

Tomás Revilla

Curriculum Vitae

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Información personal

Nombre completo Tomás Augusto Revilla Rimbach
Lugar y fecha de nacimiento 16 de Septiembre 1973, Essen, Alemania
Nacionalidad Venezolano

Educación

1997 **Licenciado en Biología**, *Universidad Central de Venezuela*, Caracas, Venezuela
2000 **M.S. en Ecología**, *Universidad Central Venezuela*, Caracas, Venezuela
2010 **Ph.D. en Biología**, *Universidad de Groningen*, Groningen, Países Bajos

Becas

2004 Programa ALBAN, Becas de Alto Nivel para América Latina de la Unión Europea. Declinado
2004 Beca doctoral, Computational Life Sciences Programme de la Netherlands Organization for Scientific Research (NWO)

Experiencia laboral

1993–1999 **Preparaduría de Físicoquímica, Bioestadística, Evolución y Ecología de Poblaciones**, *Escuela de Biología, Facultad de Ciencias, Universidad Central de Venezuela*, Caracas, Venezuela
1998–1999 **Docencia de Bioestadística y Temas de Físicoquímica Biológica**, *Escuela de Biología, Facultad de Ciencias, Universidad Central de Venezuela*, Caracas, Venezuela
2000–2001 **Asistencia en el proyecto *Dinámica de Enfermedades Infecciosas en Ambientes Heterogéneos***, Director: Dr. Diego J. Rodríguez, *Laboratorio de Biología Teórica, Instituto de Zoología Tropical, Universidad Central de Venezuela*, Caracas, Venezuela
2001 **Consultoría estadística**, *Organon Venezolana S.A.*, Caracas, Venezuela
2005–2009 **Asistente de investigación en el proyecto *The emergence of biocomplexity: a steady state between physical and biotic evolution?***, Director Dr. Franz J. Weissing, *Theoretical Biology Group, Faculty of Mathematics and Natural Sciences, Universidad de Groningen*, Groningen, Países Bajos
2009–2010 **Asistente de investigación en el proyecto *Testing the metabolic theory of ecology with the help of temperature controlled phytoplankton experiments***, Director: Dr. Franz J. Weissing, *Theoretical Biology Group, Faculty of Mathematics and Natural Sciences, Universidad de Groningen*, Groningen, Países Bajos
2001–2011 **Investigación y docencia**, *Instituto de Zoología y Ecología Tropical (IZET), Facultad de Ciencias, Universidad Central de Venezuela*, Caracas, Venezuela
2011–2014 **Investigador**, *Station D'Ecologie Experimentale du CNRS à Moulis*, Moulis, Francia

- 2015–presente **Investigador**, *Institute of Entomology, Academy of Sciences of the Czech Republic, České Budějovice, República Checa*
- 2018–presente **Instructor**, *Departament of Mathematics, Faculty of Natural Sciences, Universidad de Bohemia del Sur, České Budějovice, República Checa*

Publicaciones en revistas arbitradas

- T. A. Revilla. Resource Competition in Stage-structured Populations. *Journal of Theoretical Biology*, 204(2):289–298, 2000.
- T. A. Revilla. Effects of Intraguild Predation on Resource Competition. *Journal of Theoretical Biology*, 214(1):49–62, 2002.
- T. A. Revilla and G. Garcia-Ramos. Fighting a virus with a virus: a dynamic model for HIV-1 therapy. *Mathematical Biosciences*, 185(2):191–203, 2003.
- L. F. Chaves, M. J. Hernandez, T. A. Revilla, D. J. Rodriguez, and J. E. Rabinovich. Mortality profiles of *Rhodnius prolixus* (Heteroptera: Reduviidae), vector of Chagas disease. *Acta Tropica*, 92(2):119–125, 2004.
- T. A. Revilla and F. J. Weissing. Nonequilibrium coexistence in a competition model with nutrient storage. *Ecology*, 89(3):865–877, 2008.
- F. Encinas-Viso, T. A. Revilla, and R. S. Etienne. Phenology drives mutualistic network structure and diversity. *Ecology Letters*, 15(3):198–208, 2012.
- T. A. Revilla, G. F. Veen, M. B. M. B. Eppinga, and F. J. Weissing. Plant-soil feedbacks and the coexistence of competing plants. *Theoretical Ecology*, 6(2):99–113, 2012.
- F. Encinas-Viso, T. A. Revilla, and R. S. Etienne. Shifts in pollinator population structure may jeopardize pollination service. *Journal of Theoretical Biology*, 352:24–30, 2014.
- F. Encinas-Viso, T. A. Revilla, E. van Velzen, and R. S. Etienne. Frugivores and cheap fruits make fruiting fruitful. *Journal of Evolutionary Biology*, 27(2):313–324, 2014.
- T. A. Revilla, F. Encinas-Viso, and M. Loreau. (A bit) Earlier or later is always better: Phenological shifts in consumer-resource interactions. *Theoretical Ecology*, 7(2):149–162, 2014.
- T. A. Revilla. Numerical responses in resource-based mutualisms: a time scale approach. *Journal of Theoretical Biology*, 378:39–46, 2015.
- T. A. Revilla and F. Encinas-Viso. Dynamical transitions in a pollination–herbivory interaction: a conflict between mutualism and antagonism. *PLoS ONE*, 10(2):e0117964, 2015.
- T. A. Revilla, F. Encinas-Viso, and M. Loreau. Robustness of mutualistic networks under phenological change and habitat destruction. *Oikos*, 124(1):22–32, 2015.
- T. A. Revilla and F. Encinas-Viso. Ecología y Evolución de la Endozoocoria. *Acta Biologica Venezuelica*, 35(2):187–215, 2016.
- T. A. Revilla and V. Křivan. Pollinator foraging adaptation and the coexistence of competing plants. *PLoS ONE*, 11(8):e0160076, 2016.
- T. A. Revilla and V. Křivan. Competition, trait-mediated facilitation, and the structure of plant-pollinator communities. *Journal of Theoretical Biology*, 440:42–57, 2018.

