

## José Iriarte-Díaz

Doctoral Candidate  
Department of Ecology and Evolutionary Biology  
Brown University  
80 Waterman st.  
Providence, RI 02912, U.S.A.

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### Education

- 2002 – present PhD Ecology and Evolutionary Biology, Brown University  
(defense expected in 2008)
- 2000 – 2003 MSc Ecology and Evolutionary Biology, Universidad de Chile
- 1995 – 1998 Licenciatura en Ciencias mención Biología, Universidad de Chile (equivalent to B.Sc.)
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### Teaching experience

- 2004 – 2006 Brown University. Teaching assistant for *Human Morphology* (BI 181). Course directors: Beth Brainerd, Steve Gatesy and Dale Ritter
- 2003 – 2004 Brown University. Teaching assistant for *Comparative Biology of Vertebrates* (BI 188). Course director: Christine Janis
- 2002 Brown University. Teaching assistant for *Biological design: structural architecture of organisms* (BI 040). Course director: Sharon Swartz
- 2001 Universidad de Chile. Guest lecturer ('Terrestrial locomotion in Vertebrates') for *Vertebrate Biology* (EC410) Course director: Fernando Novoa
- 2000 – 2001 Universidad de Chile. Lecturer for *Biostatistics* (EC530). Course director: Mauricio Canals
- 1999 Universidad de Chile. Teaching assistant for *Biostatistics* (EC530). Course director: Mauricio Canals
- 1996 Universidad de Chile. Teaching assistant for *Developmental biology* (BC220). Course director: Juan Fernández
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### Publications

- Iriarte-Díaz, J.** & Swartz, S. M. (in preparation) Kinematics of the slow turning maneuvering in the fruit bat *Cynopterus brachyotis*. To be submitted to *Journal of Experimental Biology*.
- Iriarte-Díaz, J.**, Bozinovic, F. & Vasquez, R. A. (2006) What explains the trot-gallop transition in a small mammal? *Journal of Experimental Biology* 209 (20): 4061-4066.

- Xiaodong, T., **Iriarte-Diaz, J.**, Middleton, K., Galvao, R., Israeli, E., Roemer, A., Sullivan, A., Song, A., Swartz, S. M. & Breuer, K. (2006) Direct measurements of the kinematics and dynamics of bat flight. *Bioinspiration & Biomimetics*, 1: S10-S18.
- Canals, M., Atala, C., Grossi, B. & **Iriarte-Diaz, J.** (2005). Relative size of hearts and lungs of small bats. *Acta Chiropterologica* 7 (1): 65-72.
- Canals, M., Grossi, B., **Iriarte-Diaz, J.** & Veloso, C. (2005). Biomechanical and ecological relationships of wing morphology of eight Chilean bats. *Revista Chilena de Historia Natural* 78 (2): 215-227.
- Saavedra, B., Quiroz, D., **Iriarte, J.** (2004). Past and present: small mammals of Isla Mocha (Chile). *Mammalian Biology* 68 (6): 365-371.
- Iriarte-Diaz, J.** (2002). Differential scaling of locomotor performance in small and large terrestrial mammals. *Journal of Experimental Biology* 205 (18): 2897-2908.
- Iriarte-Diaz, J.**, Novoa, F. F. & Canals, M.. (2002). Comparative wing morphology of two species of Chilean bats *Tadarida brasiliensis* and *Myotis chiloensis*, and their biomechanic consequences. *Acta Theriologica* 47 (2): 193-200.
- Bacigalupe, L. D., **Iriarte-Diaz, J.** & Bozinovic, F. (2002) Functional morphology and geographic variation in the digging apparatus of cururos (*Spalacopus cyanus*, octodontidae). *Journal of Mammalogy* 83 (1): 145-152.
- Canals, M., **Iriarte-Diaz, J.**, Olivares, R. & Novoa, F. F. (2001) Comparación de la morfología alar de los quirópteros *Tadarida brasiliensis* (Chiroptera: Molossidae) y *Myotis chiloensis* (Chiroptera: Vespertilionidae), representantes de dos diferentes patrones de vuelo. *Revista Chilena Historia Natural* 74 (3): 699-704.

