

Elizabeth R. Dumont

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Education

Ph.D.	1993	S.U.N.Y. at Stony Brook, Anthropology
M.A.	1989	S.U.N.Y. at Stony Brook, Anthropology
B.A.	1985	Indiana University (Bloomington), Anthropology (with honors)

Academic Positions

2009 - present	Professor, Department of Biology, University of Massachusetts, Amherst
2006 - 2009	Associate Professor, Department of Biology, University of Massachusetts, Amherst
2001 - 2006	Assistant Professor, Department of Biology, University of Massachusetts, Amherst
1996 - 2001	Assistant Professor, Department of Anatomy, Northeastern Ohio Universities College of Medicine
1996 - present	Research Associate, Section of Mammals, Carnegie Museum of Natural History
1993 - 1996	Postdoctoral Teaching Fellow, Department of Neurobiology, University of Pittsburgh, School of Medicine

Grant Support

2014-2019	National Science Foundation , Collaborative Research, "Discovering genomic and developmental mechanisms that underlie sensory innovations critical to adaptive diversification." (P.I.) Direct Costs: \$294,092, Indirect costs: \$158,736
2014-2017	National Science Foundation , Collaborative Research, "Strain in cartilaginous fish skeletons" (P.I.) Direct Costs: \$ 139,371, Indirect Costs: \$ 82,229
2010-2012	National Science Foundation , Division of Undergraduate Education, "Seeing the Forest and the Trees" (P.I.) Direct Costs: \$135,217, Indirect Costs: \$64,774
2008 - 2012	National Science Foundation , Division of Biological Databases and Bioinformatics, "Biomesh: A digital resource collection on the biology-engineering interface" (P.I.) Direct Costs: \$670,425 (includes \$7,500 REU supplement) Indirect Costs: \$320,913

- 2006 Research Leadership Award. Office of the Vice Provost for Research, UMass Amherst. (P.I.) Total award: \$6,000 in matching funds
- 2005 - 2008 **National Science Foundation**, Division of Integrative Organismal Biology, "Finite element analyses of the mammalian skull: The impact of biting behavior." (P.I.) Direct Costs: \$225,042 Indirect Costs: \$108,034
- 1999 - 2002 **National Science Foundation**, Ecological and Evolutionary Physiology Program, "The ecomorphology of mammalian frugivores: A test of congruence between cranial morphology and feeding behavior." (P.I.) Total award: \$238,150
- 1995 - 1998 **National Science Foundation**, Ecological and Evolutionary Physiology Program, "The function of nonprismatic enamel in fruit and nectar-feeding mammals: A study of the interplay between dental structure, oral physiology and dietary niche." (P.I.) Total award: \$81,500
- 1995 University of Pittsburgh Medical School, "Salivary chemistry of African fruit- and nectar-feeding bats." (P.I.) Total award: \$1,500
University of Pittsburgh, Central Research Development Fund, "Enamel structure and dietary adaptation in Central American fruit bats." (P.I.) Total award: \$4,139
American Museum of Natural History, Theodore Roosevelt Fund, "Enamel structure and dietary adaptation in Central American fruit bats." (P.I.) Total award: \$1,650
- 1994 University of Pittsburgh, Center for Latin American Studies, "Nonprismatic enamel in Central American fruit bats: an integrative study of dental structure, oral physiology and dietary niche." (P.I.) Total award: \$2,975
- 1993 University of Pittsburgh Medical School, Teaching Development Grant, (P.I.) Total award: \$2,500
- 1989 - 1991 **National Science Foundation**, Doctoral Dissertation Improvement Grant, "Functional and phyletic features of mammalian dental enamel: evidence for primate higher-level relationships." With graduate advisor David W. Krause (P.I.). Total award: \$8,054
- 1987 Sigma Xi, Grant in Aid of Research, "Affinities of the Plagiomenidae (Mammalia: Dermoptera?): Enamel ultrastructural evidence." (P.I.) Total award: \$300

NSF Doctoral Dissertation Improvement grants to Graduate Students

- 2014-2015 To doctoral student Yi-Fe Lin, "Burrowing Behavior of Eastern Moles." Total award: \$16,997

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| 2014-2015 | To doctoral student Tom Eiting. “Functional and comparative morphology of the nasal cavity in phyllostomid bats.” Total award: \$10,487 |
| 1999 - 2000 | To doctoral student Christopher Nicolay. “The ecomorphology of feeding performance in nectar-feeding bats.” Total award: \$ 7,955 |

Honors and Awards

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| 2014 | Outstanding Service/Outreach, College of Natural Sciences, UMass Amherst |
| 2009-2010 | Family Research Scholar, Center for Research on Families, UMass Amherst. Declined. |
| 2007 | Plenary Speaker, 14 th International Bat Research Congress, Merida, Mexico |
| 2006 - 2007 | Lilly Teaching Fellow, UMass Amherst. |
| 2006 | Host, 86th annual meeting of the American Society of Mammalogists held at UMass Amherst, June 17-21, 2006 (co-Host Virginia Hayssen, Smith College). |
| 2003 - 2007 | Chairman, Board of Directors, North American Society for Bat Research (elected Board Member 2001-2007) |
| 1999 | Teacher of the Year - voted by the Northeastern Ohio Universities College of Medicine Class of 2002 |

