

University of Groningen

What fruits can we get from this tree?

Laudanno, Giovanni

DOI:
[10.33612/diss.155031292](https://doi.org/10.33612/diss.155031292)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2021

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Laudanno, G. (2021). *What fruits can we get from this tree? A journey in phylogenetic inference through likelihood modeling*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.155031292>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

PROPOSITIONS

accompanying the dissertation

WHAT FRUITS CAN WE GET FROM THIS TREE?

by

Giovanni Laudanno

1. Most existing macroevolutionary models rely on the hypothesis that the sub-components of trees do not interact, therefore letting the likelihood be a factorization of terms that comes independently from the tree's edges and nodes. However, such a hypothesis is not always valid. (Chapter 2, this thesis)
2. The BD process is extremely unlikely to reproduce the high degree of branching times clustering present in MBD phylogenies. (Chapter 3, this thesis)
3. Identifying shifts in diversification rates is a non-trivial model selection exercise where one has to choose whether shifts in now-extinct lineages are taken into account or not. Hence, the new framework also resolves the recent debate on such unobserved shifts. (Chapter 4, this thesis)
4. The inference error we aim to quantify is not of stochastic nature. Stochastic errors are usually non-directional. We, instead, aim to expose the bias due to the mismatch between a generative model (that has generated the phylogeny) and the model(s) used in the actual inference. (Chapter 5, this thesis)
5. To a man with a hammer, everything looks like a nail. (Mark Twain)
6. If I were to suggest that between the Earth and Mars there is a china teapot revolving about the sun in an elliptical orbit, nobody would be able to disprove my assertion provided I were careful to add that the teapot is too small to be revealed even by our most powerful telescopes. (Bertrand Russell)
7. I learned very early the difference between knowing the name of something and knowing something. (Richard P. Feynman)
8. Science is built up of facts, as a house is with stones. But a collection of facts is no more a science than a heap of stones is a house. (Jules Henri Poincaré)
9. I learned then what science was about: it was patience. (Richard P. Feynman)
10. It gets easier. Every day it gets a little easier, but you gotta do it every day. That's the hard part, but it does get easier. (The Baboon from Bojack Horseman)