

# Thomas Guillerme

email: [guillert@tcd.ie](mailto:guillert@tcd.ie) — Webpage: [tguillerme.github.io](https://tguillerme.github.io) — Twitter: [@TGuillerme](https://twitter.com/TGuillerme)  
GitHub: [TGuillerme](https://github.com/TGuillerme) — Google Scholar: [goo.gl/OP1XQG](https://scholar.google.com/citations?user=goo.gl/OP1XQG) — FigShare: [goo.gl/8fPU7k](https://figshare.com/profile/goo.gl/8fPU7k)  
ORCID: [0000-0003-4325-1275](https://orcid.org/0000-0003-4325-1275) — ResearcherID: [G-9833-2014](https://www.researcherid.com/rid/G-9833-2014)

## RESEARCH INTERESTS

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I am interested in macroevolutionary biology; the stories behind the history of Life and the methodologies with which it is investigated. I am particularly interested in ways of combining classical methods such as descriptive palaeontology with modern bioinformatic tools such as phylogenomics and mathematical modelling.

## ACADEMIC CAREER

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2016 - Present: Research Associate in Martin Brazeau's group  
Faculty of Natural Sciences, Department of Life Sciences  
Silwood Park Campus, Imperial College London, UK

## EDUCATION

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2012 - 2015: PhD in Zoology, Trinity College Dublin  
*Macroevolution with living and fossil species*  
Awarded as it stands.  
<http://dx.doi.org/10.6084/m9.figshare.1583337>

2010 - 2012: MSc in Palaeontology (honours), Université de Montpellier  
2<sup>nd</sup> year project: *Molecular clocks and evolutionary rates among primates: a palaeontological and genomic approach.*  
1<sup>st</sup> year project: *Southern France Upper Cretaceous Theropod teeth variability.*

2007 - 2010: BSc in Biology, Université de Montpellier

## PUBLICATIONS

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Peer reviewed - [Google Scholar profile: Thomas Guillerme](https://scholar.google.com/citations?user=goo.gl/OP1XQG)

- 2016: Kane, A., Healy, K., **Guillerme, T.**, Ruxton, G., and Jackson, A.L. A Recipe for Scavenging - the natural history of a behaviour. *Ecography*, 39:001011, DOI: [10.1111/ecog.02817](https://doi.org/10.1111/ecog.02817)
- 2016: **Guillerme, T.** and Cooper, N. Assessment of available anatomical characters for linking living mammals to fossil taxa in phylogenetic analyses. *Biology Letters*, 12 20151003 DOI: [10.1098/rsbl.2015.1003](https://doi.org/10.1098/rsbl.2015.1003)
- 2016: **Guillerme, T.** and Cooper, N. Effects of missing data on topological inference using a Total Evidence approach. *Molecular Phylogenetics and Evolution* 94:146158, DOI: [10.1016/j.ympev.2015.08.023](https://doi.org/10.1016/j.ympev.2015.08.023)
- 2014: Healy, K., **Guillerme, T.**, Finlay, S., Kane, A., Kelly, S.B.A., McClean, D., Kelly, D.J., Donohue, I., Jackson, A.L. and Cooper, N. Ecology and mode-of-life explain lifespan variation in birds and mammals. *Proceedings of the Royal Society B*, 281(1784). DOI: [10.1098/rspb.2014.0298](https://doi.org/10.1098/rspb.2014.0298)

In review/in press - see my [publications](#) page.

## AWARDS AND GRANTS

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- 2017: Royal Society International Scientific Seminar Award (£5000)  
co-awarded with Prof. Phillip Donoghue FRS and Dr Natalie Cooper  
2014: BES Photo Competition Student Prize (Ecology and Society)  
2012: Trinity Postgraduate Research Studentship (€46800)

## COMPUTER SKILLS

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- Coding: **R\***, **C\***, C++, **Bash\***, HTML, **L<sup>A</sup>T<sub>E</sub>X\***, **git\***
- Phylogenetics: PAUP, **MrBayes\***, **BEAST\***, RAxML, PhyloBayes, CoEvol  
MACSE, MAFFT, SEAvew, Tracer, Mesquite, R{ape}  
R{phytools}, R{diversitree}, R{MCMCg1mm}, R{caper}, ...
- Morphometrics: R{geomorph}, MorphoJ, TPS
- Graphics: Adobe Illustrator, Adobe Photoshop, Gimp, Inkscape