PUBLICATIONS

Peer-Reviewed Journal Publications (♦ denotes a student)

1. Smith♦, A.J., Rosario, M.V., Eiting, T.P., **Dumont**, E.R. In press. Joined at the hip: linked characters and the problem of missing data in studies of disparity. *Evolution*.
2. Eiting♦, T.P., Smith, T.D., **Dumont**, E.R. In press. Olfactory epithelium in the olfactory recess: A case study in New World Leaf-nosed Bats. *The Anatomical Record*.
3. Eiting♦, T.P., T.D. Smith, J.B. Perot and E.R. **Dumont**. 2014. The role of the olfactory recess in olfactory airflow. *Journal of Experimental Biology*. 217: 1799-1803
4. **Dumont**. E.R., K. Samadevam♦, I.R. Grosse, O.M. Warsi♦, B. Baird♦, and L.M. Dávalos. 2014. Selection for mechanical advantage underlies multiple cranial optima in new world leaf-nosed bats. *Evolution*, 68(5):1436-1449.
5. Clare, E., H.R. Goerlitz, V.A. Drapeau, M.W. Holderied, A.M. Adams, J. Nageld, E.R. **Dumont**, P.D.N. Hebert, M.B. Fenton. 2013. Trophic niche flexibility in *Glossophaga soricina*: how a nectar seeker sneaks an insect snack. *Functional Ecology*, early view doi:

10.1111/1365-2435.12192.

6. McPherson, JD[♦], IR Grosse, K Sundar, J Wileden, MA Berthaume[♦] and ER **Dumont**. 2013. Integrating biological and engineering ontologies. ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, DETC2013
7. Dzialo, C. [♦], S.A. Wood[♦], A. Smith, D.S. Strait, E.R. **Dumont**, M. Berthaume[♦], I.R. Grosse. In press. Functional implications of squamosal suture size in *Paranthropus boisei*. *American Journal of Physical Anthropology*, early view doi: 10.1002/ajpa.22427.
8. Irschick, DJ, R.C. Albertson, P. Brennan, J. Podos, N. Johnson S. Patek and E.R. **Dumont**. (2013) Evo-devo beyond morphology: From genes to resource use. *Trends in Ecology and Evolution*. 28(5):267-73. DOI: 10.1016/j.tree.2012.12.004.
9. Berthaume MA[♦], **Dumont** ER, Godfrey LR, Grosse IR. 2013. How does tooth cusp radius of curvature affect brittle food item processing? *Journal of the Royal Society Interface* 10:20130240. <http://dx.doi.org/10.1098/rsif.2013.0240>
10. Santana, S.E. [♦], I.R. Grosse and E.R. **Dumont** (2012) Dietary hardness, loading behavior, and the evolution of skull form in bats. *Evolution*, 8:2587-2598 DOI: 10.1111/j.1558-5646.2012.01615.x
11. Grosse, I.R., S.A. Wood[♦], D.S Strait, E.R. **Dumont** and C.F Ross (2012) Response to the Comment by Groning and Fagan on "The effects of modeling simplifications on craniofacial finite element models: The alveoli (tooth sockets) and periodontal ligaments", *Journal of Biomechanics*, 44: 1831-1838 DOI: 10.1016/j.jbiomech.2012.01.047
12. **Dumont**, E.R., L.M. Dávalos, A. Goldberg, S.E. Santana[♦], K. Rex and C.C. Voigt (2012) Morphological innovation, diversification and invasion of a new adaptive zone. *Proceedings of the Royal Society B*, 79:1797-1805 DOI: 10.1098/rspb.2011.2005
13. Santana, S.E. [♦], I. Geipel, E.R. **Dumont**, M.B. Kalka and E.K.V. Kalko (2011) All you can eat: high performance capacity and plasticity in the 2 common big-eared bat, *Micronycteris microtis*3 (Chiroptera: Phyllostomidae). *PLoS One*, 6: 12 Article Number: e28584 DOI: 10.1371/journal.pone.0028584
14. Hammond, A.S. [♦], E.R. **Dumont** and R.C. McCarthy (2011) The effect of unerupted permanent tooth crowns on the distribution of masticatory stress in children. *PLoS One*, 6:12 Article Number: e29121 DOI: 10.1371/journal.pone.0029121
15. Leysen, H., G. Roos, E.R. **Dumont**, L. Brabant, L. Van Hoorebeke and Adriaens, D. (2011), Modeling stress in the feeding apparatus of seahorses and pipefishes. *Biological Journal of the Linnean Society*, 104: 680-691 DOI: 10.1111/j.1095-8312.2011.01733.x
16. Godfrey, L.R. B.E. Crowley and E.R. **Dumont** (2011) Thinking outside the box: A lemur's take on hominin craniodental evolution. *Proceedings of the National Academy of Sciences*, vol. 108 (38): E742.

