

Duncan J. Irschick

Current Address Department of Biology
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Graduate advisors Jonathan B. Losos and Allan Larson

Positions

2010-present	Full Professor, University of Massachusetts at Amherst
2008-2009	Associate Professor, University of Massachusetts at Amherst
2006-2007	Assistant Professor, University of Massachusetts at Amherst
2001-2005	Assistant Professor, Tulane University (awarded early tenure in 2005; moved to Univ. Mass Amherst as advanced Assistant Professor)
2000	Postdoctoral Researcher, University of California at Berkeley
1997 – 1999	Postdoctoral Researcher, University of Cincinnati
1992 - 1996	Graduate student (Ph.D.), Washington University in St. Louis. “ <i>Adaptation, Performance Ability, and Evolutionary Diversification in <u>Anolis</u> Lizards</i> ”
1987-1991	Undergraduate (B. S., Zoology), University of California, Davis, CA

Teaching

2008-2014	Co-Instructor, <i>Biology of Social Issues</i> (BIO 105), University of Massachusetts at Amherst (7 semesters)
2006-2013	Instructor, <i>Comparative Physiology</i> (BIO 566), University of Massachusetts at Amherst (5 semesters)
2001-2006	Instructor, <i>Biostatistics and Experimental Design</i> (EEOB 408/708), Tulane University (3 semesters)
2001-2006	Instructor, <i>Human Physiology</i> (EEOB 333), Tulane University (5 semesters)
2001-2006	Instructor, <i>Ecological Physiology</i> (EEOB 452/752), Tulane University (3 semesters)
2004, 2006	Instructor, Graduate seminar (EEOB 681), Tulane University (2 semesters)
1999	Co-Instructor, <i>Freshman Biology</i> (BIO 103), Univ. Cincinnati (1 semester)

- 1999 Instructor, Seminar in Population Biology, "*Ecomorphology: New approaches for an old idea*" (BIO 996), Univ. Cincinnati (1 semester)
- 1998 Instructor, *Data analysis* (Biometry, BIO 765), Univ. Cincinnati (1 semester)
- 1995-1996 Teaching assistant, *Fundamentals of Biology*, Instructor-Garland Allen, Washington University (1 semester)
- 1993-94 Teaching assistant, *Evolution*, Instructor-Jonathan Losos, Washington University (1 semester)

Postdoctoral researchers and Research assistant Professors supervised (8)

Dr. Anthony Herrel, Ph.D. University of Antwerp (9/01 – 12/02), Dr. Bieke Van Hooydonck, Ph.D. University of Antwerp (9/01 – 12/02), Dr. Martin Dallimer, Ph.D. University of Edinburgh (10/1/02 – 6/1/03), Dr. Jay Meyers, Ph.D. Northern Arizona University (4/1/05-3/1/2008), Dr. Jerry Husak, Ph.D. Oklahoma State University (1/1/2007-4/1/2008), Patricia L Brennan (Research assistant professor, 9/1/2010-present), Teri Orr (9/1/2012-present), Daniel Moen (9/2014-present)

Ph.D. and M.S. students supervised (9)

Shawn Vincent (9/01 – 12/05), Simon Lailvaux (9/02 – 12/05), Christine Buckley (9/02 – 4/08), David McMillan (9/03 – 5/09), Phillip Bergmann (1/04-6/08), Justin Henningsen (9/1/06 – present), Suellen Almeida (M.S. 2009-2010), Chi-Yun Kuo (9/1/09-present), Casey Gilman (9/1/10-present)

Undergraduate students supervised (52)

Amy Fu (Independent study), Jan Solquist (Independent study), Julia Kulyomina, Kalpita Patel (Independent study), Brian Breen (Independent study), Dylan Briggs (Independent research), Hasan Merza (Independent study), Rachel Grabar (Independent study), Julia Schelp (Summer research), Bryn Kelley (Independent study), Amanda Withey, Irina Showalter, Amy Halpren (Independent research), Nicole Foxworth (Independent study), Eileen Curran (Independent study), Emily Georges (Independent study), Hannah Tosi (Independent study-awarded a HHMI undergraduate research fellowship), Elyse Wagner (Independent study), Rachel Herman (Honors student), Kelly Kumm (Independent study), Heidi Li (Independent study), Hyun-Joo Kim (Independent study), Suellen Almeida, Independent study, Minority), Sandy Robinson (Independent study), Lauren Bonvini (Honors thesis), Amy Trombecky (Work-study), Simon Miner (Independent study), Laura Custer (Work-study), Jessica Wood (REU fellowship), William Bell (REU fellowship), Michael Kunen (Work-study), Issac Kremsky (Work-study), Jacqueline Fountain (Independent study), Jennifer Weaver (Work-study), Phuong-Di Dang (Honors student), Rachel Katz (Work-study), John Rossell (Independent study), Natasha Bloch (Honors student, Minority), Elizabeth Carlisle (Honors student), Justin Elstrott (Honors student), Andy Jimenez (LAMP student, Minority), John Danzell (LAMP student, Minority, Kevin Gibbons (Independent study), Christina Hartnett (Independent study), Rebecca Joachim (Independent study), Daniel Ballow (Independent study), Anemone Androsceu (Independent study), Daniel Hincapie (Independent study), Veronica Webb (Independent study), Margarita Ramos (Independent study), Esteban Toro (Summer research in lab), Jon Forman (Summer research), Ted Macrini (Summer research), Stephen Koruba (Summer research).

Editorial Service

Senior Editor, Functional Ecology (2013-Present)
 Executive Editor, Functional Ecology (2010-2013)
 Associate Editor, Quarterly Review of Biology (2010-Present)

Associate Editor, Functional Ecology (2005-2010)
Southeastern Naturalist (Guest editor, 2007)

Awards and fellowships

2015 S and T Presidential Award (Submitted), University of Massachusetts at Amherst. Crosby AJ (co-PI) Irschick DJ (co-PI), Harris J (co-PI), Dumont E (co-PI), Hussein S (co-PI), Albertson C (co-PI), Santangelo C (co-PI), Grason G (co-PI), Hayward R (co-PI). \$176,000. “Novel, Functional, and Comfortable Prosthetics Developed with Evolutionary Materials”.

2014 University of Massachusetts Life Sciences Moment Fund (LSMF). Crosby AJ (PI), Harris J (co-PI), Irschick DJ (co-PI). \$75,000. “Geckskin™ for Biomedical Skin Applications: Demonstrating Clinical Relevance and Potential.”

2014 National Science Foundation award. Bergmann PJ (PI), Siler C (co-PI), Wagner G (co-PI), Irschick DJ (co-PI). \$665,963 “ A mechanistic study of the developmental and functional causes of limb re-evolution in Philippine skinks”.

2012 University of Massachusetts CVIP Technology Development Fund, Crosby AJ (PI), Irschick DJ (co-PI). 2012. \$25,000. “Geckskin Adhesive Technologies”

2012 Human Frontiers Science Program (Ranked 6 from 800 submissions). \$900,000. D. J. Irschick (PI), AJ. Crosby (co-PI), Walter Federle (co-PI). “The role of subsurface structure in biological adhesion: insects to lizards”

2010 National Science Foundation award. D. J. Irschick (PI), student (Justin Henningsen). \$15,000. Animal Behaviour panel (DDIG 1011246). “DISSERTATION RESEARCH: How do a signal and whole-organism performance interact to determine reproductive success?”

2009 National Institute of Health Katrina Supplement award. J. Lockman (PI), D. J. Irschick (co-PI). \$291,589 “Skill development: Object manipulation to tool use”

2009 National Science Foundation. J. Husak (PI), I. T. Moore (co-PI), D. J. Irschick (co-PI). \$11,460. Funded for a symposium on “Hormones and Performance” at the annual SICB meetings for 2009. Physiological and Integrative Systems Panel. “Hormonal regulation of whole-animal performance: Implications for selection”

2006 National Science Foundation award. D. Irschick (PI). \$6,000. Ecological and Evolutionary Physiology Panel, Research for undergraduates,

2006 National Science Foundation award. D. Irschick (PI). \$14,207. Supplement award to conduct additional selection work on lizards. Environmental and Structural Systems.

