

# CURRICULUM VITAE

**Apostolos Voulgarakis**

(last update: 29/01/2021)

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## **RESEARCH INTERESTS:**

- Wildfires & climate change • Air pollution-climate interactions • Global climate modelling
- Earth observation/Earth system modelling • Climate, air quality, and health co-benefits

## **EDUCATION:**

### University:

- 2004-2008 : **University of Cambridge**, Centre for Atmospheric Science, Department of Chemistry, Hughes Hall College. **PhD** in Atmospheric Science.  
Thesis: *Studies of tropospheric composition variability at global and regional scales using a three-dimensional chemical-transport model.* Supervisor: Professor John A. Pyle FRS.
- 2002-2004 : **Technical University of Crete**, Department of Environmental Engineering.  
**MSc** in Environmental Management and Quality Control.  
Thesis: *Studying tropospheric ozone and aerosols in the Eastern Mediterranean.*  
Supervisor: Professor Mihalis Lazaridis.
- 1997-2002 : **Aristotle University of Thessaloniki, Ptychion (BSc)** in Physics.  
Thesis: *Atmospheric aerosols and UV radiation.*  
Supervisors: Professor Dimitrios Balis, Professor Christos Zerefos (Academician).

### Summer Schools:

- 07/2007 : Enviro Gradschool, Manchester, UK. 4-day environmental career training (UK Grad Programme).
- 09/2006 : Geophysical and Environmental Fluid Dynamics (GEFD) Summer School (2 weeks), Department of Applied Mathematics and Theoretical Physics (DAMTP), University of Cambridge, UK.

## **EMPLOYMENT HISTORY:**

- 11/2019-present : **Technical University of Crete**, School of Environmental Engineering, Chania, Greece. Position: *Associate Professor.*
- 11/2019-present : **Imperial College London**, London, UK. Position: *Visiting Reader.*
- 09/2019-11/2019 : **Imperial College London**, London, UK. Position: *Reader (equivalent to Full Professor (without Chair)).*
- 09/2017-08/2019 : **Imperial College London**, London, UK. Position: *Senior Lecturer (equivalent to Associate Professor).*
- 07/2012-08/2017 : **Imperial College London**, London, UK. Position: *Lecturer (equivalent to Assistant Professor).*
- 01/2011-06/2012 : **NASA Goddard Institute for Space Studies & Center for Climate Systems Research, Columbia University**, New York, USA. Position: *Associate Research Scientist.*
- 01/2009-12/2010 : **NASA Goddard Institute for Space Studies & Center for Climate Systems Research, Columbia University**, New York, USA. Position: *Postdoctoral Research Scientist.*
- 10/2008-12/2008 : **University of Cambridge, Centre for Atmospheric Science**, Department of Chemistry, Cambridge, UK. Position: *Research Associate.*
- 2003-2007 : **University of Cambridge and Technical University of Crete**, (UK/Greece).  
Positions: Various part-time *Research and Teaching Assistant* roles (see below for teaching).

## **INTERNATIONAL RESEARCH ROLES:**

- 01/2019-present : **Associate Director and Founder/Founding Director** of the research centre *Leverhulme Centre for Wildfires, Environment and Society* (based at Imperial College London, UK; currently ~50 people working as part of it).

- 08/2014-present : **Member of the Scientific Steering Committee** of the international Precipitation Drivers and Response Modelling Intercomparison Project (PDRMIP), and **Analysis Lead** for the effects of regional forcings from Europe and East Asia on the global and regional hydrological cycle.
- 04/2015-present : **Analysis Lead** (of fuel consumption in models) & **Participant** (with our fire model INFERNO) in the international Fire Model Intercomparison Project (FireMIP).
- 05/2013-present : **Analysis Lead** of cloud-chemistry interactions within the international IGAC/SPARC Chemistry-Climate Modeling Initiative (CCMI).
- 2013 : **Contributing Author** to the *Intergovernmental Panel for Climate Change (IPCC) Fifth Assessment Report (AR5)*, Chapters 6 & 11.
- 01/2011-12/2012 : **Analysis Lead** of hydroxyl radical (OH) and methane lifetime changes within the international IGAC Atmospheric Chemistry & Climate Model Intercomparison Project (ACCMIP), in support of IPCC AR5.