17. Herrel, A., H.F. Choi, E.R. **Dumont**, N. De Schepper, B. Vanhooydonck, P. Aerts and D. Adriaens (2011) Burrowing and subsurface locomotion in anguilliform fish: behavioral specializations and mechanical constraints. *Journal of Experimental Biology* 214: 1379-1385.
18. **Dumont**, E.R., T.M. Ryan and L.R. Godfrey (2011) The *Hadropithecus* conundrum reconsidered, with implications for interpreting diet in fossil hominins. *Biological Journal of the Linnean Society*, 278:3654-3661.
19. Wood, S.A.♦, D.S. Strait, E.R. **Dumont**, C. F. Ross and I.R. Grosse 2011. The effects of modeling simplifications on craniofacial finite element models: The alveoli (tooth sockets) and periodontal ligaments. *Journal of Biomechanics* 44:1831-1838.
20. Santana, S.E.♦, S.G. Strait and E.R. **Dumont** (2011). The better to eat you with: Functional correlates of tooth structure in bats. *Functional Ecology* 25:839 - 847.
21. Davis J.L., **Dumont** E.R., Strait D.S. and Grosse I.R (2011) An efficient method of modeling material properties using a thermal diffusion analogy: an example based on craniofacial bone. *PLoSOne* 6(2): e1704.
22. Santana, S.E.♦, E.R. **Dumont** (2011) Do roost-excavating bats have stronger skulls? *Biological Journal of the Linnean Society* 102:1-10.
23. **Dumont**, E.R., J.L. Davis, I.R. Grosse and A.M. Burrows (2011) Finite element analyses of performance in the skulls of marmosets and tamarins. *Journal of Anatomy* 218:151-162.
24. Davis, J.L. Santana, S.E.♦ and E.R. **Dumont**. (2010) Predicting bite force in mammals: 2D vs. 3D lever models. *Journal of Experimental Biology* 213:1844-1851.
25. Santana, S.E.♦, E.R. **Dumont** and J.L. Davis. (2010) Mechanics of bite force production and its relationship to diet in bats. *Functional Ecology*. 24, 776–784
26. **Dumont**, E.R. (2010) Bone density and the lightweight skeletons of birds. *Proceedings of the Royal Society B* 277:2193-2198.
27. Smith, T.D., A.M. Burrows and E.R. **Dumont**. (2010) Microanatomical assessment of nasomaxillary suture patency. *Anatomical Record - Advances in Integrative Anatomy and Evolutionary Biology*, 293:651–657.
28. Dechmann, D.K.N., S. Santana♦ and E.R. **Dumont**. (2009) Roost making in bats – adaptations for excavating active termite nests. *Journal of Mammalogy* 90:1461–1468.
29. Santana, S. E.♦ and E.R. **Dumont**. (2009) Connecting behaviour and performance: The evolution of biting behaviour and bite performance in bats. *Journal of Evolutionary Biology* 22:2131-2145.

30. **Dumont**, E.R., A. Herrel, R.A. Medellín, J.A. Vargas-Contreras[♦] and S. E. Santana[♦] (2009). Built to bite: Cranial design and function in the wrinkle-faced bat. *Journal of Zoology*, 279:329-337.
31. Slater, G.[♦], E.R. **Dumont** and B. van Valkenburgh. (2009). Implications of predatory specialization for skull form and function in canids. *Journal of Zoology*, 278:181-188.
32. **Dumont**, E.R. I.R. Grosse and G. Slater.[♦](2009). Requirements for comparing the performance of finite element models of biological structures. *Journal of Theoretical Biology*. 256:96–103.
33. Reinholt, L.E.[♦], A.M. Burrows, T.P. Eiting[♦], E.R. **Dumont** and T.D. Smith. (2009). Brief Communication: Histology and micro CT as methods for assessment of facial suture patency. *American Journal of Physical Anthropology*, 138:499-506.
34. Tanner[♦] J.B., E.R. **Dumont**, S.T. Sakai, B.L. Lundrigan, and K.E. Holekamp. (2008). Of arcs and vaults: The biomechanics of bone-cracking in spotted hyenas (*Crocuta crocuta*). *Biological Journal of the Linnean Society*, 95:246–255.
35. Carmody[♦] K.L., M.P. Mooney, G.M. Cooper, C.J. Bonar, M.I. Siegel, E.R. **Dumont** ,and T.D. Smith. (2008) Relationship of premaxillary bone and its sutures to deciduous dentition in non human primates. *Cleft Palate Craniofacial Journal*, 45(1):93–100.
36. **Dumont**, E.R. (2007) Feeding mechanisms in bats: Variation within the constraints of flight. *Integrative and Comparative Biology*, 47:137-146.
37. Werle, S.F., N.A. Johnson, E.R. **Dumont** and P. Parasiewicz. (2007) Ecological dissimilarity analysis: A simple method of demonstrating community-habitat correlations for frequency data. *Northeastern Naturalist*, 14(3):439–446.
38. Grosse, I.R., E.R. **Dumont**, A. Tolleson[♦] and C.E. Coletta.[♦] (2007) Techniques for modeling muscle-induced forces in finite element models of skeletal structures. *Anatomical Record - Advances in Integrative Anatomy and Evolutionary Biology*, 290(9):1069-1088.
39. **Dumont**, E.R. and C.W. Nicolay.[♦] 2006. Cross-sectional geometry of the dentary in plant-visiting bats. *Zoology*, 109:66-74.
40. **Dumont**, E.R., J. Piccirillo[♦], and I.R. Grosse. 2005. Finite element analysis of biting behavior and bone stress in the facial skeletons of bats. . *Anatomical Record - Advances in Integrative Anatomy and Evolutionary Biology*, 293:319-330.
41. **Dumont**, E.R., G. W. Weiblen, and J. Winkelman. 2004. Preferences of fig wasps and fruit bats for figs of functionally dioecious *Ficus pungens*. *Journal of Tropical Ecology*, 20:233-238.
42. **Dumont**, E.R. and R. O’Neil.[♦] 2004. Fruit hardness, feeding behavior, and resource partitioning in Old World fruit bats (Family Pteropodidae). *Journal of Mammalogy*, 85:8-14.