V. Křivan and T. A. Revilla. Plant coexistence mediated by adaptive foraging preferences of exploiters or mutualists. *Journal of Theoretical Biology*, 480:112–128, 2019.

T. A. Revilla, T. Marcou, and V. Křivan. Plant competition under simultaneous adaptation by herbivores and pollinators. *Ecological Modelling*, 455:109634, 2021.

N. A. Pardikes, T. A. Revilla, C-H. Lue, M. Thierry, D. Souto-Vilarós, and J. Hrček. Effects of phenological mismatch under warming are modified by community context. *Global Change Biology*, 28(13):4013–4026, 2022.

T. A. Revilla and V. Křivan. Prey–predator dynamics with adaptive protection mutualism. *Applied Mathematics and Computation*, 433:127368, 2022.

T. E. Galanthay, V. Křivan, R. Cressman, and T. A. Revilla. Evolution of aggression in consumer-resource models. *Dynamic Games and Applications*, 13:1049–1065, 2023.

T. Marcou, T. A. Revilla, and V. Křivan. Evolutionary emergence of plant and pollinator polymorphisms in consumer-resource mutualisms. *Journal of Theoretical Biology*, 594:111911, 2024.

D. Romero-Mujalli, L.I.R. Fuchs, M. Haase, J.-P. Hildebrandt, F.J. Weissing, and T.A. Revilla. Emergence of phenotypic plasticity through epigenetic mechanisms. *Evolution Letters*, 8(4):561–574, 2024.

Otras publicaciones

📖 T.A. Revilla. "Multispecies Resource Competition", *PhD Thesis*, University of Groningen. 2010.

📖 T.A. Revilla. "Changement climatique: synchronisation des espèces et modélisation", In *Ariège, terre de science, Collection Petit Illustré*. (19), pp. 16. La Dépêche du Midi / CNRS, 2013.

📖 T.A. Revilla y Encinas-Viso, F. "Ecología y Evolución de la Endozoocoria", En *Modelos y Simulaciones Biológicas: Ecología y Evolución*. Cipriani, R. & de Vladar, H. (ed.). Amazon Createspace. 2015.

📖 Arnoldi J.-F., Haegeman B., Revilla T.A. y Loreau M. "Particularity of Universal resilience patterns in complex networks". *bioRxiv*. 2016.

Charlas y Posters

- 1999 **Charla: Competencia por un recurso en una población con estructura de etapas**, III Congreso Venezolano de Ecología, Puerto Ordaz, Venezuela
- 2000 **Charla: Condiciones de coexistencia en redes tróficas con omnivoría: un modelo para tres especies**, L Convención Anual de la Asociación Venezolana para el Avance de la Ciencia, Caracas, Venezuela
- 2001 **Charla: Combatiendo virus con virus: un modelo dinámico**, IV Congreso Venezolano de Ecología, Merida, Venezuela
- 2006 **Charla: Multispecies resource competition: The variable storage model**, Annual meeting of the Dutch Society of Theoretical Ecology, Schorl, Países Bajos
- 2006 **Poster: Integrating Resource and Metabolism Based Approaches to Ecology: A Simple Food Chain Model**, Gordon Research Conference on "The metabolic basis of ecology", Lewiston ME, Estados Unidos de América
- 2006 **Charla: Multispecies competition models with resource storage**, CEES Symposium on "Experimental and theoretical Approaches to biodiversity", Groningen, Países Bajos
- 2007 **Charla: Stability properties of competition models: a comparison**, Annual Verweij Meeting, Lunteren, Países Bajos