**PHD/PDRA MENTORING EXPERIENCE** (nominated as Best Supervisor at Imperial College in 2018, see AWARDS section):

- 01/2021-present : Research Fellow Dr. Emmanouil Grillakis, Technical University of Crete, Topic: *Fire weather calculations over the area of Greece*, Funding: ITET, Greece.
- 09/2020-present : PhD student Anastasios Rovithakis, Technical University of Crete, Topic: *Estimating future wildfire risk in the Eastern Mediterranean based on climate change scenarios*, Funding: ITET, Greece.
- 09/2020-present : PhD student Katie Blackford, Imperial College London, Topic: *The role of peat fires in shaping future atmospheric composition, the carbon cycle and climate*. Funding: Leverhulme Centre for Wildfires and Met Office.
- 09/2018-present : PhD student Alexander Kuhn-Regnier, Imperial College London, Topic: *Predicting the ecological impacts of future fire activity on a global scale*. Funding: NERC, UK.
- 09/2018-present : PhD student Carl Thomas, Imperial College London, Topic: *Using machine learning to constrain the atmospheric dynamics contribution to regional climate change*. Funding: NERC, UK.
- 09/2017-present : PhD student Laura Mansfield, Imperial College London, Topic: *Model reduction using emulation for understanding and predicting climate responses to different regional short-lived emission forcings*. Funding: NERC, UK.
- 09/2017-present : PhD student Chris Wells, Imperial College London, Topic: *Human health co-benefits from climate change mitigation*. Funding: NERC, UK.
- 09/2017-present : PhD student João Teixeira, University of Exeter (co-supervisor), Topic: *Feedbacks between fire and atmospheric composition*. Funding: UK Met Office.
- 08/2017-present : Research Fellow Dr. Peer Nowack. Topic: *Innovative applications of machine learning in climate sciences*. Funding: Imperial College London Research Fellowships.
- 01/2019-01/2020 : PhD student Yawei Qu, Imperial College London (visiting PhD researcher for 1 year from Nanjing University of China). Topic: *The influence of tropospheric aerosols on atmospheric oxidants over East Asia*. Funding: China Scholarships Council - CSC.
- 01/2014-06/2019 : PhD student Sunil Varma, Imperial College London, Topic: *The influence of tropospheric clouds on upper troposphere/lower stratosphere composition and climate forcings* Funding: self-funded.
- 02/2017-10/2017 : Postdoctoral researcher Dr. Carlo Corsaro, Topic: *Multi-purpose regional emission metrics and simplified global/regional emissions impact modelling* Funding: Grantham Institute, UK.
- 10/2013-05/2017 : PhD student Dilshad Shawki, Imperial College London, *Remote and local influences on South Asian climate and air quality*. Funding: Grantham Institute, UK.
- 01/2016-01/2017 : Postdoctoral researcher Dr. Longbo Liu, Topic: *Influences of pollution originating from East Asia and Europe on the hydrological cycle*. Funding: Northwest Institute of Nuclear Technology, China.
- 10/2013-03/2017 : PhD student Stephane Mangeon, Imperial College London, *Interactive fire modelling for studies of past, present and future wildfire-composition-climate interactions* (with Met Office; co-supervisor: Dr. Gerd Folberth). Funding: NERC CASE studentship with UK Met Office.
- 10/2012-07/2016 : PhD student Matthew Kasoar, Imperial College London, *Relationships between regional emissions, radiative forcing and precipitation*. Funding: NERC, UK.

06/2010-12/2013 : PhD student Miriam Marlier, Columbia University, *Studying health effects of wildfires in SE Asia* (co-supervisor). Funding: National Science Foundation, USA.

**Also:** Supervised **19 MSc/MSci** and **33 undergraduate** research projects, and mentored **10 summer research interns** in between 2013 and present:

Dilshad Shawki (MSc 2013), Robert Dickens (MSc 2015), Le Yuan (MSc 2016), Catherine Burrows (MSci 2016), Laura Mansfield (MSci 2016), Stephanie Pinto (MSci 2016), James Fernandes (MSci 2016), Wong Tran (MSci 2016), James White (MSci 2016), Ida Bagus Mandhara Brasika (MSc 2017), Burhanuddin Pisavadi (MSci 2018), Mark Cox-Smith (MSci 2018), Sabrina Kohlmann (MSci 2018), Jamie Turner (MSci 2018), Julia Chmielowska (MSci 2019), Alexander Chaudhri (MSci 2019), Milan Ding (MSci 2019), Conor Crook (MSci 2020), Matthew Adams (MSci 2020), Styliani Ampazoglou (BSc 2014), James Lee (BSc 2014), Fahar Al Said (BSc 2014), Catherine Burrows (BSc 2014), James Fernandes (BSc 2015), Sunil Jindal (BSc 2015), William Jones (BSc 2015), Daniel Powell (BSc 2015), Natasha Wright (BSc 2016), Charlie Keen (BSc 2017), Le Yang Sim (BSc 2017), Sumer Jaitly (BSc 2017), Lee Wei Quan (BSc 2017), Ismail Dawoodjee (BSc 2017), Vinh Ta (BSc 2017), Mihrasp Rustomjee (BSc 2017), Rosemary Pickering (BSc 2017), Philip Rutter (BSc 2017), Theofanis Markopoulitis (BSc 2017), Ruiting Xie (BSc 2017), Jessica Oliver (BSc 2017), Nicholas Lee (BSc 2017), Paolo Pelucchi (BSc 2017), William John Richards (BSc 2017), Yuyin Liu (BSc 2017), Kenza Tazi (BSc 2018), Kei Tsun Yeung (BSc 2018), Meryl Chittethazhathu Anil (BSc 2018), Qasim Afghan (BSc 2018), Rani Berkoun (BSc 2018), Gabin Laurent (BSc 2018), Dimitrios Voidomatis (BEng 2021), Athina Gkagkaoudaki (BEng 2021), Thierry Escabasse (Intern 2010), Muhammad Huzaifah bin Md Shahrin (Intern 2014), Yunzhou Xia (Intern 2015), Laura Mansfield (Intern 2015), Stefanos Mousafeiris (Intern 2016), Peter Steiglechner (Intern 2016), Kong Liow (Intern 2016), Alexander Kuhn-Regnier (Intern 2017), Dominika Mulak (Intern 2017), Theofanis Markopoulitis (Intern 2017).

### **TEACHING EXPERIENCE:**

- 01/2020-present : **Module Lead**, *Scientific Programming I and II* modules, School of Environmental Engineering, Technical University of Crete. 1<sup>st</sup> year modules. Attendance: >100 students per year. Evaluation: Performed highly in all categories of evaluation; results available on request.
- 10/2020-present : **Module Co-Lead**, *Climate Change & Environmental Impacts* module, School of Environmental Engineering, Technical University of Crete. Master's module. Attendance: ~20 students per year.
- 10/2017-09/2019 : **Module Lead**, *Atmospheric Physics* module, Department of Physics, Imperial College London. 4<sup>th</sup> year module, also available to masters students. Attendance: ~70 students per year. Evaluation: 93% (ratings >50% generally considered as positive and >75% as remarkable (same applies to other teaching sub-sections below). Nominated as Best Lecturer at Imperial College in 2019.
- 01/2014-09/2017 : **Lecturer**, *Environmental Physics* undergraduate course, Department of Physics, Imperial College London. 2<sup>nd</sup> year module. Attendance: ~50 students per year. Evaluation: 92% rating by students.
- 10/2012-02/2019 : **Academic Tutor**, Various undergraduate courses (Physics & Maths), Department of Physics, Imperial College London. Attendance: Typically 2 groups of 20 students per year. Evaluation: 98% student rating. Won the Best Tutor Award across Imperial College (2016) and was nominated again for it in 2017. Also: **Personal Tutor** for 60 undergraduate students in total. Evaluation: 100% rating by students.
- 10/2016-03/2017 : **Demonstrator** in undergraduate 1<sup>st</sup> year Computing Labs (Python), Department of Physics, Imperial College London. Attendance: 2 classes of ~40 students.
- 10/2012-09/2019 : **Associate Lecturer**, *Thermodynamics* (2013-14, 2017-18) undergraduate module, *Atmospheric Physics* UG/MSc module (2014-15, 2015-16), and *Vibrations & Waves* module (2016-17), Department of Physics, Imperial College London.
- 10/2012-01/2013 : **Lecturer**, *Professional Skills* undergraduate module, Department of Physics, Imperial College London.
- 04/2007-06/2007 : **Teaching Assistant**, University of Cambridge (UK), Department of Chemistry, *Phys. Chem. Labs.*
- 03/2004-08/2004 : **Teaching Assistant**, Technical University of Crete (Greece), *Environmental Meteorology-Climatology and Air Pollution Models.*
- 09/2003-06/2004 : **Physics Teacher** (part-time), 2<sup>nd</sup> High School of Chania, Greece.

### **OTHER INSTITUTIONAL RESPONSIBILITIES:**

2020-present : Representative of the Technical University of Crete in the Greek University Network for Sustainability.

- 2020-present : Member of the 3-person Committee for the Future of the School of Environmental Engineering.  
 2014-2019 : Coordinator of Space and Atmospheric Physics Group's Postgraduate Lecture Series (26 lectures).  
 2013-2019 : Member of the PhD Admissions Committee (interviews) for the Space and Atmospheric Physics Group, Imperial College London.  
 2013-2017 : Member of Undergraduate Admissions Committee for the Department of Physics, Imperial College.