2005 National Science Foundation award. D. Irschick (PI). \$6,000. Ecological and Evolutionary Physiology Panel, Research for undergraduates.

2004 National Science Foundation award. Ecological and Evolutionary Physiology Panel. D. Irschick (PI). \$327,589 “Comparative and convergent aspects of natural selection”

2004 National Institute of Health award. J. Lockman (PI), D. Irschick (co-PI). \$1.5 million. “Skill development: Object manipulation to tool use”. Ranking (1.5%)

2003 National Science Foundation (International supplement award). Ecological and Evolutionary Physiology Panel. D. Irschick (PI). \$18,595. "Convergence of ecological locomotor function in old and new world lizards"

2003 Board of Regents Support Fund (for award period 2003-2007). D. C. Heins (PI), S. P. Darwin (Co-PI), D. Irschick (Co-PI). \$76,000. "Recruitment of Superior Graduate Students to Ecology and Evolutionary Biology at Tulane University".

2002 Coypu Foundation award, J. McLachlan (PI), D. Irschick (co-PI), S. Michael (co-PI, among other co-PIs at Tulane). \$135,460 to D. J. Irschick and Scott Michael (Direct costs). "The molecular ecology of invasive reptile species: Inferring routes and timing of invasions"

2000 National Science Foundation award. Ecological and Evolutionary Physiology Panel. D. Irschick (PI), B. C. Jayne (co-PI). \$6,393. Research for undergraduates.

2000 National Science Foundation award. Ecological and Evolutionary Physiology Panel. D. Irschick (PI), B. C. Jayne (co-PI). \$238,935 "Life on a limb: The evolution of locomotion in arboreal specialists"

1994 Dean's Excellence in Teaching Award

1994 Sigma Xi Grant-in-aid of Research, \$500

1994 Presidential Undergraduate Fellowship, \$1,000

1988/89 White Mountain Research Station Fellowship, \$2,000

Total external funds acquired: >4 million dollars

Patents

UOMA031PR. Filed February 2013. "WEIGHT-BEARING ADHESIVES WITH ADJUSTABLE ANGLES". Provisional Patent.

UOMA033PR. Filed March 2013. "HIGH CAPACITY EASY RELEASE EXTENDED USE ADHESIVE CLOSURE DEVICES". Provisional Patent.

UOMA032PR. Filed March 2013. "DEVICES FOR APPLICATION AND LOAD BEARING OF FLEXIBLE ADHESIVE AND METHOD OF USING THE SAME". Provisional Patent.

Notable Media Attention

Magazines: Natural History Magazine, National Geographic News, Scientific American, Whats UP!, BBC Wildlife Magazine, National Wildlife Magazine, Popular Mechanics

Newspapers: The New York Times, Wall Street Journal, The National Examiner, Hampshire Gazette, Independent UK, The Columbus Dispatch, Springfield Republican, San Diego Union-Tribune, Baltimore Sun, Cincinnati Enquirer, The Toronto Star, Boston Examiner, New York Daily News, Canadian National Post, The Globe and Mail, Aiken Standard, New Zealand Herald, The Gaurdian

Online news journals and websites: MSNBC.com, FOXNEWS.com, Wired magazine.com, American Association for the advancement of Science, Science News, ScienceDaily, Wissenschaft-online (a German online news group), Yahoo! News, The Week, The Scientist, PhillyBurbs.com, Discovery Channel News, NewScientist.com, SmartPlanet.com, Tech Review, The Daily Planet, CNET.com, Daily KOS, CNN, Buisnessweek.com, Bloomberg.com, Geek.com, Gizmag.com, Mashable.com, ABC news.com, Haaretz.com

Radio and TV: BBC, NPR, Discovery Channel, ABC news, Canadian Broadcasting Corporation (CBC), Voice of America, WTOP Radio

Other: The Journal of Experimental Biology News and Views

News organizations for which opinions have been solicited (regarding other papers): The Scientist, Kentucky Mercury News, Twin Cities Pioneer Press, Dallas Star Telegram, Grand Forks Herald, The Charlotte Observer, Columbia Daily Tribune, Detroit Free Press, Portsmouth Herald, South Florida Sun-Sentinel, KCTV news, teenja.com, Miami Herald, diverssite.com, National Geographic News, New Orleans Times-Picayune, Discovery Channel News

Personal appearances on the following TV shows: Discovery Channel (Weird Connections, 2008), Daily Planet (Inventors, 2012), Stephen Hawking's Brave New World (Inspired by Nature, 2014), Worlds Strangest (Inventors, 2014), Al Jazeera America (TechKnow, 2014)

Some featured work and accomplishments

-TTI/Vanguard speaker, San Diego, CA, 2015

-College Outstanding Faculty Research Award, University of Massachusetts, Amherst, 2014

- Joint lecture, Tulane University. 2014 Joint Chemical Engineering and Ecology and Evolutionary Biology Departments. "Of gecko toes and sharks teeth: The evolution of innovation and the imperfection of nature"

-NerdNite NOHO speaker, Northampton, MA, November 2013 "The Wonders of Geckskin"

-Winner, 2013 NASA LAUNCH Challenge – Geckskin technology chosen as one of top ten innovations by NASA, NIKE, USAID, and the State Department in this competition.

-Chosen by UMASS for the 2nd annual Vision Project – Publication quality presentation on Gecko research to the Massachusetts legislature, August, 2013

-Presenter; Dinner with the UMASS Trustees - September, 2013

-Featured on the UMASS promotional video ("Innovation and Impact", 2012) for achievements with Geckskin™, along with Al Crosby. Our two laboratories were the only research labs featured in the video.

-TEDx speaker, Sorbonne, Paris, France, "The New Age of Enlightenment" (2012)

-Awarded as a Fullbright "Specialist by the Fullbright foundation (2011). This honor allows different countries to invite me to visit and teach methods in functional morphology and field ecology, which is then paid for by the Fullbright foundation.

-Hilgendorf plenary lecturer (University Tubingen, 2010)

-OCIB plenary lecturer (University of Ottawa and Carleton College, 2008)

- Graduate student choice speaker, University of Utah.

-Keynote address, Iowa State University. 2014 Ecology & Evolutionary Biology Symposium

-Consultant for Pixar Studios

- Featured on the Discovery Channel** for “Weird Connections” on gecko adhesion (Gecko adhesion; Irschick et al. 1996)
- Named as a “Climate Change Expert” by the National Science Foundation for work on rapid evolution in island lizards (Featured on the Research Channel on “To What Degree? What Science is Telling us about Climate Change” (Rapid evolution in island lizards; Herrel et al. 2008)**
- Research on gecko adhesion featured on “Head Games” and “Head Rush” for the Science Discovery TV network” (Gecko adhesion; Irschick et al. 1996)**
- Selected to talk for the University of Massachusetts Amherst College Advisory Board (April 2012) (Gecko adhesion; Bartlett et al. 2012)**
- Mashable “10 innovations poised to change sustainable industries”**
- Daily Mail “Gecko feet inspire super thin 'glue pad' which can stick a 700lb object to a glass wall - without leaving a mark”**
- CNN hailed the invention of Geckskin™ as one of top five Science breakthroughs in 2012**
- CNET “The Holy Grail of Adhesives”**
- Bloomberg News “14 Smart Inventions Inspired by Nature: Biomimicry”**
- Wired Magazine “Gecko-inspired adhesive can hold 300 kg”**
- New Scientist TV “Gecko-like tape holds up 42-inch TV”**
- NPR “UMass Scientists Create Gecko-Like Super Adhesive”**
- Daily Mail “US Military reveals ‘gecko gloves’ that let soldiers scale vertical walls.**
- Discovery Magazine “Spider-soldier of the future ascend buildings with ease”**
- Science Daily “Biologists Propose a New Research Roadmap for Connecting Genes to Ecology”**
- CNN “Stealing from nature: Incredible new tech inspired by biology”**