- 2007 **Poster: *Non-equilibrium dynamics of a resource competition model with nutrient storage***, EPSRC/BICS Workshop “Mathematical Models and Experimental Microbial Systems: Tools for Studying Evolution”, Bath, Reino Unido
- 2007 **Charla**, CEES Symposium on “Integrative ecology at different organization levels”, Groningen, Países Bajos
- 2008 **Poster: *Non-equilibrium dynamics of a resource competition model with nutrient storage***, NERN Annual Meeting, Lunteren, Países Bajos
- 2009 **Charla: *Integrating metabolic and resource competition theories: simple modelling approaches***, Mathematical Models in Ecology and Evolution, Bristol, Reino Unido
- 2009 **Poster: *Plant-soil feedbacks and competition dynamics***, 94th Annual Meeting of the Ecological Society of America, Albuquerque NM, Estados Unidos de América
- 2011 **Charla: *Evolutionary ecology of seed dispersal by frugivores: From exploitation to mutualism***, 96th Annual Meeting of the Ecological Society of America, Austin TX, Estados Unidos de América
- 2014 **Charla: *Robustness of mutualistic networks under phenological change and habitat destruction***, 99th Annual Meeting of the Ecological Society of America, Sacramento CA, Estados Unidos de América
- 2014 **Charla: *Dynamical transitions in a pollination-herbivory interaction: a conflict between mutualism and antagonism***, Joint Annual Meeting Société Française d'Écologie and British Ecological Society, Lille, Francia
- 2015 **Charla: *The Evolutionary Ecology of Endozoochory***, BIOMATH 2015: International Conference on Mathematical Methods and Models in Biosciences, Blagoevgrad, Bulgaria
- 2015 **Poster: *Pollinator foraging flexibility and the coexistence of competing plants***, Mathematical Models in Ecology and Evolution 2015, Paris, Francia
- 2015 **Charla: *Pollinator foraging flexibility and the coexistence of competing plants***, 5th conference of the Czech Society for Ecology, České Budějovice, República Checa
- 2016 **Charla: *Pollinator foraging flexibility and the coexistence of competing plants***, Conflict, Competition, Cooperation & Complexity: Using Evolutionary Game Theory to model realistic populations, Plön, Alemania
- 2016 **Charla: *Pollinator foraging adaptation and the coexistence of competing plants***, Conflict, Competition, Cooperation & Complexity: Using Evolutionary Game Theory to model realistic populations, Praga, República Checa
- 2018 **Charla: *Plant coexistence under adaptive exploitation or mutualism***, Conflict, Competition, Cooperation & Complexity: Using Evolutionary Game Theory to model realistic populations, Turín, Italia
- 2024 **Charla: *A model for plant–pollinator interaction with separation of pollen and nectar dynamics***, Mathematical Models in Ecology and Evolution 2024, Viena, Austria

Otras actividades

- 1999 Comité local y moderador en la Iberoamerican School of Astrobiology (IASA), Centro de Convenciones del Instituto de Estudios Avanzados (IDEA), Caracas, Venezuela. Organizado por The Abdus Salam International Centre for Theoretical Physics, (Trieste - Italia).
- 2000 Coordinador de la sesión de trabajos orales en Biología Teórica I, L Convención Anual de la Asociación Venezolana para el Avance de la Ciencia (AsoVAC), Universidad Simón Bolívar, Caracas, Venezuela.
- Investigador Invitado Laboratorio de Biología Teórica del Instituto de Zoología Tropical, Universidad Central de Venezuela, Caracas, Venezuela.

Referee para las revistas *The American Naturalist*, *Journal of Theoretical Biology*, *Theoretical Ecology*, *Theoretical Population Biology*, *Oikos*, *Journal of Biological Dynamics*, *Marine Ecology Progress Series*, *Journal of Mathematical Biology*, *Ecological Modelling*, *Applied Mathematical Modelling*, *New Phytologist* y *Axios Review*.

Destrezas

Idiomas Español (nativo), Inglés (avanzado), Alemán y Francés (básico).
Informática GNU/Linux, Unix. Programación en C, Matlab, Octave, R. Tipografía con L^AT_EX/LyX y HTML.
Otras Modelación matemática, análisis numérico, estadística, docencia y mentoría.

Referencias personales

Dr. Franz J. Wessing **Professor**, *University of Groningen*, Groningen, The Netherlands
<https://www.rug.nl/staff/f.j.weissing>

Dr. Rampal S. Etienne **Professor**, *University of Groningen*, Groningen, The Netherlands
<https://www.rug.nl/staff/r.s.etienne>

Dr. Michel Loreau **Professor**, *Station d'Ecologie Expérimentale du CNRS*, Moulis, France
<https://sete-moulis-cnrs.fr/fr/recherches/ctmb/equipe/item/179-loreau-michel>

Dr. Vlastimil Krivan **Professor**, *Czech Academy of Sciences*, České Budějovice, Czech Republic
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