43. Vandoros, J. D. and E.R. **Dumont**. 2004. Use of the wings in manipulative and suspensory behaviors during feeding by frugivorous bats. *Journal of Experimental Zoology*, 301:361-366.
44. **Dumont**, E.R. 2004. Patterns of diversity in cranial shape among plant-visiting bats. *Acta Chiropterologica*, 6:59-74.
45. **Dumont**, E.R. and A. Herrel. 2003. The effects of gape angle and bite point on bite force in bats. *Journal of Experimental Biology*, 206:2117-2123.
46. Bonaccorso, F. J., J. R. Winkelmann, E.R. **Dumont**, and K. Thibault. 2002. Home range of *Dobsonia minor* (Pteropodidae): A solitary, foliage-roosting fruit bat in Papua New Guinea. *Biotropica*, 34: 138-146.
47. **Dumont**, E.R., S.G. Strait, and A. R. Friscia. ♦ 2000. Abderitid marsupials from the Miocene of Patagonia: An assessment of form, function, and evolution. *Journal of Paleontology*, 74(6): 1161-1172.
48. Nicolay CW. ♦ and E.R. **Dumont**. 2000. An experimental analysis of feeding behavior in a nectarivorous bat, *Syconycteris australis*. *Mammalia*, 64: 155-161.
49. **Dumont**, E.R. 1999. The effect of food hardness on feeding behavior in frugivorous bats (Family Phyllostomidae): An experimental study. *Journal of Zoology*, 248: 219-229.
50. **Dumont**, E.R., K.R. Etzel, and J.D. Hempel. 1999. Bat salivary proteins segregate according to diet. *Mammalia*, 62: 159-166.
51. Wood, C.B., E.R. **Dumont**, and A.W. Crompton. 1999. New studies of enamel microstructure in Mesozoic mammals: a review of enamel prisms as a synapomorphy of Mammalia. *Journal of Mammalian Evolution*, 6: 177-214.
52. Maas, M.C. and E.R. **Dumont**. 1999. Built to last - A microscopic view of the morphology and evolution of primate dental enamel. *Evolutionary Anthropology*, 8: 133-152.
53. **Dumont**, E.R. 1997. Cranial shape in fruit, nectar and exudate feeders: Implications for interpreting the fossil record. *American Journal of Physical Anthropology*, 102: 187-202.
54. **Dumont**, E.R. 1997. Salivary pH and buffering capacity in frugivorous and insectivorous bats. *Journal of Mammalogy*, 78:1210-1219.
55. **Dumont**, E.R. 1996. Enamel prism morphology in molar teeth of small eutherian mammals. *Scanning Microscopy*, 10: 349-370.
56. **Dumont**, E.R. 1996. Variation in quantitative parameters of enamel microstructure as assessed using confocal microscopy. *Archives of Oral Biology*, 41: 1053-1063.
57. **Dumont**, E.R. 1995. The effects of sectioning angle on measurements of enamel prisms: Implications for comparative studies. *Archives of Oral Biology*, 40: 959-966.
58. **Dumont**, E.R. 1995. Mammalian enamel prism patterns and enamel deposition rates.

Scanning Microscopy, 9: 429-442.

59. **Dumont**, E.R. 1995. Correlations between enamel thickness and dietary adaptation among extant primates and chiropterans. *Journal of Mammalogy*, 76: 1127-1136.
60. **Dumont**, E.R. 1986. Mid-facial tissue depths of white children: An aid in facial feature reconstruction. *Journal of Forensic Science*, 31: 1463-1469.

Peer-Reviewed Book Chapters

Dumont, E.R. and S. Swartz. 2009 Biomechanical approaches and ecological research. In *Ecological and Behavioral Methods for the Study of Bats*, T.H. Kunz and G. Jones (eds).

Dumont, E.R. 2006. The correlated evolution of cranial morphology and feeding behavior in new world fruit bats. Pp. 160-177 In: *Functional and Ecological Morphology of Bats*. T.H. Kunz, G. McCracken, and Z. Akbar (eds). Oxford University Press, New York.