Research featured in the following books and textbooks:

- “**Lizards**” by **Pianka and Vitt 2003** (Lizard adhesion, Irschick et al. 1996)
- “**The Ecology of Adaptive Radiation**” by **Dolph Schluter** (Radiation of mainland and island lizards; Irschick et al. 1997).
- Herpetology textbook by Pough et al. 2005** (Lizard bipedalism, gecko adhesion; Irschick et 1996; Irschick and Jayne 1999)
- “**Moths that Drink Elephant tears**” by **Matt Walker** (Effects of self-amputation and performance in spiders; Ramos et al. 2004)
- “**Lizards in an Evolutionary tree; Ecology and adaptive evolution of anoles**” by **Jonathan Losos** (anole lizards; multiple papers)
- “**Evolution**” textbook (2009) by D. Futuyma (Honest signalling in lizards; Vanhooydonck et al. 2005)
- “**The Tangled Bank: An Introduction to Evolution**” by Carl Zimmer (Rapid evolution in island lizards; Herrel et al. 2008)
- “**The Flexible Phenotype**” by **Theunis Piersma** (Effects of self-amputation and performance in spiders; Ramos et al. 2004)
- “**The Greatest Show on Earth: The Evidence for Evolution**” by **Richard Dawkins** (Rapid evolution in island lizards; Herrel et al. 2008)
- “**Nasty, Brutish, and Short: The Quirks and Quarks Guide to Animal Sex and Other Weird Behaviour**” by Pat Senson- Kindle edition (Effects of self-amputation and performance in spiders; Ramos et al. 2004)
- “**Man Down**” by **Dan Abrams** (Human hammering performance)

“Evolution's Wedge: Competition and the Origins of Diversity” by Karin and David Pfennig (Rapid evolution in island lizards; Herrel et al. 2008)

“Campbell Biology Textbook”, 10th edition by Jane B. Reece, Neil A. Campbell, Lisa A. Urry, Michael L. Cain, Peter V. Minorsky, Steven A. Wasserman (Gecko adhesion Bartlett et al. 2012)

“NanoInnovation: What Every Manager Needs to Know” by Michael S. Tomczyk (Gecko adhesion, Bartlett et al. 2012)

“Biology NOW” W.W. Norton (Rapid evolution in island lizards; Herrel et al. 2008)

“From Gecko Feet to Adhesive Tape” by Cherry Press (Gecko adhesion; Bartlett et al. 2012)

“Pillars of Evolution: Fundamental Principles of the Eco-evolutionary Process” by Douglas Morris and Per Lundberg (Lizard locomotion; Irschick and Losos 1998, Vanhooydonck and Irschick 2002)

“The Analysis of Biological Data, 2e” by Whitlock & Schluter, Roberts and Company Publishers (Effects of self-amputation and performance in spiders; Ramos et al. 2004)

“Geckos: The Animal Answer Guide” by Aaron Bauer. Johns Hopkins University Press (Gecko adhesion; Bartlett et al. 2012).

Reviewer for (64 journals and organizations)

American Midland Naturalist, The Anatomical Record, The American Naturalist, The American Zoologist, Amphibia-Reptilia, Animal Behaviour, Annals of the Missouri Botanical Garden, Animal Biology (formerly Netherlands Journal of Zoology), Australian Journal of Zoology, Behavior, Behavioral Ecology and Sociobiology, Behavioral Ecology, Belgian Journal of Zoology, Biological Journal of the Linnean Society, Biotropica, Biology Letters, Bioessays, Biological reviews of the Cambridge Philosophical Society, Bioscience, British Sciences Research Council, Copeia, Current Zoology, Ecology, Ecoscience, Ethology, Evolution, Evolutionary Ecology Reports, Frontiers in Zoology, Functional Ecology, Herpetologica, Hormones and Behavior, Integrative Zoology, Journal of Anatomy, Journal of Animal Ecology, Journal of Comparative Physiology, Journal of Evolutionary Biology, Journal of Experimental Biology, Journal of Experimental Zoology, Journal of Herpetology, Journal of the Royal Society of Western Australia, Journal of Morphology, Journal of Natural History, Journal of Orthoptera Research, Journal of Theoretical Biology, Louisiana Board of Regents, Naturwissenschaften, National Geographic Society, The Molecular Ecology, National Science Foundation, National Research Foundation for South Africa, Natural Sciences and Engineering Research Council of Canada, Nature, Oecologia, Oikos, Physiological and Biochemical Zoology, Proceedings of the National Academy of Sciences, Philosophical Transactions of the Royal Society of London, PLoS Biology, PLoS one, Proceedings of the Royal Society of London, Senckembergiana Lethaea, Southeastern Naturalist, Zoology, Zoologischer Anzeiger

Special Issues, Edited Volumes, and Symposia organized

Special Issue for Functional Ecology (published July 2007). “Sexual selection, physiology, and performance” D. J. Irschick, R. Van Damme, and A. Herrel.

Symposia for the International Congress of Vertebrate Morphology, Paris, 2007 (Published February 2008 in Evolutionary Ecology Research). “Natural selection on biomechanical traits” D. J. Irschick and F. Le Galliard.

Symposia for the Society of Integrative and Comparative Biology, Boston 2009 (Accepted, Society-wide, published in Integrative and Comparative Biology in 2009) “Hormonal regulation

of whole-animal performance: implications for selection” J. F. Husak, D. J. Irschick, and I. T. Moore.

Virtual Issue. Functional Ecology “Locomotion Unplugged”. D. J. Irschick and T. Higham. April 2014.

Edited Volume. Irschick DJ, Briffa M, Podos J. 2015. *Animal Signaling and Function: An Integrative Approach*. Wiley Blackwell Press. 253 pages. ISBN: 978-0-470-54600-0.

Publications (129 published)

Losos JB, **Irschick DJ**, Schoener TW. 1994. Adaptation and constraint in the evolution of specialization of Bahamian *Anolis* lizards. *Evolution* 48:1786-1798.

Irschick DJ, Losos JB. 1996. Morphology, ecology, and behavior of the twig anole *Anolis angusticeps*. In, eds. B. Powell and B. Henderson, *Contributions to West Indian Herpetology: A tribute to Albert Schwartz*. P. 291-301, Society for the study of Amphibians and Reptiles, Ithaca, New York.

Losos JB, **Irschick DJ**. 1996. The effect of perch diameter on the escape behavior of *Anolis* lizards: Laboratory-based predictions and field tests. *Animal Behaviour* 51:593-602.

Irschick DJ, Austin CC, Petren K, Fisher RN, Losos JB, Ellers O. 1996. A comparative analysis of clinging ability among pad-bearing lizards. *Biological Journal of the Linnean Society* 59:21-35 (**Highlighted by “The Discovery Channel” for their Cable TV series Weird Connections in 2008**)

Irschick DJ, Shaffer HB. 1997. The polytypic species revisited: Morphological differentiation among tiger salamanders (Amphibia: Caudata). *Herpetologica* 53:30-49.

Irschick DJ, Vitt LJ, Zani P, Losos JB. 1997. A comparison of evolutionary radiations in Mainland and West Indian *Anolis* lizards. *Ecology* 78:2191-2203.

Cheverud JM, Routman EP, **Irschick DJ**. 1997. Pleiotropic effects of individual gene loci on mandibular morphology. *Evolution* 51:2004-201.

Irschick DJ, Jayne BC. 1998. Effects of incline on acceleration, body posture, and hindlimb kinematics in two species of lizard, *Callisaurus draconoides* and *Uma scoparia*. *Journal of Experimental Biology* 201:273-287.