### **PHD EXTERNAL EXAMINING:**

- In 2019 : Duke University.  
 07/2017 : University of Manchester.  
 05/2016 : Swiss Federal Institute of Technology (ETH) Zurich.  
 03/2016 : Indian Institute of Science (IISc) Bangalore.  
 09/2015 : University of Cambridge.  
 12/2014 : Universitat Politècnica de Catalunya (UPC).

### **REVIEWING:**

Articles for journals: *Nature Climate Change, Nature Geoscience, Nature Communications, Atmospheric Chemistry & Physics, Journal of Geophysical Research, Geophysical Research Letters, Atmospheric Environment, Geoscientific Model Development, Environmental Science and Pollution Research, Scientific Online Letters on the Atmosphere, Earth's Future, amongst others.*

Research proposals: Natural Environment Research Council, UK (NERC); National Oceanic Atmospheric Administration, USA (NOAA); Netherlands Organisation for Scientific Research (NWO); the Arctic Council, amongst others.

### **MEETING ORGANIZATION:**

- 05/2017 : *Precipitation Drivers and Response Modelling Intercomparison Project (PDRMIP) Workshop.*  
 07/2016 : *Aerosol Impacts on Climate over South Asia Workshop (Bangalore, India).*  
 07/2015 : *Local & Remote Influences on Rainfall over India (LORRI) Workshop (London, UK).*  
 11/2014 : *Royal Meteorological Society National Meeting titled "Air pollutants as mediators of climate change: science and policy" (London, UK).*

### **OTHER SKILLS:**

Computing : • UNIX/LINUX, Mac OS, MS Windows • Fortran, Python, Matlab, LaTeX • IDL, Grads, netCDF operators, Excel.

Languages : English (fluent), German (intermediate), French (basic), Greek (native).

### **FUNDING:**

- 2019-2029 : *Leverhulme Centre for Wildfires, Environment and Society, £10M Centre funding for 10 years. (Founder and Founding Director; transitioned to Associate Director after moving to Greece).*  
 2020-2021 : *National Research Network for Climate Change and its Impacts (Co-I), General Secretariat of Research and Technology, Greece (Funding for TUC: 145.000 euros).*  
 2015 - 2018 : *Quantifying and Reducing Uncertainty in the Processes Controlling Tropospheric Ozone and OH (Co-I), NERC Standard Grant (Overall: £780,000; Imperial: £40,000).*  
 2014 - 2018 : *Utilizing A-Train Satellite Measurements in Conjunction with Global Models to Study the Radiative Impact of Clouds on Tropospheric Composition and Chemistry (Co-I), NASA ACOMAP programme (Overall: \$440,000).*  
 2013 - 2017 : *Regional climate-air quality interactions (REQUA) (Co-I), EU Marie Curie IRES Scheme (Overall: £220,000; Imperial: £42,000).*  
 2015-2016 : *Influencing international activity in assessments of climate-chemistry models (PI), National Centre For Earth Observation (NCEO) (Overall: £67,000; Imperial: £23,000).*  
 2014 - 2016 : *Local and Remote influences on Rainfall over India (LORRI) (PI), UGC-UKIERI programme of the British Council (Overall: £50,000; Imperial: £32,000).*  
 2016 : *Regional climate and air quality impacts of air pollutants, Attracted visiting researcher Dr. Longbo Liu*

from the Northwest Institute of Nuclear Technology, to visit for 1 year and pursue research in my group (PI) (In-kind funding: £50,000).

- 2013 - 2016 : *The fate and effects of forest fire emissions injected directly into the stratosphere* (Co-I), NASA ACMAP programme (Overall: £330,000).
- 2015 - 2016 : *Climate Change Risk Assessment for Cyprus* (Lead Climate Change Adviser), Ministry of the Environment of Cyprus (Overall: £120,000; Imperial: £16,000).
- 2014 - 2016 : *Avoiding Dangerous Climate Change Research Programme, Phase Two (AVOID-2)* (Expert Adviser), DECC (Overall: £1,450,000).
- 2011 - 2014 : *Evaluation of emissions and processes in the chemistry-climate system* (Co-I), NASA ACMAP programme (Overall: \$430,000).
- 2009 - 2012 : *Using and improving an interactive climate-composition model: GISS-PUCCINI* (Co-I), NASA ACMAP programme (Overall: \$1,200,000).
- 2010 : Travel grant for the *International Global Atmospheric Chemistry Conference*, Davos, Switzerland.
- 2010 : Secured funding to support intern through the *Alliance Program* (GISS/École Polytechnique).
- 2005 : *Cambridge European Trust* bursary.
- 2005 - 2008 : *Greek State Scholarships Foundation (IKY)*. Obtained full PhD funding for 3.5 years.
- 2004 - 2007 : *Natural Environment Research Council, UK*. Obtained fees-only funding for 3 years.

