# StephenPrice

Researcher, Statistician & Data Scientist


## Contact

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## Links

Research site
Google scholar
ResearchGate
GitHub

## Programming

R
bash
Python
SQL

## Modelling

Regression (LM, GLM)
additive (GAM)
mixed-effects
machine learning
spatial

## Awards

UoN Zoology prize
QMUL volunteer of the year
Ofqual recognition awards for innovation and impact

## References

Ofqual, on request
Trent Garner, ZSL

## experience

2019–2021 **Senior Research & Data Analyst** Ofqual

**Innovation:** supported projects across Research, Data & Analytics and Standards teams by bringing innovations and delivering bespoke solutions, e.g. development of a QR code based mark-tracking system.
**Reproducible analytical pipelines:** developed a suite of internal R packages for cleaning, quality-checking, and analysis of Official Statistics and exam grading datasets, including functions & unit tests, documentation & vignettes.
**Data engineering:** wrote R pipelines to join raw datasets and engineer features to support regulation of standards in assessment.
**Interactive applications:** routinely produced interactive R Shiny apps: 4 published apps, 20 internal, 1 private external. Transformed analysis of consultations through use of bespoke internal apps enabling more than 30 users to make informed decisions under pressure.
**Data visualisation:** wrote R package to implement company brand and style in data visualisations. Includes vignettes packed with examples & best practise.

2013–2019 **Research Scientist** UCL & ZSL Institute of Zoology

Investigated the spread and evolution of viruses using genomics, laboratory experiments and field studies. Collaborated with 19 research groups in 16 countries.
**Problem-solving:** iterative experimental design, logistics/planning of field-based projects.
**Data analysis:** from genomics to GIS and citizen science datasets. Routinely used statistical models (LM, GLM, GAM, mixed-effects). Also used machine learning approaches. As a supervisor, collaborator & peer reviewer, I reviewed data summaries and identified patterns in raw data requiring further investigation.
**Method Development:** molecular and cell culture systems to study viruses.
**Leadership:** contributed to or led projects that won £800,000 in funding. Supervised 7 postgraduate and 7 undergraduate students as well as technical staff.
**Publication:** 27 articles in academic journals since 2013 & 2 magazine articles.

2010–2012 **Biodiversity Programme Schools Coordinator** Conserve Me Foundation

Part of a team that created & delivered a 6-week programme of workshops on biodiversity and the environment. Received the QMUL volunteer of the year award.

2009 **Parasitology Research Technician** University of Bristol

Planned and conducted lab experiments & reported results to senior scientists.

2008–2009 **Project Manager** wibfilm

Prepared pitches and proposals, coordinated teams/kit, administered finances.

2003–2004 **Assistant Quality Manager** LB Parkes Ltd

Monitored chemical concentrations and safety records for industrial processes.

1998–1999 **English Teacher** Pamir Public School, Pakistan

Created and delivered a curriculum for 5-16 year olds in a school in an isolated, subsistence-farming community in the Hindu Kush.

## education

2009–2013 **PhD** Epidemiology/Conservation/Population Genetics Queen Mary University of London

*Emergence of a virulent wildlife disease: using spatial epidemiology and phylogenetic methods to reconstruct the spread of amphibian viruses*

2004–2007 **BSc Hons Zoology** University of Nottingham

1st class honours; awarded Zoology prize for top mark in year

# training (selected courses)

**ONS Secure Research Service Accredited Researcher training (2019)**; **Advanced Python** PR Statistics (2018); **Managing Big Data with MySQL** MOOC from Duke University (2018); **Programming for Everybody (Python)** MOOC from University of Michigan (2015); **Grant Writing & Project Management** British Ecological Society (2013); **R Statistical Programming** Institute of Zoology (2011); **ArcGIS** Institute of Zoology (2010)

# presentations & media coverage

- 12 talks at international conferences
- seminars & presentations to academics, stakeholders & the public
- regular presentations at group and departmental meetings
- conceived and supervised production of an animated movie narrated by Stephen Fry for dissemination of research findings to diverse audience
- I promoted my work through specialist and mainstream media, including the New Scientist, BBC radio and national daily newspapers. An overview of my online reach is available via Impact Story.

# publications

## Selected journal articles

Effects of Historic and Projected Climate Change on the Range and Impacts of an Emerging Wildlife Disease
Stephen J. Price, William T. M. Leung, Christopher J. Owen, Robert Puschendorf, Chris Sergeant, Andrew A. Cunningham, Francois Balloux, Trenton W. J. Garner, Richard A. Nichols
Global Change Biology *25.8 (2019) pp. 2648–2660. 2019*

A Quantitative-PCR Based Method to Estimate Ranavirus Viral Load Following Normalisation by Reference to an Ultraconserved Vertebrate Target
William T. M. Leung, Laura Thomas-Walters, Trenton W. J. Garner, Francois Balloux, Chris Durrant, Stephen J. Price
Journal of Virological Methods *249 (Nov. 1, 2017) pp. 147–155. 2017*

From Fish to Frogs and beyond: Impact and Host Range of Emergent Ranaviruses
Stephen J. Price, Ellen Ariel, Alicia Maclaine, Gonçalo M. Rosa, Matthew J. Gray, Jesse L. Brunner, Trenton W. J. Garner
Virology *511 (Nov. 1, 2017) pp. 272–279. 2017*

Comparative Genomics of Amphibian-like Ranaviruses, Nucleocytoplasmic Large DNA Viruses of Poikilotherms
Stephen J. Price
Evolutionary Bioinformatics Online *11 (Suppl 2 2016) pp. 71–82. 2016*

Reconstructing the Emergence of a Lethal Infectious Disease of Wildlife Supports a Key Role for Spread through Translocations by Humans
Stephen J. Price, Trenton W. J. Garner, Andrew A. Cunningham, Tom E. S. Langton, Richard A. Nichols
Proc. R. Soc. B *283.1839 (Sept. 28, 2016) p. 20160952. 2016*

Collapse of Amphibian Communities Due to an Introduced Ranavirus
Stephen J. Price, Trenton W. J. Garner, Richard A. Nichols, Francois Balloux, Cesar Ayres, Amparo Mora-Cabello de Alba, Jaime Bosch
Current Biology *24.21 (Nov. 3, 2014) pp. 2586–2591. 2014*

## Reports

Drivers of Centres' Choice for Vocational and Technical Qualifications
Stephen Price, Aneesa Khan, Beth Black
*Tech. rep., 2020*