Dumont, E.R. 2003. Bats and fruit: An ecomorphological approach. Pp. 398-429 In: *Ecology of Bats*. T.H. Kunz and B. Fenton (eds). University of Chicago Press, Chicago.

Dumont, E.R. 2000. Cranial morphology and diet in gliding marsupials and flying lemurs. Pp. 249-272 In: *Biology of Gliding Mammals*. R.L. Goldingay and J.S. Scheibe (eds). Filander Press, Fürth.

Dumont, E.R. and T.M. Bown. 1997. New caenolestoid marsupials from Miocene deposits of Colombia. Pp. 207-212 In: *Vertebrate Paleontology in the Neotropics: The Miocene Fauna of La Venta, Colombia*. R.F. Kay, R.H. Madden, R.L. Cifelli and J.J. Flynn (eds). Smithsonian Institution Press.

Invited Conference Symposia and Workshops

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| 2010 | 15 th International Bat Research Congress, Prague, Czeck Republic |
| 2009 | Craniofacial Biomechanics: <i>in vivo</i> to <i>in silico</i> . Sponsored by the Anatomical Society Great Britain and Ireland, York, UK |
| 2008 | Society of Vertebrate Paleontology, Austin Texas |
| 2007 | Society for Integrative and Comparative Biology, Phoenix
International Congress for Vertebrate Morphology, Paris, France
Plenary Speaker, 14 th International Bat Research Congress, Merida, Mexico
Geomagic Convergence (Industry-based Conference, Raleigh) |
| 2006 | Society of Vertebrate Paleontology, Toronto, Canada |
| 2004 | Society for Experimental Biology, Edinburgh, Scotland |

- International Congress for Vertebrate Morphology, Boca Raton, Florida
- 2001 12th International Bat Research Congress, Kuala Lumpur, Malaysia
- 2000 Australasian Bat Research Conference, Tocal, Australia

Invited Departmental Seminars

- 2013 Michigan State University, xx
- 2011 University of Illinois, Department of Biology
University of Chicago, Organismal Biology & Anatomy
- 2010 UMass Amherst, Department of Veterinary and Animal Sciences
University of Chicago, xx
- 2008 Texas Tech University, Department of Biological Sciences
Iowa State University, Department of Bioinformatics
Missouri University of Science & Technology, Department of Computer Science
- 2007 UMass Amherst, Program in Organismic and Evolutionary Biology
- 2006 Florida Southern University, Department of Biology
- 2005 Brown University, Department of Anatomy
- 2004 Northeastern University, Department of Biology
- 2003 Boston University, Department of Biology
University of Maine, Department of Biology
- 2002 Harvard University, Concord Field Station
- 2001 University of Akron, Department of Biology
Oklahoma State University, Department of Zoology
Smithsonian Tropical Research Institute, Barro Colorado Island, Panama
- 1999 Marshall University, Keynote Speaker, Sigma Xi Banquet
- 1998 CSIRO Tropical Forest Research Institute, Atherton, Australia
- 1997 S.U.N.Y. at Stony Brook, Department of Anatomical Sciences
- 1996 Ohio University, Department of Biological Sciences
University of Colorado (Boulder), Department of Biology
University of Costa Rica (San Jose), Department of Biology

Contributed Conference Presentations (last three years only; ♦ denotes a student)

Gussekløo, S.W.S.; Grosse, I.R.; Berthaume, M.; Dumont, E.R. 2012. Finite element modeling suggests functional divergence in the skulls of palaeognathous and neognathous birds. Society for Integrative and Comparative Biology (Charleston, SC)

Dumont, E.R.; Davalos, L.M.; Goldberg, A.; Santana, S.E.; Rex, K.; Voigt, C.C. 2012. Cranial Morphology, Feeding Performance and Diversification in New World Leaf-Nosed Bats. Society for Integrative and Comparative Biology (Charleston, SC)

Eiting, T; Smith, T; Forger, N; Dumont, E.R. 2012. Comparing Sensory Abilities: Olfactory Bulb Size and Olfactory Sensitivity in Phyllostomid Bats. Society for Integrative and Comparative Biology (Charleston, SC)

M.A. Berthaume, E.R. Dumont, L.R. Godfrey, I.R. Grosse. 2012. Parametric model of a bunodont molar. American Association of Physical Anthropologists (Portland, OR)

B.W. Wright, L.R. Godfrey, D. Pulaski, A. Heller, I.R. Grosse, E.R. Dumont. 2012. In silico comparisons of craniofacial biomechanics in platyrrhine and strepsirrhine destructive and extractive foragers to determine the diet and ingestive behavior of the subfossil Archaeolemur. American Association of Physical Anthropologists (Portland, OR)

Santana, S.E. and Dumont, E.R. 2011. Functional correlates of tooth structure in bats. Society for Integrative and Comparative Biology (Salt Lake City, UT)

Dumont, E.R., Samavedam, K.C. and Grosse, I.R. 2011. Mechanical Optimization and skull form in New World leaf-nosed bats. Society for Integrative and Comparative Biology (Salt Lake City, UT)

Rosario, M.V., Patek, S.N. and Dumont, E.R. 2011. Comparing elastic energy structures in mantis shrimp using finite element analysis. Society for Integrative and Comparative Biology (Salt Lake City, UT)

L.R. Godfrey and E.R. Dumont. 2011. The Hadropithecus conundrum - solved. XXIII Congress of the International Primatological Society, Kyoto, Japan.