## Meeting presentations

- Iriarte-Diaz, J.** (2007) The effect of artificial loads on the straight flight performance of fruit bats. Annual meeting of the Society of Integrative and Comparative Biology, Phoenix, AZ.
- Swartz, S. M., **Iriarte-Diaz, J.**, Riskin, D., Song, A., Tian, X., Willis, D. J. & Breuer, K. (2007) Wing structure and the aerodynamic basis of flight in bats. 45<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, NV.
- Tian, X., **Iriarte, J.**, Middleton, K., Galvao, R., Israeli, E.\*, Roemer, A., Sullivan, A., Song, A., Swartz, S. & Breuer, K. (2006) Direct measurements of the kinematics and dynamics of bat flight. 36<sup>th</sup> AIAA Fluid Dynamics Conference and 24<sup>th</sup> Applied Aerodynamics Conference. San Francisco, CA.
- Swartz, S.M., Galvao, R., **Iriarte-Diaz, J.**, Israeli, E., Middleton, K., Roemer, R., Tian, X. & Breuer, K. (2006) Unique characteristics of aerodynamics of bat flight evidence from direct visualization of patterns of airflow in the wakes of naturally flying bats. Annual meeting of the Society of Integrative and Comparative Biology. Orlando, FL. [Abstract in *Integrative and Comparative Biology* (2005) 45 (6): 1080]
- Iriarte-Diaz, J.**, Swartz, S. M. & Breuer, K. S. (2005) Kinematics of turning maneuvering in the Lesser Short-nosed Fruit Bat (*Cynopterus brachyotis*). 35<sup>th</sup> annual North American Symposium of Bat Research. Sacramento, CA.

- Iriarte-Díaz, J.** & Lee, M. –M. (2005) Kinematics of slow turning maneuvering in bats. Annual Meeting Society of Integrative and Comparative Biology, San Diego. [Abstract in *Integrative and Comparative Biology* (2004) 44 (6): 575]
- Swartz, S.M., Middleton, K.M., **Iriarte-Díaz, J.**, Lee, M., Wofford, J.M.\*, Breuer, K.S. & Ritter, D.A. (2005) Can bats actively control the mechanical properties of the wing membrane?. Annual Meeting Society of Integrative and Comparative Biology. San Diego, CA. [Abstract in *Integrative and Comparative Biology* (2004) 44 (6): 751]
- Iriarte-Díaz, J.**, Vásquez, R. A. & Bozinovic, F. (2004) Trot-gallop transition in a small mammal. Annual Meeting Society of Integrative and Comparative Biology. New Orleans. [Abstract in *Integrative and Comparative Biology* (2003) 43 (6): 1030]
- Vargas, A. & **Iriarte-Díaz, J.** (2002) Predator avoidance and body size reduction in the evolution of bird ancestors. I Congreso Latinoamericano de Paleontología de Vertebrados, Santiago, Chile.
- Iriarte-Díaz, J.** (2002) Differential scaling in locomotor performance in small and large terrestrial mammals. SICB, Division of Vertebrate Morphology, Northeastern Regional Meeting. Cambridge, MA
- Iriarte-Díaz, J.** (2001) Análisis comparado del desempeño locomotor de mamíferos terrestres y su relación con el tipo de hábitat. X Reunión Anual de la Sociedad de Ecología de Chile y I Reunión Binacional Chileno-Argentina de Ecología, Bariloche, Argentina
- Bozinovic, F., Meynard, C., **Iriarte-Díaz, J.** & Vásquez, R. A. (2001) Rol de la masa corporal sobre la energética del forrajeo y la conducta de escape antidepredatoria en pequeños mamíferos. X Reunión Anual de la Sociedad de Ecología de Chile y I Reunión Binacional Chileno-Argentina de Ecología, Bariloche, Argentina
- Cecchi, C., **Iriarte-Díaz, J.**, Saavedra, B., Veloso, C. & Vásquez, R. A. (2001) Efecto materno, vía condición de la lactancia, sobre rasgos morfológicos y conductuales en *Octodon degus*. X Reunión Anual de la Sociedad de Ecología de Chile y I Reunión Binacional Chileno-Argentina de Ecología, Bariloche, Argentina
- Vásquez, R. A., **Iriarte, J.**, Sartori, D., Rodríguez-Gironés, M. A. & Veloso, C. (2000) Reconocimiento de parentesco y vigilancia cooperativa en el roedor caviomorfo *Octodon degus*. VIII Congreso Nacional (Español) y V Congreso Iberoamericano de Etología, Universidad de Granada, España [Abstract en *Libro de resúmenes VIII Congreso Nacional (Español) y V Iberoamericano de Etología*: 36]
- Sartori, D, **Iriarte, J.**, Cecchi, C., Veloso, C. & Vásquez, R. A. (2000) Reconocimiento de parentesco en el roedor caviomorfo *Octodon degus*. IX Reunión Anual de la Sociedad de Ecología de Chile, Concepción. [Abstract in *Biological Research* (2000) 33: R53]
- Iriarte-Díaz, J.** & Canals, M. (2000) Predictores morfológicos del desempeño locomotor en mamíferos terrestres. XLIII Reunión Anual de la Sociedad de Biología de Chile, Pucón. [Abstract in *Biological Research* (2000) 33: R75]
- Iriarte, J.**, Atala, C., Novoa, F. F. & Canals, M. (1999) Morfometría comparada de dos especies de murciélagos chilenos y su correlación con la conducta de vuelo. XLII Reunión Anual de la Sociedad de Biología de Chile, Pucón. [Abstract in *Biological Research* (1999) 32: R151]