Irschick DJ, Losos JB. 1998. A comparative analysis of the ecological significance of locomotor performance in Caribbean *Anolis* lizards. *Evolution* 52:219-226.

Macrini TE, **Irschick DJ**. 1998. An intraspecific analysis of trade-offs in sprinting performance in a West Indian lizard (*Anolis lineatopus*). *Biological Journal of the Linnean Society* 63:579-591.

Jayne BC, **Irschick DJ**. 1999. Effects of incline and speed on the three-dimensional hindlimb kinematics of a generalized iguanian lizard (*Dipsosaurus dorsalis*). *Journal of Experimental Biology* 202:143-159.

Irschick DJ, Jayne BC. 1999. A field study of effects of incline on the escape locomotion of a bipedal lizard, *Callisaurus draconoides*. *Physiological and Biochemical Zoology* 72:44-56

Irschick DJ, Jayne BC. 1999. Comparative three-dimensional kinematics of the hindlimb for high-speed bipedal and quadrupedal locomotion of lizards. *Journal of Experimental Biology* 202:1047-1065.

Irschick DJ, Losos JB. 1999. Do lizards avoid habitats in which their performance is submaximal? The relationship between sprinting capabilities and structural habitat use in Caribbean anoles. *The American Naturalist* 154:293-305.

Irschick DJ, Jayne BC. 2000. Size matters: Ontogenetic differences in the three-dimensional kinematics of steady-speed locomotion in the lizard *Dipsosaurus dorsalis*. *Journal of Experimental Biology* 203:2133-2148.

Irschick DJ, Macrini TE, Koruba S, Forman J. 2000. Ontogenetic differences in morphology, habitat use, behavior and sprinting capacity in two West Indian *Anolis* lizard species. *Journal of Herpetology* 34:444-451.

Irschick DJ. 2000. Effects of behavior and ontogeny on the locomotor performance of a West Indian lizard *Anolis lineatopus*. *Functional Ecology* 14:438-444.

Jayne BC, **Irschick DJ**. 2000. A field study of incline use and preferred speeds for the locomotion of lizards. *Ecology* 81:126-14 (**Featured in the “Biomechanics” section of the magazine “Natural History” Sand-dune two step**)

Irschick DJ. 2000. Comparative and behavioral analyses of preferred speed: *Anolis* lizards as a model system. *Physiological and Biochemical Zoology* 73:428-437.

Irschick DJ, Garland T. Jr. 2001. Integrating function and ecology in studies of adaptation: Investigations of locomotor capacity as a model system. *Annual Reviews of Ecology and Systematics* 32:367-396.

Irschick DJ. 2002. An imperfect solution to optimality: Taking the fun out of adaptation. *Ecology* 83:1473-475

Jackman T, **Irschick DJ**, de Querioz K, Losos JB, Larson A. 2002. A molecular phylogenetic perspective on evolution of lizards of the *Anolis grahami* series. *Journal of Experimental Zoology B* 294:1-16.

Irschick DJ. 2002. Evolutionary approaches for studying functional morphology: Examples from studies of performance capacity. *Integrative and Comparative Biology*. 42:278-290.

VanHooydonck B, **Irschick DJ**. 2002. Is Evolution Predictable? Co-evolutionary patterns of ecology, performance, and morphology in Old and New World lizard Radiations. In *Topics in Vertebrate Functional and Ecological Morphology*, Eds. Aerts, P, Herrell, Van Damme, R. P. 191-204, Maastricht: Shaker Publishing.

Macrini TE, **Irschick DJ**, Losos JB. 2003. Ecomorphological differences in toepad characteristics between mainland and island anoles. *Journal of Herpetology*. 37:52-58.

Toro E, Herrel A, **Irschick DJ**. 2003. A biomechanical analysis of intra- and interspecific scaling of jumping and morphology in Caribbean *Anolis* lizards. *Journal of Experimental Biology* (**Cover**). 206: 2641-2652.

Irschick DJ, Vincent S, Buckley C, Lailvaux S. 2003. Lizard act part II: Making the transition from ecology to behavior. *Quarterly Review of Biology*. 78:510-511.

Irschick DJ, VanHooydonck B, Herrel A, Androsceu A. 2003. Effects of loading and size on maximum power output and kinematics in geckos. *Journal of Experimental Biology*. 206:3923-3934.

Irschick DJ. 2003. Studying performance in nature: Implications for fitness variation within populations. *Integrative and Comparative Biology*. 43:396-407.

Vincent S, Herrel A, **Irschick DJ**. 2004. Ontogeny of intersexual head shape and prey selection in the pitviper *Agkistrodon piscivorus*. *Biological Journal of the Linnean Society*. 81:151-159.

Ramos M, **Irschick DJ**, Christenson T. 2004. Overcoming an evolutionary conflict: Removal of a reproductive organ greatly enhances locomotor performance. *Proceedings of the National Academy of Sciences*. 101:4883-4887 (**Featured in the book “Moths that drink elephant tears” by Matt Walker, NPR, Science News, the BBC, and many other media outlets**)

Toro E, Herrel A, **Irschick DJ**. 2004. The evolution of jumping performance in Caribbean *Anolis* lizards: solutions to biomechanical trade-offs. *The American Naturalist*. 163:844-856 (**Highlighted in “Outside JEB”**)

Herrel A, Vanhooydonck B, Joachim R, **Irschick, DJ**. 2004. Frugivory in polychrotid lizards: Effects of body size. *Oecologia*. 140:160-168.

Vincent S, Herrel A, **Irschick DJ**. 2004. Sexual dimorphism in head shape and diet in the cottonmouth snake (*Agkistrodon piscivorus*). *Journal of Zoology, London*. 264:53-59.

Irschick DJ. 2004. Counting sheep: Life and death on an island. *Ecology*. 85:3179-3180.

Elstrott J, **Irschick DJ**. 2004. Evolutionary correlations among morphology, habitat use and clinging performance in Caribbean *Anolis* lizards. *Biological Journal of the Linnean Society*. 83:389-398.

Lailvaux S, Herrel A, VanHooydonck B, Meyers J, **Irschick DJ**. 2004. Performance capacity, fighting tactics, and the evolution of life-stage male morphs in the green anole Lizard (*Anolis carolinensis*). *Proceedings of the Royal Society of London, B*. 271:2501-2508.

Irschick DJ. 2004. Doing the locomotion: Animals, movement, and muscles. *Quarterly Review of Biology*. 79:89-90.

Buckley CR, Michael SF, **Irschick DJ**. 2005. Early hatching and substrate type decrease jumping performance in a direct-developing frog, *Eleutherodactylus coqui*. *Functional Ecology*. 19:67-72.

VanHooydonck B, Herrel A, Van Damme R, **Irschick DJ**. 2005. Does dewlap size predict male bite performance in Jamaican *Anolis* lizards? *Functional Ecology*. 19:38-42 (**Featured in the widely-used textbook “Evolution (2009)” By Doug Futuyma**)

Vincent S, Herrel A, **Irschick DJ**. 2005. Comparisons of aquatic vs. terrestrial strike kinematics and performance in a pitviper, *Agkistrodon piscivorus*. *Journal of Experimental Zoology*. 303A:476-488.

Irschick DJ, Dyer L, Sherry T. 2005. Phylogenetic methodologies for studying specialization. *Oikos*. 110:404-408.

Irschick DJ, VanHooydonck B, Meyers J, Herrel A. 2005. Intraspecific correlations among morphology, performance, and habitat use within a green anole lizard (*Anolis carolinensis*) population. *Biological Journal of the Linnean Society*. 85:211-221.

