Zerefos C., Kapsomenakis J., Eleftheratos K., Tourpali K., Petropavlovskikh I., Hubert D., Godin-Beekmann S., Steinbrecht W., Frith S., Sofieva V., Hassler B., "Representativeness of single lidar stations for zonally averaged ozone profiles, their trends and attribution to proxies", ***Atmos. Chem. Phys.***, 18, 9, 2018
28. Abernethy R., Ackerman S.A., ..., Tourpali K., ..., McVicar T.R.", State of the climate in 2017, ***Bulletin of the American Meteorological Society***, 99, 8, 2018

29. Logothetis I., Tourpali K., Misios S., Zanis P., “Etesians and the Summer Circulation over East Mediterranean in CMIP5 Simulations: Connections to the Indian Summer Monsoon”, ***International Journal of Climatology***,1-14, doi:10.1002/joc.6259, 2019
30. Blunden J., Boyer T., Dunn R.J.H., Allen J.,..., Tourpali K.,..., Xin F., Zeng F., Zhang P., Zhu Z., "State of the climate in 2020", ***Bulletin of the American Meteorological Society***, 102 (8), pp. 1 - 481, DOI: 10.1175/2021BAMSStateoftheClimate.1, 2021
31. Logothetis I., Dafka S., Tourpali K., Misios S., Zanis P., Xoplaki E., Luterbacher J., Papagianoulis E., "The South-east Asian monsoon and El Niño–Southern Oscillation impact on the summer atmospheric circulation of East Mediterranean during 20th century based on ERA-20C and CMIP5 simulations", ***International Journal of Climatology***, 42 (9), pp. 4893 - 4908, DOI: 10.1002/joc.7510, 2022
32. Ades M., Adler R., ..., Tourpali K., ...,, Riddle D.B., Veasey S.W., "GLOBAL CLIMATE", ***Bulletin of the American Meteorological Society***, 103 (8), pp. S11 - S142,DOI: 10.1175/BAMS-D-22-0092.1, 2022
33. Misios S., Logothetis I., Knudsen M.F., Karoff C., Amiridis V., Tourpali K., "Decline in Etesian winds after large volcanic eruptions in the last millennium", ***Weather and Climate Dynamics***, 3 (3), pp. 811 - 823, DOI: 10.5194/wcd-3-811-2022, 2022
34. Eleftheratos K., Kapsomenakis J., Fountoulakis I., Zerefos C.S., Jöckel P., Dameris M., Bais A.F., Bernhard G., Kouklaki D., Tourpali K., Stierle S., Liley J.B., Brogniez C., Auriol F., Diémoz H., Simic S., Petropavlovskikh I., Lakkala K., Douvis K.", Ozone, DNA-active UV radiation, and cloud changes for the near-global mean and at high latitudes due to enhanced greenhouse gas concentrations", ***Atmospheric Chemistry and Physics***, 22 (19), pp. 12827 - 12855, DOI: 10.5194/acp-22-12827-2022, 2022
35. Godin-Beekmann S., Azouz N., Sofieva V.F., Hubert D., Petropavlovskikh I., Effertz P., Ancellet G., Degenstein D.A., Zawada D., Froidevaux L., Frith S., Wild J., Davis S., Steinbrecht W., Leblanc T., Querel R., Tourpali K., Damadeo R., Maillard Barras E., Stübi R., Vigouroux C., Arosio C., Nedoluha G., Boyd I., Van Malderen R., Mahieu E., Smale D., Sussmann R., "Updated trends of the stratospheric ozone vertical distribution in the 60°S-60°N latitude range based on the LOTUS regression model", ***Atmospheric Chemistry and Physics***, 22 (17), pp. 11657 - 11673, DOI: 10.5194/acp-22-11657-2022, 2022