\* Skills taught at workshops or courses (see below)

### Developed software:

- R{mulTree}: Performs MCMCg1mm on multiple phylogenetic trees. *Role: main author.*  
GitHub page: [github.com/TGuillaume/mulTree](https://github.com/TGuillaume/mulTree)
- R{dispRity}: Measuring disparity in R. *Role: main author.*  
GitHub page: [github.com/TGuillaume/dispRity](https://github.com/TGuillaume/dispRity)
- R{SIDER}: Stable Isotope Discrimination Estimation in R. *Role: co-author.*  
GitHub page: [github.com/healyke/SIDER](https://github.com/healyke/SIDER)
- Morphy: A C library for morphological characters phylogenetic analysis. *Role: co-author.*  
GitHub page: [github.com/mbrazeau/Morphy](https://github.com/mbrazeau/Morphy)

## PRESENTATIONS

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### Invited seminars

- 2017: *Silwood Social Seminars Series* - Imperial College London, UK  
Talk: Multidimensionality in morphology.
- 2016: *Palaeobiology Discussion Group* - University of Bristol, UK  
Talk: Do we still need morphological characters data?

### International Conferences

- 2016: *BES Macro SIG meeting 2016* - Oxford, UK  
Talk: Moving away from the consensus in Phylogenetic Comparative Methods  
Available here: [goo.gl/1PsRfi](https://goo.gl/1PsRfi)
- 2016: *Evolution 2016* - Austin TX, USA  
*Palaeobiology/macroevolution session chair*  
Talk: New approaches to disparity-through-time analysis  
Available here: [goo.gl/nnSpVS](https://goo.gl/nnSpVS)
- 2015: *Systematics Association Biennial* - Oxford, UK  
Talk: Total evidence phylogenies, the data issue  
Available here: [goo.gl/MVwMTY](https://goo.gl/MVwMTY)
- 2014: *SVP annual meeting* - Berlin, Germany  
Symposium presentation (**invited talk**): *Putting fossils in trees*  
Talk: Total evidence phylogenies and missing data  
Available here: [goo.gl/CBqSVJ](https://goo.gl/CBqSVJ)
- 2014: *BES Macroecology SIG meeting* - University of Nottingham, UK  
Talk: Trees with fossil and living species: the data issue  
Available here: [goo.gl/Sdcxon](https://goo.gl/Sdcxon)
- 2014: *Evolution 2014* - Raleigh NC, USA  
Symposium presentation: *Ernst Mayr Symposium*  
Talk: Total evidence phylogenies: the missing data issue  
Available here: [goo.gl/oPfHZE](https://goo.gl/oPfHZE)
- 2014: *Challenges in Macroecology: Scaling the Time Barrier* - Natural History Museum  
London, UK  
Talk: Trees with fossil and living species: the missing data issue  
Available here: [goo.gl/c1RBER](https://goo.gl/c1RBER)
- 2013: *European Society for Evolutionary Biology Congress* - Lisbon, Portugal  
Poster: Combining fossils and molecular phylogenies  
Available here: [goo.gl/3HcRGH](https://goo.gl/3HcRGH)
- 2013: *11th International Mammalogical Congress* - Queen's University, Belfast, UK  
Poster: Combining fossils and molecular phylogenies  
Available here: [goo.gl/3HcRGH](https://goo.gl/3HcRGH)

## PROFESSIONAL SERVICE

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**Reviewing:** *Biology Letters* ([Top reviewer for 2016](#)); *International Journal of Primatology*; *Molecular Phylogenetics and Evolution*; *The Royal Society: Interface focus*, *Systematic Biology*.

### Workshops:

- 2014: Tip-Dating workshop — *helper*  
Nicholas Matzke & April Wright, SVP Annual meeting - Berlin
- 2014: Software Carpentry Bootcamp - R and UNIX — *helper*  
Devasena Inupakutika & Aur Saraf, University of Nottingham

### Academic memberships:

- 2015-present: Member of the Systematic Association
- 2014-present: Member of the Society of Vertebrate Palaeontology
- 2013-present: Member of Society of Systematic Biologists
- 2013-present: British Ecological Society (BES) including Macroecology Special Interest Group

### Departmental services:

- 2017: Silwood [Ecology and Evolution Seminar Series](#) organiser
- 2016-present: Biweekly Silwood Park Campus computer workshops organiser (L<sup>A</sup>T<sub>E</sub>X, version control, webpages, R packages, etc.)
- 2013-2015: Trinity Zoology Postgraduate student social committee chair

## TEACHING

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### Academia

All my teaching material is available on the following [GitHub page](#).