#### **AWARDS:**

- 2016 : Winner of *Student Academic Choice Award as Best Tutor at Imperial College* (awarded to only one academic at Imperial College each year by the Student Union). Also nominated again in 2017 for the same award, and nominated for Best Supervisor and for Best Lecturer in 2018 and 2019, respectively.
- 2010 : *Distinguished Scientist Award*, from the Greek Ministry of National Defense (awarded to Greek scientists with high achievements who reside outside of the country).
- 2008 : *Best Young Researcher Award*, from the Hellenic Meteorological Society (awarded to only one exceptional young researcher every two years).
- 2008 : *Lundgren Research Award*, by the Board of Graduate Studies, Cambridge (final-year award offered to students who have shown a high aptitude for research).

#### **SCIENTIFIC MEMBERSHIPS:**

- European Geosciences Union
- American Geophysical Union
- Royal Meteorological Society

#### **MAJOR COLLABORATIONS:**

**UK:** Dr. Fiona O'Connor & Dr. Gerd Folberth, *Met Office Hadley Centre* • Prof. William Collins & Dr. Nicolas Bellouin, *University of Reading* • Dr. Oliver Wild, *Lancaster University* • Dr. David Stevenson, *University of Edinburgh* • Prof. Sir Brian Hoskins, Dr. Arnaud Czaja & Ms. Alyssa Gilbert *Imperial College London*.

**US:** • Prof. Drew Shindell, *Duke University* • Dr. Kevin Bowman & Dr. John Worden, *NASA JPL, CalTech*  
• Dr. Robert Field & Dr. Kostas Tsigaridis, *NASA GISS & Columbia University*  
• Dr. Jean-Francois Lamarque, *NCAR* • Dr. Hongyu Liu and Dr. Jim Crawford, *NASA Lagrange*.

**India:** Prof. J. Srinivasan & Dr. Arindam Chakraborty, *IISc Bangalore & Divecha Centre for Climate Change*.

**China:** Prof. Tijian Wang, Prof. Min Xie, Prof. Yong Han, *Nanjing University*.

**Greece:** Prof. Dimitrios Melas & Prof. Prodromos Zanis, *Aristotle University of Thessaloniki* • Dr. Christos Giannakopoulos, Dr. Vassilis Amiridis, *National Observatory of Athens*