36. Blunden J., Boyer T., Dunn R.J.H., Allen J., ..., Tourpali K., ..., Zeng F., Zhang P., Zhu Z., "STATE OF THE CLIMATE IN 2021", ***Bulletin of the American Meteorological Society***, 103 (8), pp. S11 - S142, DOI: 10.1175/2022BAMSStateoftheClimate.1, 2022
37. Weber M., Arosio C., Coldewey-Egbers M., Fioletov V.E., Frith S.M., Wild J.D., Tourpali K., Burrows J.P., Loyola D., "Global total ozone recovery trends attributed to ozone-depleting substance (ODS) changes derived from five merged ozone datasets", ***Atmospheric Chemistry and Physics***, 22 (10), pp. 6843 - 6859, DOI: 10.5194/acp-22-6843-2022, 2022
38. Dunn R.J.H., Aldred F., Gobron N., Miller J.B.,..., Tourpali K., ..., Weber M., Wiese D., Wilber A.C., Wild J.D., Wong T., Woolway R., Yin X., Zhao G., Zhao L., Zhou X., Ziemke J.R., Ziese M., Zotta R.M., "Global climate***", Bulletin of the American Meteorological Society***, 102 (8), pp. S11 - S142, DOI: 10.1175/BAMS-D-21-0098.1, 2022
39. Blunden J., Adusumilli S., Agyakwah W.,..., Tourpali K.,..., Noguchi L., Riddle D.B., Veasey S.W., "State of the climate in 2022***", Bulletin of the American Meteorological Society***, 104 (9), pp. 1 - 516, DOI: 10.1175/2023BAMSStateoftheClimate.1, 2023
40. Moustaka A., Korras-Carraca M.-B., Papachristopoulou K., Stamatis M., Fountoulakis I., Kazadzis S., Proestakis E., Amiridis V., Tourpali K., Georgiou T., Solomos S., Spyrou C., Zerefos C., Gkikas A., "Assessing Lidar Ratio Impact on CALIPSO Retrievals Utilized for the Estimation of Aerosol SW Radiative Effects across North Africa, the Middle East, and Europe", ***Remote Sensing***, 16 (10), art. no. 1689, DOI: 10.3390/rs16101689, 2024
41. Logothetis I., Tourpali K., Melas D., "Projected Changes in Wind Power Potential over a Vulnerable Eastern Mediterranean Area Using EURO-CORDEX RCMs According to rcp4.5 and rcp8.5 Scenarios", ***Engineering Proceedings***, 87 (1), art. no. 18, DOI: 10.3390/engproc2025087018, 2025
42. Chatzopoulou A., Tourpali K., Bais A.F., Braesicke P.," 21st century surface UV radiation changes deduced from CMIP6 models: part I—evolution of major influencing factors", ***Photochemical and Photobiological Sciences***, 24 (1), pp. 89 - 109, DOI: 10.1007/s43630-024-00675-7, 2025
43. Chatzopoulou A., Tourpali K., Bais A.F., Braesicke P., "Twenty-first century surface UV radiation changes deduced from CMIP6 models. Part II: effects on UV index and plant growth weighted irradiance", ***Photochemical and Photobiological Sciences***, 24 (1), pp. 113 - 130, DOI: 10.1007/s43630-024-00676-6, 2025
44. Chatzopoulou A., Tourpali K., Bais A.F., Braesicke P. "Effects of different aerosol types on surface UV radiation in the 21st century", ***Atmospheric Environment***, 362, art. no. 121595, DOI: 10.1016/j.atmosenv.2025.121595, 2025
45. Moustaka A., Siomos N., Kazadzis S., Proestakis E., Voudouri K.A., Lopatin A., Dubovik O., Tourpali K., Zerefos C., Amiridis V., Gkikas A., "Enhancing dust aerosols monitoring capabilities across North Africa and the Middle East using the A-Train satellite constellation", ***Atmospheric Measurement Techniques***, 19 (4), pp. 1201 – 1225, DOI: 10.5194/amt-19-1201-2026, 2026