- 2017: MSc students: C for biologists  
*Co-teacher*, 30 hours, Imperial College - UK
- 2017: MSc students: Phylogenetic Comparative Methods  
*Teaching assistant*, 6 hours, Natural History Museum - UK
- 2017: MSc students: morphometrics  
*Co-teacher*, 6 hours, Natural History Museum - UK
- 2016: MSc students: Rocks 'n' clocks (including a MrBayes practical)  
*Teacher*, 6 hours, Imperial College London - UK
- 2014: MSc students: Timing Evolution  
*Teacher*, 6 hours, Trinity College Dublin - IE
- 2014 : Software Carpentry Bootcamp - R and UNIX  
*Helper*, full day, University of Nottingham - UK
- 2013-14: 2<sup>nd</sup> year MSc students: Statistics with R  
*Teaching assistant*, full semester, Trinity College Dublin - IE
- 2013-14: 4<sup>th</sup> year undergraduate students: Evolution  
*Teaching assistant*, full semester, Trinity College Dublin - IE
- 2012-13: 4<sup>th</sup> year undergraduate students: Statistics with R  
*Teaching assistant*, full semester, Trinity College Dublin - IE
- 2012-13: 1<sup>st</sup> year undergraduate students: Introduction to Biodiversity Evolution and the Environment  
*Teaching assistant*, full semester, Trinity College Dublin - IE

### Student supervision

- 2017: Danielle Moraviec & Hayley Swalund (Imperial College London - MSc mini projects)
- 2016: Victoria Stanley Tsui (Imperial College London - MSc) *A preliminary study on the suture morphology of skull roofs in early gnathostomes and their ancestors*. - Co-supervised with Martin Brazeau.
- 2016: Asiem Sanyal (Imperial College London - MSc mini project)
- 2014-2015: Luke Hannon (Trinity College Dublin -4<sup>th</sup> year project) *Orbit size and nocturnality in living and fossil primates*. - Co-supervised with Natalie Cooper.
- 2013-2014: Maura Judge (Trinity College Dublin -4<sup>th</sup> year project) *Bite force and diet in mammals*. - Co-supervised with Natalie Cooper.

## FIELDWORK AND DATA COLLECTION

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- 2013-14: Museum data collection: Smithsonian Institute Natural History Museum (Washington DC), American Museum of Natural History (New York), Museum of Comparative Zoology (Cambridge, MA), Muséum National d'Histoire Naturelle (Paris)
- 2011-12: Excavations in Cruzy, France  
Southern France, Continental Cretaceous
- 2011: Excavations in Krasiejów, Poland  
Southern Poland, Continental Trias
- 2009-10: Excavations in Espéraza, France - Site fore-person  
Southern France, Continental Cretaceous

## PUBLIC ENGAGEMENT AND OUTREACH

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– Regular contributor to [EcoEvo@TCD](#) blog; rated [best Irish Science and Technology blog \(2014\)](#) and [Bronze Award Irish Blog \(2015\)](#).

- Complete list available here: [goo.gl/MAq9oA](https://goo.gl/MAq9oA)
- Featured posts: [How do lego cars evolve?](#); [If you please – draw me a dino...](#); [The more the better?](#).
- [Threesis video](#) (*early stage* thesis project explained in three minutes – winner of the NERD club threesis award 2013).

#### Outreach Events

- 2015 & 2014 & 2013: Trinity College Dublin Zoology Department, Researcher's night – *participant*
- 2014: 1<sup>st</sup> Soapbox Science Ireland – *helper*
- 2014: "What can we learn from skeletons", comparative anatomy practical – *Co-organiser*
- 2013: Trinity College Zoology Museum guided tours – *tour guide*
- 2010: Introduction to palaeontological excavations, Musée des Dinosauriens (FR) – *animator*