Dumont, ER, Davalos, LM, Goldberg, A, Voigt, CC, Rex, K and SE Santana. 2010. Frugivory and the diversification of phyllostomid bats. 15th International Bat Research Congress, Prague, Czech Republic.

Santana, SE, and ER Dumont. 2010. Switching gears: The evolution of plasticity in feeding behavior and performance in phyllostomids. 15th International Bat Research Congress, Prague, Czech Republic.

Santana, SE, Dumont, ER, and JL Davis. 2010. Mechanisms of bite force production and their relationship with diet in Neotropical leaf-nosed bats. Society for Integrative and Comparative Biology, Seattle WA.

Dumont, ER, Godfrey L R and TM Ryan. 2010. A structural analysis of feeding in Archaeolemur and Hadropithecus using finite element analysis. American Association of Physical Anthropology, Albuquerque, NM.

Field Experience:

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| 1999 - present | Expedition Leader. Collection of behavioral, biomechanical and ecological data from bats in Panama, Australia, Papua New Guinea, Costa Rica, Dominican Republic, and Jamaica. |
| 1995 - 1999 | Expedition Leader. Survey of salivary chemistry among bats, marsupials and primates and the collection of data describing the physical and chemical properties their foods in Costa Rica, Panama, Australia, and Papua New Guinea. |
| 1995 | Member, Joint Expedition (Carnegie Museum of Natural History and University of Addis Ababa) to conduct a mammalian biodiversity survey in North-Central Ethiopia. |
| 1989 | Member, Joint Expedition (S.U.N.Y. at Stony Brook and Museo de Ciencias Naturales, Buenos Aires) to Argentina to collect Miocene mammals (two expeditions to Chubut and Santa Cruz Provinces, one in January and another in December). |

TEACHING**Courses - University of Massachusetts, Amherst**

Mammalogy (Bio548, 4 credits, average enrollment = 65). This course entails lectures and readings on the comparative biology and evolutionary relationships of mammals. The laboratory portion involves detailed introduction to the New England mammalian fauna and a survey of all mammalian orders. Lab exercises emphasize ecology, anatomy and morphological adaptations. I am solely responsible for this course, provide all the lectures, and developed the laboratory exercises. I have taught this course seven times since 2001.

Tropical Field Biology (Bio 497H, 3 credits, average enrollment = 26). This Honors course provides students with informative lectures on topics in tropical biology and one-on-one mentorship through the process of developing and executing independent research projects. Until 2008, the highlight of the course is conducting research projects over their spring break at the Virgin Islands Environmental Research Station in St. John (USVI). Since then, as course leader, I have moved the field trip to Costa Rica and Panama. I have participated in this team-taught course since 2002, providing lectures and supervising the development, execution, analysis and presentation of 4-6 independent undergraduate research projects each year.

Biology of Social Issues (Bio105, 3 credits, average enrollment = 300). This General Education course is designed to provide non-majors with the basic scientific knowledge that an informed citizen needs to develop thoughtful positions on controversial questions related to medical ethics, environmental degradation, biotechnology, and evolution. My role in this course was to develop 1/3 of the lectures and an exam covering that material. This is a team-taught course. I have taught this course four times.

Discussion Group on Gender and Science (Fall, 2008). As leader of this Thursday Lunch Discussion Group for the graduate program in Organismic and Evolutionary Biology (OEB), I developed an integrated series of readings surrounding the issue of gender and science. The readings were drawn from peer-reviewed literature and designed to address issues including the relationship of gender to hiring, negotiation, salary, tenure, promotion, family, and job satisfaction. All members of OEB and the Department of Biology community were welcomed to attend. Weekly attendance ranged between 15 and 25 graduate students and faculty.

Art/Biology Studio Research (Bio497R, 3 credits, average enrollment = 18). This course was an experimental collaboration between the Biology and Art Departments. Undergraduates from both departments worked independently and in small, integrated groups to develop multimedia science education exhibits. I taught this course twice with a faculty member from the Art Department.

Courses at Other Universities (prior to employment at UMass)

Northeastern Ohio Universities College of Medicine (Assistant Professor, 1996-2001)

Human Gross Anatomy (lecturer and laboratory instructor)

Developmental Medicine (lecturer, normal embryology)

Mammalian Evolution (guest lecturer)

Introduction to Physical Anthropology (guest lecturer)

Problem Based Learning Facilitator

The University of Pittsburgh Medical School (Postdoctoral Teaching Fellow, 1993-1996)

Gross Anatomy of the Human Body (member curriculum design group, lecturer, laboratory instructor, problem based learning facilitator)

Surgical Anatomy (curriculum design and laboratory instruction)

Gross Anatomy for Graduate Students (curriculum design, lecturer, laboratory instructor)

Structure, Development, and Function of Specialized Tissue (laboratory instructor, problem based learning facilitator)

Supervision of Undergraduate Research (University of Massachusetts only)

Honors Theses (Major Advisor)

Jeffery Strait, (BS in Ecology and Conservation, expected Spring 2013). Owl predation on bats in Haiti.