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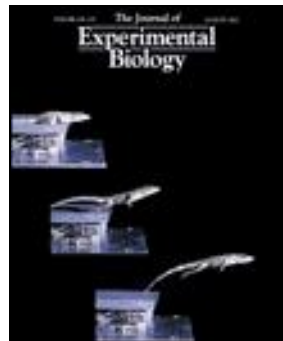
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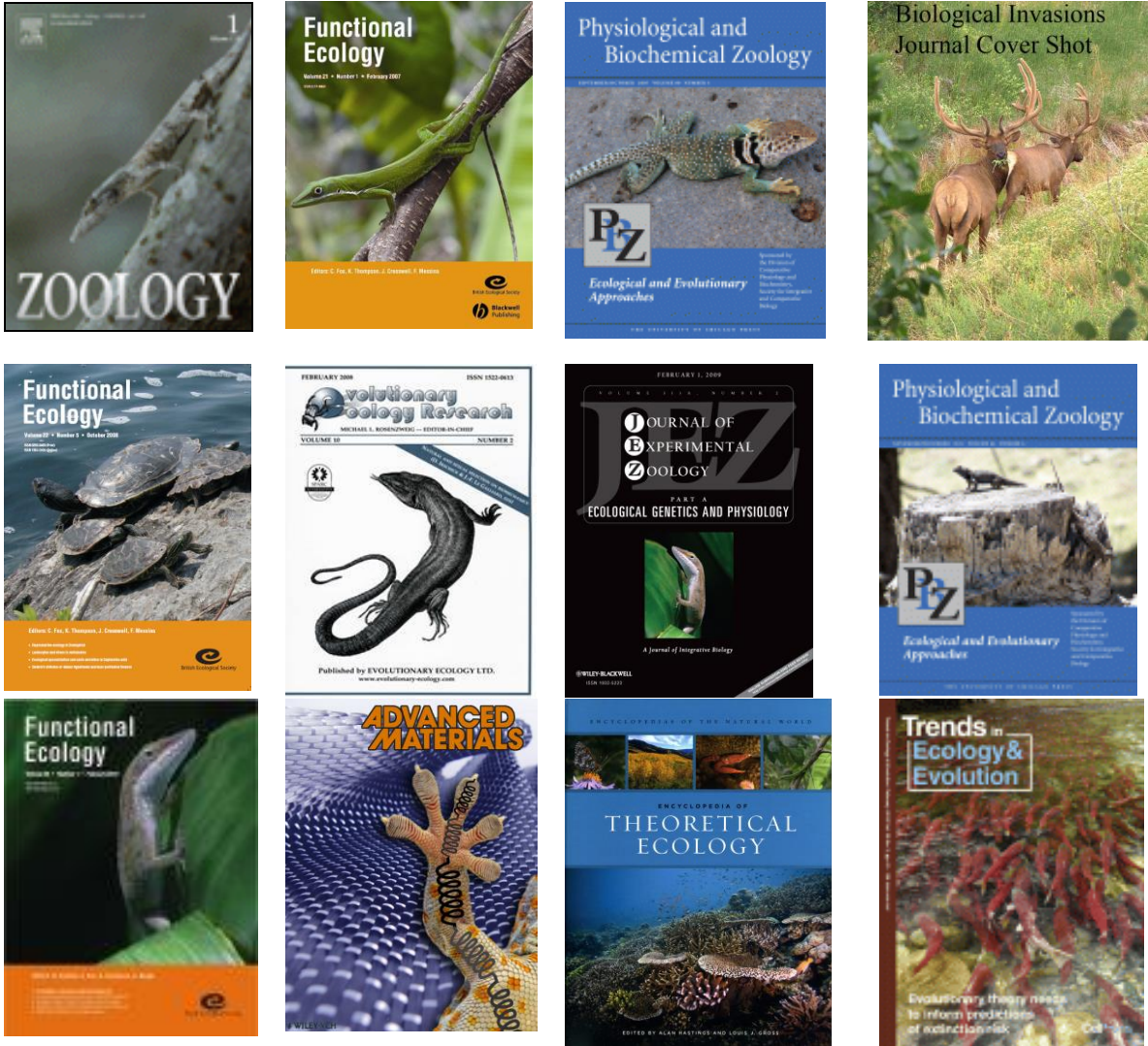
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- (35) Vanhooydonck B, Herrel A, Irschick DJ. 2005. Effects of substrate diameter on acceleration capacity in *Anolis* lizards. *Integrative and Comparative Biology*. 45:1089
- (36) Lailvaux SP, Irschick DJ. 2006. The evolution of performance-based fighting ability in Caribbean *Anolis* lizards. 13th Benelux Congress of Zoology, Leuven, Belgium.
- (37) Huyghe K, Herrel A., Vanhooydonck B, Irschick DJ. 2006. The Hispaniolan twig Anole, *Anolis sheplani*: pushing the boundaries of morphospace. 13th Benelux Congress of Zoology, Leuven, Belgium.
- (38) Meyers J, Irschick DJ. 2007. Performance and niche space in a community of lizards. *Integrative and Comparative Biology*. 39.9
- (39) Buckley CR, Irschick DJ, Adolph SC. 2007. The persistence of environmentally-induced phenotypic variation in western fence lizards. *Integrative and Comparative Biology*. 52.5
- (40) McElroy E, Meyers J, Irschick DJ. 2007. Linking badge morphology, performance, and field behavior in the ornate tree lizard, *Urosaurus ornatus*. *Integrative and Comparative Biology*. 55.1
- (41) Wood J, Meyers J, Irschick DJ. 2007. Display behavior, sexual signal size, and performance in *Anolis sagrei*. *Integrative and Comparative Biology*. 55.3
- (42) Husak JF, Irschick DJ, Meyers J, Moore IT. 2007. Hormones, sexual signals, and performance of green anole lizards (*Anolis carolinensis*). *Integrative and Comparative Biology*. 55.4
- (43) Irschick DJ, Meyers J. 2007. A comparative analysis of natural and sexual selection in lizards. *Integrative and Comparative Biology*. 64.4
- (44) Bergmann PJ, Meyers J, Irschick DJ. 2007. Evolving to be short and stubby – orthogenesis and grades of evolution in body plan in lizards. *Integrative and Comparative Biology*. 36.2
- (45) Herrel A, Vanhooydonck B, Irschick DJ. 2007. Morphological and biochemical correlates of differences in arboreal locomotor performance and substrate use in *Anolis* lizards. *Comparative Biochemistry and Physiology.A – Molecular & Integrative Physiology* 146:S143
- (46) Buckley CR, Adolph SC, Irschick DJ. 2008. Ecomorphology among populations of the western fence lizard, *Sceloporus occidentalis*. *Integrative and Comparative Biology*.
- (47) Irschick DJ. 2008. Sexual selection and functional morphology: A new frontier? *Integrative and Comparative Biology*. 27.2
- (48) Henningsen JP, Husak JF, Irschick DJ. 2008. Do androgens mediate seasonal changes in sexual signal size and bite-force performance in green anoles (*Anolis carolinensis*)? *Integrative and Comparative Biology*. 27.5