**Cyprus:** Dr. Panos Hadjinicolaou, *Cyprus Institute*.

**Norway:** Dr. Gunnar Myhre & Dr. Bjørn Samset, *CICERO*.

## **INVITED TALKS / SEMINARS:**

- 1) 2<sup>nd</sup> Joint School ESA/EUMETSAT/ECMWF-CAMS on Atmospheric Composition (online), 17 November 2020.
- 2) University College London (UK), Physical Geography Seminar, 26 April 2018.
- 3) University of Cambridge (UK), UKCA Training Course, 10 January 2018.
- 4) Mathematics of Planet Earth CDT Seminar, London (UK), 1 November 2017.
- 5) Informing Future UK Climate Projections Workshop, Met Office Hadley Centre (UK), 4 July 2017.
- 6) Met Office Hadley Centre Seminar Series (UK), 16 May 2017.
- 7) Imperial College Earth Day (UK), 21 April 2017.
- 8) RMetS National Meeting on El Niño (UK), 15 March 2017.
- 9) University of Cambridge (UK), UKCA Training Course, 13 January 2017.
- 10) American Geophysical Union Fall Meeting (USA), 15 December 2016.
- 11) IISc Banalore (India), Climate Change Seminar, 15 July 2016.
- 12) National Observatory of Athens seminar series (Greece), 1 July 2016.
- 13) University of Edinburgh (UK), Global Change Seminar, 23 April 2016.
- 14) University of Cambridge (UK), UKCA Training Course, 5 January 2016.
- 15) AGU Fall Meeting (USA), December 2015 (could not attend due to paternity leave).
- 16) Stockholm University (Sweden), ACES Seminar, 28 October 2015.
- 17) Columbia University (USA), ACCU Forum, 21 May 2015.
- 18) NOAA GFDL (USA), Lunch Seminar, 20 May 2015.
- 19) NASA GISS (USA), GISS Seminar Series, 21 May 2015.
- 20) Columbia University (USA), LDEO Seminar, 8 May 2015.
- 21) University of Cambridge (UK), Centre for Atmospheric Science Seminar, 9 February 2015.
- 22) ACITES Network Conference (UK), 2 December 2014.
- 23) ETH (Switzerland), Seminar series Greenhouse Gas Fluxes and Sinks, 10 April 2014.
- 24) NCAS Composition-Climate Meeting (UK), 4 April 2014.
- 25) NCEO Atmospheric Composition Meeting (UK), 1 April 2014.
- 26) ECMWF (UK), Lunchtime Seminar, 23 January 2014.
- 27) University of Leeds (UK), ICAS External Seminar, 19 November 2013.
- 28) University College London (UK), Department of Geography Seminar, 24 April 2013.
- 29) Imperial College (UK), Grantham Institute Seminar, 13 March 2013.
- 30) University of Lancaster (UK), RmetS ACSG Workshop, 22 February 2013.
- 31) University of Reading (UK), Department of Meteorology Seminar, 18 February 2013.
- 32) King's College (UK), Earth and Environmental Dynamics Seminar, 1 February 2013.
- 33) Met Office Hadley Centre (UK), 14 September 2012.
- 34) Imperial College London (UK), Atmospheric Physics Seminar, 2 December 2011.
- 35) Lamont-Doherty Earth Observatory (USA), DOCP Seminar, 11 March 2011.
- 36) NASA Goddard Space Flight Center (USA), Atmospheric Chemistry and Dynamics Seminar, 3 March 2011.
- 37) Harvard University (USA), Atmospheric Sciences Seminar, 12 November 2010.
- 38) Cornell University (USA), Biological and Environmental Engineering Seminar, 22 October 2010.
- 39) University of Cambridge (UK), Physical Chemistry Seminar, 17 October 2007.
- 40) University of Cambridge (UK), CAS Seminar, 21 November 2005.

## **PUBLICATIONS LIST** (students/postdocs supervised by me are highlighted with an asterisk (\*)):

### **A) In Preparation for Submission to Journals (listing only papers from Voulgarakis group):**

Kasoar, M.\*, Bayley, C.\*, and **Voulgarakis, A.**, The impact of El Niño-generated wildfire emissions on El Niño itself in preparation for *Nature Clim. Change*.

**Voulgarakis, A.**, Corsaro, C.\*, Kasoar, M.\*, Steiglechner, P.\*, Mansfield, L.\*, and Shawki, D.\*, Regional emission metrics for informing climate policy, in preparation for *Climatic Change*.

Varma, S.\* and **Voulgarakis, A.**, Cloud linkages with atmospheric oxidants via photolysis processes, in preparation for *Atmos. Chem. Phys.*