Russ Diatale, (BS in Engineering, Spring 2010) Root depth, crown height and stress in ungulate molar teeth. (I serve as co-mentor)

Mat Weissinger (BS in Engineering, Spring 2009) The effect of progressive decimation on the performance of finite element models. (I serve as co-mentor)

Paul Chatelaine (B.S. in Biology, Spring 2007). The ontogeny of biting performance in shrews (*Blarina brevicauda*).

Huai-Ti Lin (B.S. in Biology and Physics, Spring 2006). A novel magnetic method for collecting measuring 2D kinematic data.

Jamie Green (B.S. in Biology, Spring 2004), Functional implications of variation in cranial base flexion among bats (Order Chiroptera).

Kathryn Lipson (B.S. in Biology, 2003), Testing the 'triangle of support' model of masticatory function.

Jason Vadoros (B.S. in Biology 2003), Use of the wings in manipulative and suspensory behaviors by fruit bats.

Foad Rashek (B.S. in Biology 2003), Inter- and intra-specific variation in tooth sharpness among fruit bats.

Undergraduate Independent Study Projects

I have supervised 25 undergraduate independent study projects since arriving at UMass Amherst in the fall of 2001 (two were co-mentored). These projects have ranged from original laboratory research to detailed review papers and the development of a searchable on-line database. One student was supported through the NSF Undergraduate Mentoring in Environmental Biology (UMEB) program. In addition to Biology majors, I have supervised interdisciplinary projects for students majoring in Classics, Physics, and Mechanical Engineering. Of these students, over half were either women or minorities.

Supervision of Graduate Student Research

Major Advisor

Sharlene Santana, Ph.D. in OEB 2010 (Assistant Professor, University of Washington)

Tom Eiting, Ph.D. in OEB 2014

Nina Veselka, MS in OEB 2012

Andy Smith, PhD program, entered OEB program in September of 2011

Yi-Fen Lin, PhD program, entered OEB program in September of 2011

Natasha Korobov, non-thesis M.S. 2004, OEB, UMass Amherst.

Alta Dawson, non-thesis M.S. 2003, OEB, UMass Amherst.

Chris Nicolay, Ph.D. 2001, (Associate Professor, University of North Carolina, Asheville)

Member, Graduate Committees

PhD:

Chi-Yun Quo (current OEB student)

Skye Long (current OEB student)

Eric Dewar (Ph.D. 2008, OEB, UMass Amherst)

Philip Bergman (Ph.D. 2008, OEB, UMass Amherst)

Suzette Stephens (Ph.D. 2005, Natural Resources Conservation, UMass Amherst)

Andrea Ward (Ph.D. 2005, OEB, UMass Amherst)

Tim Koneval (Ph.D. 2003, Biology, UMass Amherst)

Alistair Evans (Ph.D. 2003, Zoology, Monash University, Australia)

Gina Semprebon (Ph.D. 2002, Biology, UMass Amherst)

Scott LeRoy (Ph.D. 1999, Kent State University)

Stephanie Belovitch (Ph.D. 1999, Kent State University)

Rich May (Ph.D. 1997, Kent State University)

Petra Van der Mark (Ph.D. 1997, Kent State University)

Masters:

Mike Berthaume (M.S. Mechanical & Industrial Engineering, 2011)

Krishna Samedevam (M.S. Mechanical & Industrial Engineering, 2010)

Caroline Rounds (M.S. 2010, OEB, UMass Amherst)

Diana Walden (M.S. 2008, Natural Resources Conservation, UMass Amherst)

Anna Gabella (M.S. 2007, OEB, UMass Amherst)
 Reilly O'Neal (M.S. 1999, Kent State University)
 Amy Harrison (M.S. 1998, Kent State University)

PROFESSIONAL SERVICE

2013-2017	Editorial Board, Journal of Morphology
2010-2013	Member, executive committee, International Society of Vertebrate Morphologists
2008-2011	Associate Editor, Journal of Mammalogy
2008-2011	NSF Panel Member
2008	Invited Participant, Amphibian Ontology Workshop (St. Louis)
2007 - present	Developer, Instructor and Host of annual 7-day workshop, "Finite Element Modeling in Biology", held on the UMass Amherst Campus.
2006	Host, 86th annual meeting of the American Society of Mammalogists held at UMass Amherst, June 17-21, 2006 (co-Host Virginia Hayssen).
2005	NSF Panel Member
2003 - present	Member, Scientific Advisory Board, Lubee Bat Conservancy, Gainesville
2003	Consultant to the Rabies Unit, Center for Disease Control (CDC)
2003 - 2007	Chairman, Board of Directors, North American Society for Bat Research (elected Board Member 2001-2007)
2003	Chairman, Student Prize Committee, North American Society for Bat Research (Committee Member 1998 – 2003, 2011)
2002	Ad Hoc grant reviewer for the National Geographic Society, the Miami Metro Zoo, and the Lubee Foundation
2001	Co-organizer of symposium entitled "New Perspectives in Functional Morphology" 12 th International Bat Research Conference (Kuala Lumpur, Malaysia)
1999 - 2001	Member, J.T. Gregory Prize Committee, Society of Vertebrate Paleontology
1996 - present	Ad Hoc reviewer, National Science Foundation Programs in Ecological and Evolutionary Physiology, Ecology, Integrative Organismal Biology, Physical Anthropology, HOMINID, Ecology, Databasing and Bioinformatics, Biological Resource Collections, and Environmental Biology