- (49) Meyers JJ, Irschick DJ. 2008. The role of badge size, bite performance and display behavior in predicting dominance in male ornate tree lizards. *Integrative and Comparative Biology*. 27.7
- (50) Miner SV, Meyers JJ, Husak JF, Irschick DJ. 2008. How do hormones, performance, sexual signals, and behavior interact to predict dominance in brown anoles? *Integrative and Comparative Biology*. 27.8
- (51) Bonvini LA, Irschick DJ, Gillis GB. 2008. Losing Stability: Tail loss and jumping in the lizard *Anolis carolinensis*. *Integrative and Comparative Biology*. 42.5
- (52) Bergmann PJ, Irschick DJ. 2008. Conservatism in lizard vertebral number evolution is widespread but not universal. *Integrative and Comparative Biology*. 51.4
- (53) Husak JF, Irschick JF, Irschick DJ, Meyers JJ, Moore IT. 2008. Sexual signals, performance, and testosterone in Bahamian *Anolis* lizards. *Integrative and Comparative Biology*. 53.4
- (54) McMillan DM, Irschick DJ. 2008. Do long term changes in environmental temperature affect thermal tolerance in lizards? *Integrative and Comparative Biology*. 73.5
- (55) Bergmann PJ, Irschick DJ. 2008. Reduced constraint on vertebral number facilitates the diversification of lizards. *Canadian Journal of Zoologists Meeting*. May 2008.
- (56) Husak JF, Irschick DJ. 2009. Hormones as mediators of animal performance. *Integrative and Comparative Biology*. S3.1
- (57) McMillan DM, Rees B, Irschick DJ. 2009. The role of HSP70 expression in locomotion – Reduced sprint speeds after heat stress in *Sceloporus occidentalis*. *Integrative and Comparative Biology*. 42.5
- (58) Irschick DJ, Henningsen J. 2009. Trade-offs between force and accuracy in human performance. *Integrative and Comparative Biology*. 98.6
- (59) Almeida S, Irschick DJ. 2009. The kinetics and kinematics of human performance: Trade-offs between force and accuracy *Integrative and Comparative Biology*. 98.7
- (60) Bergmann PJ, Irschick DJ. 2009. Alternate pathways in the evolution of body elongation, locomotor performance and kinematics in two clades of lizards. *Integrative and Comparative Biology*. 104.1
- (61) Henningsen J, Herman R, Irschick DJ. 2009. Tail autotomy and escape performance in a stream side salamander. *Integrative and Comparative Biology*. 104.5
- (62) McMillan DM, Rees B, Irschick DJ. 2009. Thermal tolerance and Hsp70 expression in the Western fence lizard, *Sceloporus occidentalis*: Geographic variation in measures of acute stress and their role in selection on sprint speeds. *Experimental Biology Conference Abstract, New Orleans*.

- (63) Herrel A, Losos JB, Vanhooydonck B, Irschick DJ. 2009. The evolution of locomotor performance in *Anolis* lizards: why are mainland anoles different? International Ethological Conference Abstract, Rennes, France.
- (64) Irschick DJ, Almeida S. 2009. Functional and behavioral limits on human hammering performance. Society for Experimental Biology Conference Abstract, Glasgow, UK (**The research presented in this talk was highlighted in many media outlets, including FOXnews.com, MSNBC.com, Science Daily, Scientific American, the Globe and Mail, The Week, and many others**)
- (65) Irschick DJ. 2009. Tails of selection on sexual signal size and performance in anoles. 2009 *Anolis* symposium abstract, Harvard University, Boston.
- (66) Henningsen J, Irschick DJ. 2009. Dewlap manipulation and behavior in *Anolis* lizards. 2009 *Anolis* symposium abstract, Harvard, Boston.
- (67) Vanhooydonck B, Huyghe K, Herrel A, Meyers JJ, Irschick DJ. 2009. Evolution of dewlap traits in anoles from the Dominican Republic. 2009 *Anolis* symposium abstract, Harvard University, Boston.
- (67) Almeida S, Irschick DJ. 2010. Evaluating the affects of climate change on larval locomotor performance in *Ambystoma maculatum*. Integrative and Comparative Biology. Seattle, WA. 27.1
- (68) Irschick DJ. 2010. Correlational selection on sexual signal size and performance in lizards. Integrative and Comparative Biology. Seattle, WA.
- (69) Kuo C, Irschick DJ. 2010. Loading effects on jumping and running in green anole lizards (*Anolis carolinensis*). Seattle, WA. 43.6
- (70) Henningsen J, Irschick DJ. 2010. Performance prevails over signal size during staged dominance encounters between male green anole lizards. Integrative and Comparative Biology. Seattle, WA. 61.2
- (71) Bergmann PJ, Irschick DJ. 2010. Tempo and mode of lizard axial evolution. Is body elongation a key innovation? Integrative and Comparative Biology. Seattle, WA. 8.5
- (72) Henningsen J, Irschick DJ. 2010. Signal size, performance, and dominance: an experimental test with the green anole lizard. Animal Behavior Society meeting, VA.
- (73) Henningsen J, Irschick DJ. 2010. Manipulating dewlap size reveals that performance is more important than signal size in determining the outcome of staged dominance interactions in male green anole lizards. International Behavioral Ecology Congress. Perth, Australia.
- (74) Bartlett, MD, Croll AB, Paret BM, Gerberich BG, Irschick DJ, Crosby AJ 2010. Designing Bio-Inspired Adhesives for Shear Loading. Fall UMASS Polymer Event Poster Session. Amherst, MA.

- (75) Kuo C, Irschick DJ. 2010. How well do lizards learn to jump after tail loss? Northeast Division of Vertebrate Morphology Regional meeting, Harvard University, Boston, MA.
- (76) Gilman C, Irschick DJ. 2010. Effects of perch stability on jumping performance and kinematics in green anole lizards (*Anolis carolinensis*). Northeast Division of Vertebrate Morphology Regional meeting, Harvard University, Boston, MA.
- (77) Gilman C, Irschick DJ. 2011. Effects of perch stability on jumping performance and kinematics in green anole lizards (*Anolis carolinensis*). Integrative and Comparative Biology. Salt Lake City, UT. 58.1
- (78) Kuo C, Irschick DJ. 2011. The effect of physical perturbation on behavior: an example from the yellow-chinned anole (*Anolis gundlachi*). Integrative and Comparative Biology. Salt Lake City, UT. 34.4
- (79) Irschick DJ, Langerhans B. 2011. Microevolution of seasonal dimorphism in morphology and performance of a lizard. Integrative and Comparative Biology. Salt Lake City, UT. 40.4
- (80) Bartlett .D., Croll AB, Paret, BM, Gerberich BG, Irschick DJ, Crosby AJ. 2011. The Importance of Compliance in Synthetic and Natural Adhesive Systems. Adhesion Society. Savannah, Georgia.
- (81) Bartlett, MD, Croll AB, Paret BM, King DR, Irschick DJ, Crosby AJ. 2011. The Importance of Compliance in Synthetic and Natural Adhesive Systems. Science of Adhesion GRS, Lewiston, ME.
- (82) Bartlett, MD, Croll AB, Paret BM, Gerberich BG, Irschick, DJ, Crosby AJ. 2011. Designing Bio-Inspired Adhesives for Shear Loading. Macromolecular Materials GRS and GRC Poster Session. Ventura, CA.
- (83) Kuo C, Irschick DJ. 2011. Vertebral morphology and the facility of tail autotomy in lizards. Northeast Division of Vertebrate Morphology Regional meeting, University of Rhode Island, MA.
- (84) Bartlett.MD, Croll AB, King DR, Irschick DJ, Crosby AJ. 2012. Scaling Reversible Adhesion in Synthetic and Natural Adhesive Systems. New England Workshop on the Mechanics of Materials and Structures (NEW.Mech). Providence, RI.
- (85) Bartlett.MD, Croll AB, King DR, Irschick DJ, Crosby AJ. 2012. Designing Bio-Inspired Adhesives for Shear Loading: From Simple Structures to Complex Patterns. NEW.Mech Poster Session. Providence, RI. (2nd Place Poster Competition)
- (86) Bartlett.MD, Croll AB, King DR, Irschick DJ, Crosby AJ. 2012. Looking Beyond Fibrillar Features to Scale Gecko-Like Adhesion. Rogers Corporation, Rogers, CT. 2012.