- Iriarte, J.** (1998) Escalamiento diferencial de la velocidad máxima estandarizada en mamíferos terrestres. XLI Reunión Anual de la Sociedad de Biología de Chile, Pucón. [Abstract in *Noticiero de Biología* (1998) 6: 119]
- Iriarte, J.** (1998) Escalamiento diferencial de una velocidad máxima estandarizada respecto a la masa corporal en mamíferos terrestres. VII Congreso Argentino de Paleontología y Paleoestratigrafía, Bahía Blanca, Argentina. [Abstract in *Actas VII Congreso Argentino de Paleontología y Paleoestratigrafía*: 109].
- Iriarte, J.**, Moreno, K., Rubilar, D. & Vargas, A. (1998) A titanosaurid from quebrada La Higuera (late cretaceous), III Region, Chile. XIV Jornadas Argentinas de Paleontología de Vertebrados, Neuquén, Argentina. [Abstract in *Actas XIV Jornadas Argentinas de Paleontología de Vertebrados*: 32].

### Invited seminars

- Iriarte-Diaz, J.** (2006) Bailarines en la oscuridad: la biomecánica y aerodinámica del vuelo en murciélagos. Departamento de Ciencias Ecológicas, Facultad de Ciencias, Universidad de Chile.

### Honors and awards

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| 2007 | John G. Peterson Fellow, Brown University   |
| 2007 | Dean's Teaching Excellence Award, The Warren Alpert Medical School of Brown University  |
| 2001 | Partial Financing of thesis grant by Departamento de Postgrado y Postítulo of Vicerrectoría de Asuntos Académicos, Universidad de Chile |
| 1998 | Academic Excellence Scholarship, Facultad de Ciencias, Universidad de Chile   |

### Research experience

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| 2001        | <p>Research assistant</p> <p><i>Use of time and energy of small endotherms in natural conditions: physiological constraints, behavioral processes, and ecological consequences</i> (Francisco Bozinovic, PI)</p> <p>Pontificia Universidad Católica de Chile</p> |
| 1999 – 2001 | <p>Research assistant</p> <p><i>Plasticity and trade-offs in behavioral ecology: use of information, time and energy in fluctuating environments</i> (Rodrigo A. Vásquez, PI)</p> <p>Facultad de Ciencias, Universidad de Chile</p>                              |

### Courses and workshops

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| 2001 | <p>Workshop <i>Geometric morphometrics: conceptual bases and applications</i>, dictated by F. James Rohlf (SUNY, Stony Brook), Dennis Slice (SUNY, Stony Brook) and Dean Adams (Iowa State University). Facultad de Ciencias, Universidad de Chile</p> |
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- 2000      *Evolutionary Biology and Multivariate Statistics* (graduate courses), Facultad de Ciencias, Universidad de Chile
- 1999      *Evolutionary Processes of Vertebrates* (graduate course), Facultad de Ciencias, Universidad de Chile
- 1997      *Biomechanics* (intensive course), dictated by Richard A. Fariña (Universidad de La República, Uruguay), Universidad Austral de Chile
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### Professional memberships

- 2001 – present      Sociedad de Ecología de Chile (SOCECOL)  
2003 – present      Society of Integrative and Comparative Biology (SICB)
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### Service to the profession

Reviewer for  
*Physiological and Biochemical Zoology*  
*Revista Chilena de Historia Natural*

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### References

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