**B) Refereed Papers in Journals (~7,100 citations; h-index=36 in Google Scholar on 28/01/2021):**

- 1) Thomas, C.\*, **Voulgarakis, A.**, Lim, G., Haigh, J., and Nowack, P.\* (2021), An unsupervised learning approach to identifying blocking events: the case of European summer, *Weather Clim. Dynam. Discuss.*, <https://doi.org/10.5194/wcd-2021-1>.
- 2) Mansfield, L.\*, Nowack, P.\*, Kasoar, M.\*, Everitt, R. G., W. J. Collings, and **A. Voulgarakis**, Predicting global patterns of long-term climate change from short-term simulations using machine learning *accepted in npj Clim. & Atmospheric Sci. (Nature journal)*, doi:10.1038/s41612-020-00148-5.
- 3) Hodnebrog, Ø. et al. (incl. **Voulgarakis, A.**) (2020), The effect of rapid adjustments to halocarbons and N<sub>2</sub>O on radiative forcing, *accepted in npj Climate and Atmospheric Science (Nature journal)*, doi: 10.1038/s41612-020-00150-x.
- 4) Kuhn-Régnier, A.\*, **Voulgarakis, A.**, Nowack, P.\*, Forkel, M., Prentice, I. C., and Harrison, S. P. (2020), Quantifying the Importance of Antecedent Fuel-Related Vegetation Properties for Burnt Area using Random Forests, *Biogeosciences Discuss. [preprint]*, <https://doi.org/10.5194/bg-2020-409>.
- 5) Qu, Y.\*, **Voulgarakis, A.**, Wang, T., Kasoar, M.\*, Wells, C.\*, Yuan, C., Varma, S.\*, and Mansfield, L.\*, A study of the effect of aerosols on surface ozone through meteorology feedbacks over China, *in review in Atmos. Chem. Phys.*
- 6) Hantson, S., et al. (incl. Mangeon, S.\* and **Voulgarakis, A.**) (2020), Quantitative assessment of fire and vegetation properties in simulations with fire-enabled vegetation models from the Fire Model Intercomparison Project, *Geosci. Model Dev.*, 13, 3299–3318, <https://doi.org/10.5194/gmd-13-3299-2020>.
- 7) Tang, T., Shindell, D., Zhang, Y., **Voulgarakis, A.**, Lamarque, J.-F., Myhre, G., Stjern, C. W., Faluvegi, G., and Samset, B. H. (2020), Response of surface shortwave cloud radiative effect to greenhouse gases and aerosols and its impact on summer maximum temperature, *Atmos. Chem. Phys.*, 20, 8251–8266, <https://doi.org/10.5194/acp-20-8251-2020>.
- 8) Wild, O., **Voulgarakis, A.**, O'Connor, F., Lamarque, J.-F., Ryan, E. M., and Lee, L. (2020), Global sensitivity analysis of chemistry–climate model budgets of tropospheric ozone and OH: exploring model diversity, *Atmos. Chem. Phys.*, 20, 4047–4058, <https://doi.org/10.5194/acp-20-4047-2020>.
- 9) Saunio, M., et al. (incl. **Voulgarakis, A.**) (2020), The Global Methane Budget 2000–2017, *accepted in Earth Syst. Sci. Data*, <https://doi.org/10.5194/essd-2019-128>.
- 10) Lasslop, G., Coppola, A. I., **Voulgarakis, A.**, Yue, C., and Veraverbeke, S. (2019), Influence of Fire on the Carbon Cycle and Climate, *Current Climate Change Reports*, 5, 112–123, <https://doi.org/10.1007/s40641-019-00128-9>.
- 11) Scannell, C., Booth, B. B., Dunstone, N. J., Rowell, D. P., Bernie, D. J., Kasoar, M.\*, **Voulgarakis, A.**, Wilcox, L. J., Acosta Navarro, J. C., Seland, O., and Paynter, D. J. (2019), The Influence of Remote Aerosol Forcing from Industrialized Economies on the Future Evolution of East and West African Rainfall, *J. Climate*, 32 (23): 8335–8354, <https://doi.org/10.1175/JCLI-D-18-0716.1>.
- 12) Sillmann, J., Stjern, C. W., Myhre, G., Samset, B. H., Hodnebrog, Ø, Boucher, O., Forster, P. M., Kirkevåg, A., Lamarque, J.-F., Olivie, D., Shindell, D., **Voulgarakis, A.**, and Zwiers, F. W., Extreme precipitation affected differently by greenhouse gases and aerosols (2019), *npj Climate and Atmospheric Science*, 2, 24, doi:10.1038/s41612-019-0079-3.

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- 2) **Voulgarakis, A.**, Field, R. D., and Fromm, M. (2016), Fire impacts on high-altitude atmospheric composition, *Proceedings of the COMECAP Conference 2016*, Thessaloniki, Greece.
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- 8) **Voulgarakis, A.**, T. Glytsos, O. Hov, K. Torseth and M. Lazaridis (2004), Particulate matter characteristics in the Eastern Mediterranean - Saharan dust episodes. *Measurements of Particulate Matter: Status Report 2004. EMEP/CCC-Report 3/2004, O-98134 Status Report*.
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**D) Conference abstracts (only 1<sup>st</sup>-author listed):**

- 1) **Voulgarakis** et al., Regional emission metrics for assessing multiple environmental impacts of pollutants, *Tri-MIP-Athlon Conference*, Reading, UK, June 2018.
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- 3) **Voulgarakis** et al., Addressing Fuel Consumption biases in Global Fire Models, *iLEAPs Conference*, Oxford, UK, September 2017.
- 4) **Voulgarakis** et al., Model Evaluation and Intercomparison, *REQUA Workshop*, Thessaloniki, Greece, September 2017.
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- 7) **Voulgarakis, A.** et al., Fire impacts on high-altitude atmospheric composition, *COMECAP Meeting*, Thessaloniki, Greece, September 2016.