- (87) Bartlett.MD, Croll AB, King DR, Paret BM, Irschick DJ, Crosby AJ Looking Beyond Fibrillar Features to Scale Gecko-Like Adhesion. Fall UMASS Polymer Event Poster Session. Amherst, MA. 2012.
- (88) Bartlett.MD, Croll AB, King DR, Paret BM, Irschick DJ, Crosby AJ. 2012. High Capacity, Easy Release Adhesive Pads. Ignite Earth Day UMass, Amherst, MA.
- (89) Kuo C, Gillis GB, Irschick DJ. 2012. The role of practice (or lack thereof) on the recovery of jump performance in tailless green anole lizards, *Anolis carolinensis*. Integrative and Comparative Biology. Charleston, SC. 2.1
- (90) Gilman C, Irschick DJ. 2012. Foils of flexion: The effects of perch compliance on lizard locomotion and perch choice in the wild. Integrative and Comparative Biology. Charleston, SC. 60.1
- (91) King D, Bartlett M, Irschick DJ, Crosby AJ. 2012. Design criteria for reversible adhesives under shear loading. Adhesion Society Meeting, New Orleans, LA.
- (92) Bartlett, MD, Croll AB, Paret BM, King DR, Irschick DJ, Crosby AJ. 2011. The Importance of Compliance in Synthetic and Natural Adhesive Systems. Science of Adhesion GRS, Lewiston, ME.
- (93) Moen D, Irschick DJ, Weins JJ. 2012. The role of history in adaptation to novel environments: the relationship between morphology, performance, and phylogenetic history in assemblages of frogs from three continents. World Congress of Herpetology, Vancouver, CA.
- (94) Kuo C, Irschick DJ. 2012. Take this broken tail and learn to jump: Recovery can tail autotomy in lizards. World Congress of Herpetology, Vancouver, Canada.
- (95) Crosby AJ, Bartlett M, Croll AB, Irschick DJ, Breid D, Davis C. 2012. Lessons from Nature: Adhesion and Structure. Pressure Sensitive Tape Council, Boston, MA.
- (96) Kuo C, Irschick DJ. 2013. A costly antipredator behavior in a gradient of predation pressure: tail autotomy in the side-blotched lizard *Uta stansburiana*. Integrative and Comparative Biology. San Francisco, CA. P1.147 (Poster)
- (97) Irschick DJ, Crosby AJ, Federle W. 2013. The evolution of gecko adhesion: An integrative perspective. Integrative and Comparative Biology. San Francisco, CA. 27.2
- (98) Henningsen J, Husak J, Irschick DJ. 2013. Dewlap displays and predation risk in green anole lizards. Integrative and Comparative Biology. San Francisco, CA. 95.5
- (99) Bartlett MB, Irschick DJ, Crosby AJ. 2013. Scaling Reversible Adhesion in Synthetic and Natural Adhesive Systems, Adhesion Society Meeting, Daytona Beach, FL.
- (100) King DR, Bartlett MD, Irschick DJ, Crosby AJ. 2013. Comparing the Performance of Draping Adhesives to Geckos on Various Surfaces. Adhesion Society Meeting, Daytona Beach, FL.

- (101) Hammerschlag, N, Luo J, Irschick DJ, Ault JS. 2013 A comparison of spatial and movement patterns between sympatric predators: Bull sharks (*Carcharhinus leucas*) and Atlantic Tarpon (*Megalops atlanticus*). Benthic Ecology Meeting, Savannah, GA.
- (102) Irschick DJ, Crosby AJ, Federle W, Gilman C, King D, Imburgia M, Bartlett M, Showalter I. 2013. The role of subsurface structure in biological adhesion: insects to lizards. Human Frontiers Awardees Meeting. Strasbourg, France.
- (103) Gilman CA, Irschick DJ, King DR, Bartlett MD, Imburgia M, Federle W, Crosby AJ. 2013. The role of structural compliance in lizard locomotion and locomotor ecology. International Congress of Vertebrate Morphology, Barcelona, Spain.
- (104) King D, Irschick DJ, Crosby AJ. 2014. Designing High Strength, Reversible Adhesives for “Real World” Surfaces. Adhesion Society Meeting, San Diego, CA.
- (105) Gilman CA, Geneva AJ, Glor RE, Albertson RC, Irschick DJ. 2014. Preliminary analysis of hemiclitoris development in the lizard *Anolis distichus*. Society for Integrative and Comparative Biology, Austin, TX. P2.100
- (106) Irschick DJ, Hartog K, Escontrella D, Hammerschlag N. 2014. New methods for assessing scaling and body condition in several shark species. Society for Integrative and Comparative Biology, Austin, TX. 45.3
- (107) Kuo CY, Showalter, I, Federle W, Crosby AJ, Irschick DJ. 2014. Digital tendon morphology and adhesive performance in five gekkotan lizards. Society for Integrative and Comparative Biology, Austin, TX. P3.153.
- (108) Irschick DJ, Crosby AJ, Federle W. 2014. The role of compliance in adhesion. Annual Human Frontiers Meeting, Lugano, Switzerland.
- (109) A comparative analysis of shark morphology. British Ecological Society Annual Meeting, Lille, France.
- (110) Irschick DJ, Kuo C, Gilman C, Showalter I, Moen D, Crosby AJ. 2015. Novel methods for understanding diversity in gecko toepads. Society for Integrative and Comparative Biology, Palm Beach, CA.
- (111) Grabar R, Gilman C, Irschick DJ. 2015. An analysis of effects of surface diameter on the jumping ability of two gecko species. Society for Integrative and Comparative Biology, Palm Beach, CA.
- (112) Irschick DJ, Gilman C, Imburgia M, Bartlett M, King D, Crosby AJ. 2015. Geckos as springs: Mechanics explains across-species scaling in adhesion. Adhesion Society Meeting, Savannah, GA.
- (113) Irschick DJ, Kuo C, Gilman C, Showalter I, Moen D, Crosby AJ. 2015. Novel methods for understanding diversity in gecko toepads. Adhesion Society Meeting, Savannah, GA.

(114) Brooks A, Breen B, Miller R, Irschick DJ. 2015. Morphological variation across juvenile green sea turtles (*Chelonia mydas*) in mangrove creeks on Eleuthera, The Bahamas. 35th Annual Symposium on Sea Turtle Biology and Conservation. Mulga, Turkey.

Invited seminars at Universities (68 invites total)

Domestic:

Clark University, Massachusetts
Cornell University, New York
Southeastern Louisiana University, Louisiana
University of Oklahoma, Oklahoma.
University of Kentucky, Kentucky
University of Cincinnati, Ohio
Washington University in St. Louis, Missouri
The University of California at Riverside, California
Indiana State University, Indiana
California State Northridge, California
Tulane University, Louisiana (2)
The University of California at Davis, California
The University of California at Berkeley, California
Sonoma State University, California
San Francisco State University, California
Brigham Young University, Utah
Amherst College, Massachusetts
The University of New Orleans, Louisiana
Louisiana State University, Louisiana
University of Southern Mississippi, Mississippi
University of Louisiana at Lafayette, Louisiana (2)
Virginia Tech University, Blacksburg, Virginia
Ohio University, Ohio
Northeastern Ohio Universities College, Ohio
Northern Arizona University, Arizona
Harvey Mudd University, California
Brown University, Rhode Island
University of Massachusetts at Amherst, Massachusetts
Colorado State University, Colorado
Florida State University, Florida
Oklahoma State University, Oklahoma
Loyola University, Louisiana
Concord Field Station at Harvard University, Massachusetts
Union College, New York
University of Tours, France
SUNY Stony Brook, New York
Rhode Island College, Rhode Island
Tufts University, Massachusetts
Boston University, Massachusetts
Indiana University, Indiana
University of Connecticut, Connecticut
University of Tennessee at Knoxville, Tennessee (2)
University of Alabama at Tuscaloosa, Alabama
University of Chicago

Harvard University, Massachusetts
University of Idaho, Idaho
University of Vermont, Vermont
Brandeis University, Massachusetts
University of Utah, Utah
Iowa State University, Iowa
Villanova University, Pennsylvania
New Jersey Institute of Technology (Guest lecture)
University of Rhode Island

International:

Carelton University, Canada
University of Ottawa, Canada
University of Tuebingen, Germany
The University of Glasgow, UK
The University of Oxford, UK
University of Tours, France
University of Antwerp, Belgium
Kasetsart University, Thailand
University of Sorbonne, Paris, France
Macquarie University, Australia
Cape Eleuthera Institute, Bahamas
Royal Veterinary College, London, UK

Invited talks at meetings and plenary lectures

1997 - Society for the study of Amphibians and Reptiles meeting, Seattle, Washington. “An evolutionary analysis of the ecological significance of maximal locomotor performance in West Indian *Anolis* lizards”.