1992 Co-organizer of symposium entitled "Enamel Microstructure in Mammalian Evolution" Society of Vertebrate Paleontology, (Toronto, Canada)

Reviewer: *Acta Chiropterologica, Anatomical Record, American Journal of Physical Anthropology, American Museum Novitates, Archives of Oral Biology, Biotropica, Conservation Biology, Evolution, Journal of Anatomy, Journal of Experimental Biology, Journal of Human Evolution, Journal of Mammalogy, Journal of Morphology, Journal of Tropical Biology, Journal of Zoology (London), International Journal of Primatology, Paleobiology, Physiological and Biochemical Zoology, PNAS, Proceedings of the Royal Society of London, Scanning Microscopy, Southeastern Naturalist* (Guest Editor), University of Chicago Press

Professional Associations: *American Society of Mammalogists, Association of Tropical Biologists, North American Society for Bat Research, Society for Integrative and Comparative Biology*

UNIVERSITY SERVICE (UMASS AMHERST ONLY)

2014	Member, Search Committee for Senior Vice Chancellor for Academic Affairs and Provost
2012-2013	Member, ad hoc committee on Campus Collections (2012-present)
2012-2013	Member, Search Committee, Director of Animal Care
2012-2013	Joint Task Force for Strategic Oversight, Provost's Representative and co-chair subcommittee on "Strategies for Building Across Boundaries"
2012-present	Chair, Biology Personnel Committee (member since 2011)
2010- present	Director, Graduate Program in Organismic and Evolutionary Biology
2009-2011	Chair, Morrill Day Committee
2009 - present	Chair, Biology Department Space Committee (member since 2005)
2009	Member, Evolutionary Development Search Committee (Biology)
2008-2009	Faculty recruiter for the NSF-funded, STEM diversity program Northeastern Alliance for Graduate Education and the Professoriate" (NEAGAP).
2008	Member, Ecological Physiology Search Committee (Biology) Member, OEB AQAD Preparation Team Member, Search Committee, Clerk IV position
2008 - present	Director, Natural History Collections Member, President's Council, Massachusetts Academy of Sciences

2007 - 2008	Member, Ad Hoc Faculty Hiring Priority Committee Member, Search Committee for Interim Chair (Biology) Member, Biology AQAD Research Committee
2006 - 2009	Associate Director and Chair of Admissions, Graduate Program in Organismic and Evolutionary Biology
2006	Member, Evolutionary Ecology Search Committee (Biology) Personnel Committee Representative, Genomics Search Committee
2005	Member, Darwin Fellow Search Committee Member, Ad Hoc Faculty Hiring Priorities Committee (Biology) Developed cross-college collaborations between NSM and the School of Engineering (MIE Department) and between NSM and HFA (Art Department)
2005 – 2011	Member, Institutional Animal Care and Use Committee
2004 - 2007	Member, Biology Personnel Committee
2003	Member, committee to evaluate the OEB preliminary exam experience Member, workgroup to develop administrative component of Evolutionary Synthesis Center Pre-Proposal Member, Ad Hoc Faculty Hiring Priority Committee (Biology)
2002 – 2006	Member, Admissions Committee, Graduate Program in Organismic and Evolutionary Biology
2001– present	Member, Steering Committee, Graduate Program in Organismic and Evolutionary Biology Curator of Mammals, UMass Natural History Collections Member, Steering Committee, UMass Natural History Collections Attendee, OEB Thursday Lunch Discussion Group

PRESS

National/International: New York Times; BBC Earth News, Scientific American blog, Nature News, Quirks and Quarks, Science Daily, Royal Society Publishing news, PopSci.com; Functional Ecology podcast, Live Science, PhysOrg, Ducks Unlimited, Medical Imaging Magazine, numerous international science blogs

Local: Mass High Tech Magazine, Valley Free Radio, WFCR (local NPR station), 2008 Report on Research (UMass)

OUTREACH (UMASS AMHERST ONLY)

2012	Speaker at Science Café
2008-2012	Interview on careers in science for 5 th & 6 th grade students from the Common School (Amherst)

2007 - 2008	NEAGEP diversity outreach recruiter The Notch Visitor Center – Public talk on bat biology
2005, 2006, 2008	Mentored undergraduate students in the development of educational displays in Morrill Science Center
2005	Bat education, Girl Scouts
2003	Expert interview on local bats for the Springfield Herald Presentation for 10 th grade Career Day, Monson High School
2003, 2004	Judge, Regional Science Fair
2001, 2003, 2008	Seminars for BIOTAP program
2001- present	Receive and respond to inquiries from local community members concerning bats and other mammals