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- 19) **Voulgarakis A.** et al, Biomass burning influence on atmospheric composition: Earth observation and modelling, *NCEO Atmospheric Composition Workshop*, London, UK, March 2014.
- 20) **Voulgarakis A.**, and M. Kasoar, Local and remote climate effects of short-lived pollutant emissions, *NCAS Composition-Climate Conference*, Exeter, UK, March 2014.
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- 22) **Voulgarakis A.**, Using satellite observations and models to understand processes in the composition-climate system: some examples, *CCMI Workshop*, Boulder, USA, May 2013.
- 23) **Voulgarakis A.**, Wildfires, the composition-climate system, and human health: studying linkages using global modelling, *NCAS Composition-Climate Interaction Meeting*, Cambridge, UK, March 2013.
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- 27) **Voulgarakis A.**, V. Naik at al., Multimodel intercomparison of preindustrial, present day and future OH and methane, *ACITES Meeting*, York, UK, December 2012.
- 28) **Voulgarakis A.**, V. Naik at al., Analysis of present day and future OH and methane lifetime in the ACCMIP simulations, *AGU Fall Meeting*, San Francisco, USA, December 2012.
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tropospheric OH and methane lifetime, *IGAC/SPARC Global Chemistry Climate Modeling and Evaluation Workshop*, Davos, Switzerland, May 2012.

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**38) Voulgarakis, A.,** D.T. Shindell, K. Tsigaridis, O. Pechony, M.E. Marlier and G. Faluvegi, Interannual variability of tropospheric aerosols and gases: exploring biomass burning emissions as a potential driver, *European Geosciences Union (EGU) General Assembly*, Vienna, Austria, April 2011.

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**40) Voulgarakis, A.,** D.T. Shindell, K.W. Bowman, P.J. Telford, J.A. Pyle, A.M. Aghedo and P. Breasicke, Global correlation patterns of ozone and CO from TES observations and model simulations, *EOS Aura Science Team Meeting*, Boulder, USA, September 2010.

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**47) Voulgarakis, A.,** N.H. Savage, P. Braesicke, O.Wild and J.A. Pyle, Interannual variability of tropospheric composition: the influence of changes in emissions, meteorology and clouds, *NCAS Conference*, Bristol, UK, December 2008.

**48) Voulgarakis, A.,** O.Wild and J.A. Pyle, The radiative effect of clouds and other factors affecting photolysis on global and regional tropospheric ozone budgets, *IGAC Conference*, Annecy, France, September 2008.

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July 2008.

**50) Voulgarakis, A.,** N.H. Savage, O.Wild and J.A. Pyle, How is the sensitivity of the tropospheric oxidizing capacity influenced by the effect of clouds on photolysis treatment? *NCAS Conference, Cambridge, UK,* December 2006.

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**52) Voulgarakis, A.,** N.H. Savage and J.A. Pyle, A study of the effect of differing photolysis treatment on tropospheric chemistry simulations using *p*-TOMCAT 3-D chemistry transport model. *European Geosciences Union (EGU) General Assembly, Vienna, Austria, April 2006.*

**53) Voulgarakis, A.,** N.H. Savage and J.A. Pyle, New options for photolysis treatment in *p*-TOMCAT Global Chemistry Transport Model, *Royal Meteorological Society Conference, Exeter, UK, September 2005.*

### **OTHER PUBLICITY:**

- 1) “Firing Up Climate Models”, Article on AGU magazine *EOS*, based partly on interview I gave about wildfires in Earth system models (2020).
- 2) Live appearance on Greek TV news (De Facto show on Creta TV), talking about the newly funded National Network for Climate Change and its Impacts of which I am part (2020).
- 3) “Pyrogeography”, Article in the British magazine *Avaunt* on our newly formed Leverhulme Centre for Wildfires, Environment, and Society, including my interview (2019).
- 4) “The perfect storm fueling New Delhi's deadly pollution”, Article on *CNN*, based partly on interview I gave (2019).
- 5) “The California wildfire could create a climate change death spiral”, Article on British publication *Wired*, based partly on interview I gave (2018).
- 6) “Antarctic scientists begin hunt for sky’s ‘detergent’”, Article on British scientific journal *Nature*, based partly on interview I gave (2018).
- 7) “European pollution helped cause one of India's worst-ever droughts, researchers show”, Article on my group’s work published on *The Independent* (2017).
- 8) Posted article titled “It’s a small world: How air pollution in Europe can affect rainfall in India” to the Grantham Institute’s website, contributed in collaboration with my PhD student Dilshad Shawki (2016).
- 9) Interviewed by the BCC Radio on “Air pollution and health impacts of El Niño and fire” (2014).
- 10) “Using satellite observations and models to understand processes in the composition-climate system, *Invited Science Feature for the International Global Atmospheric Chemistry Newsletter* (2013).
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- 12) Interview and personal portrait in *Kathimerini*, a major Greek newspaper, in the weekly column titled “Πατριδογνωσία”, in which prominent Greek scientists living abroad are interviewed each week (2012).
- 13) “Could Arctic sea-ice retreat drive changes in air pollution levels?”, *NASA GISS Science Brief* (2009).