2001 - The Society for Integrative and Comparative Biology, Chicago, Illinois. Oral presentation. “Evolutionary approaches for studying functional morphology: Examples from studies of performance capacity”. In the Symposium “Molecules, Muscles, and Macroevolution: Integrative Functional Morphology” (Invited speaker)

2002 – The American Physiological Society, San Diego, California. Oral presentation. “Using phylogenies to understand the evolution of function and behavior in lizards”. In the Symposium “Phylogenetic Approaches to Understanding Physiological Evolution” (Invited speaker).

2002 – Topics in Functional and Ecological Vertebrate Morphology (Symposium). Antwerp, Belgium. Oral Presentation. “Is evolution predictable? Co-evolutionary patterns of ecology, performance and morphology in old and new world lizard radiations” (Invited speaker)

2003 – The Society for Integrative and Comparative Biology, Toronto, Canada. Oral presentation. “Studying performance in nature: Implications for fitness variation within populations”. In the Symposium “Selection and Evolution of Performance in Nature” (Invited speaker).

2004 – The International Congress of Vertebrate Morphology, Boca Raton, Florida. Oral Presentation. “The ontogeny of habitat use and performance in Caribbean anoles”. In the Symposium “The ontogeny of performance in vertebrates” (Invited speaker).

2004 – The International Congress of Vertebrate Morphology, Boca Raton, Florida. Oral Presentation “Whole-organism studies of clinging and locomotion in arboreal pad-bearing lizards”. In the

2004 – University of Montana, Missoula, Montana. Oral presentation. “Ontogeny, performance, male polymorphism, and selection in lizards”.

2007 – The Society for Integrative and Comparative Biology, Phoenix, Arizona. Oral presentation. “Anti-predatory behavior and sexual dimorphism in *Anolis* lizards”. In the Symposium “Ecological dimorphisms in vertebrates: proximate and ultimate causes” (Invited speaker with Bieke Vanhooydonck).

2007 - **OCIB Symposium (Plenary lecturer)**. Carleton University and the University of Ottawa, Canada. “Bridging the gap between theory and reality in sexual selection; performance, fitness, and signaling”

2010 – Selected for the **EvE Hilgendorf Lecture Series (Plenary lecturer)**, University of Tuebingen, Germany (funded by the Volkswagen Company). Oral Presentation. “The evolution of animal performance: from microevolution to macroevolution”

2012 – World Congress of Herpetology, Vancouver, Canada. Oral Presentation. “The impact of tail loss on locomotor stability and mechanics.” (Invited speaker with Gary Gillis and Chi-Yun Kuo)

2012 - TEDx speaker, Sorbonne France, The New Age of Enlightenment. “Accidental science and the discovery of Geckskin™”

2013 – **SciTech Café, Amherst, MA**. “What lets geckos walk up walls?”.

2013 – **Graduate student choice speaker**, University of Utah, 2013. “The evolution of innovation: Geckos, shark teeth and all the imperfections of nature”

2013 – **Nerdnite Speaker**, Northampton, MA. “The Wonders of Geckskin”

2014 – **Keynote address**, Iowa State University. 2014 Ecology and Evolutionary Biology Research Symposium. “The evolution of innovation: Geckos, biomimicry and why life is imperfect”

2014 – **Joint lecture**, Tulane University. 2014 Joint Chemical Engineering and Ecology and Evolutionary Biology Departments. “Of gecko toes and sharks teeth: The evolution of innovation and the imperfection of nature”

2015 – **TTI Vanguard speaker**, San Diego, CA. 2015. “The Wonders of Geckos: A New Path Towards Bioinspiration?”

University Service

Tulane University (2001-2005)

Evolutionary Systematics Search committee

Graduate program review committee

University of Massachusetts at Amherst (2006-Present)

Biology dept. committees

Ecological physiology search committee chair (2007)
Evolutionary developmental biologist search committee (2009)
AQUAD Biology assessment committee (2007)
Interim biology chair search committee (2007)
Hiring priorities Committee (2007-2009)
Space committee (2007-Present)
Biology chair search committee (2008-2009)
Personnel committee (2008-2012)
Sinauer lectureship committee (2007-Present)
Research advisory committee (2009-2012)
Personnel committee chair (2011-2012)
Research advisory chair (2011-2012)
Chair, Alumni relations committee (2014-present)

Other committees

OEB steering committee (2007-Present)
Darwin Fellow search committee (2007)
Darwin Fellow funding committee (2007-Present)
OEB Graduate review committee (2007 and 2008)
OEB Evolution core course committee (2008-Present)
OEB Graduate organizing committee (2008-Present)
Publications committee, British Ecological Society (2010-present)
OEB grant committee (Chair, Spring 2012)

Graduate student thesis committee member:

Doonata Roome (Member, Tulane University)
Jennifer Coulson (Member, Tulane University)
Michael Guill (Member, Tulane University)
Philip Bergmann (Chair, Tulane University)
Christine Buckley (Chair, Tulane University)
David McMillan (Chair, Tulane University)
Shawn Vincent (Chair, Tulane University)
Simon Lailvaux (Chair, Tulane University)
Sharlene Santana (Member, University of Massachusetts at Amherst)
Joseph Chadwick (Member, University of Massachusetts at Amherst)
Tom Eiting (Member, University of Massachusetts at Amherst)
Nina Veselka (Member, M. S. University of Massachusetts at Amherst)
Michael Bartlett (Member, University of Massachusetts at Amherst)
Eliza Nelson (Member, University of Massachusetts at Amherst)
Andrew John Smith (2011, member, OEB guidance committee)
Jose Iriarte-Diaz-Diaz (member, Brown University)
Daniel Moen (Member, State University of New York-Stony Brook, external Committee Member)
Olivier Dangles (2007, HDR defense, external committee member, University of Tours, France)
Katleen Huyghe (2009, Ph.D. defense, external committee member, University of Antwerp, Belgium)
Christofer Clemente (2006, Ph.D. defense, external committee member, University Western Australia)
Bieke Vanhooydonck (2001, Ph.D. defense, external committee member, University of Antwerp, Belgium)
Stanley Shane (2011, Ph.D. External committee member, University of Alabama at Tuscaloosa)

Daniel King (2012, Ph.D. External committee member, University of Massachusetts at Amherst)
Yi-Fen Lin (2012, Ph.D. Guidance committee member, University of Massachusetts at Amherst)
John Hall (2013, Ph.D defense, external committee member, The University of the West Indies)
Dan Noble (2013, Ph.D defense, external committee member, Macquarie University)

Service to Profession:

- Division of Vertebrate Morphology (Society of Integrative and Comparative Biology) Nominating committee 2009
- Division of Vertebrate Morphology (Society of Integrative and Comparative Biology) Poster evaluation committee (2 years)
- Division of Vertebrate Morphology (Society of Integrative and Comparative Biology) Best Student talk evaluation committee (2 years)
- NSF Dissertation Improvement Grant Panel member (3 years)
- NSF panel member (2 years)
- Editorial Service (Quarterly Review of Biology, Functional Ecology, Open Conservation Biology Journal, Southeastern Naturalist)
- Reviewer for 64 peer-reviewed journals and organizations
- Publications committee, British Ecological Society (2010-Present)