

TINA R. CHANG

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EDUCATION

Ph.D., Experimental Psychology (concentration in Animal Behavior), minor in Behavioral Technology, Georgia Institute of Technology, Atlanta, GA, 1999

Dissertation: *Development and evaluation of a behavioral husbandry program in a zoo setting.* (Advisor: Terry L. Maple, PhD)

M.S., Experimental Psychology (concentration in Animal Behavior), minor in Architecture, Georgia Institute of Technology, Atlanta, GA, 1991

Thesis: *Social behavior and activity budgets of captive mandrills (*Mandrillus sphinx*): a comparison of a traditional exhibit and an ecologically representative habitat.* (Advisor: Terry L. Maple, PhD)

B.A., Psychology, minor in Biological Anthropology, University of California, Davis, Davis, CA, 1988

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

Animal Behavior Society (ABS) • Environmental Design and Research Association (EDRA)
• Center for Behavioral Neuroscience (CBN)

ACADEMIC AND PROFESSIONAL INTERESTS

Research

Environmental preference, evolutionary adaptation, and fractal analysis • Primate behavioral ecology • Undergraduate teaching

Teaching

Research Methods • Statistics • Animal Behavior • Learning & Cognition • Environment & Behavior • Peer Led Team Learning (PLTL)

Consulting

Survey design • Behavioral management programs • Behavioral enrichment, behavior modification, & positive reinforcement training

RESEARCH APPOINTMENTS

2003-present **Principle Investigator**, Environment & Behavior Lab, Department of Psychology, Morehouse College, Atlanta, GA

- 1999– 2003 **Research Affiliate**, Zoo Atlanta, Atlanta, GA
- 1996– 1998 **Senior Research Associate**, TECHlab, Zoo Atlanta & School of Psychology, Georgia Institute of Technology, Atlanta, GA
- 1994– 1996 **Research Associate**, Conservation & Research Department, Zoo Atlanta & School of Psychology, Georgia Institute of Technology, Atlanta, GA
- 1989– 1991 **Graduate Research Assistant**, School of Psychology, Georgia Institute of Technology, Atlanta, GA
- 1988 **Research Assistant**, Department of Anthropology, University of California, Davis, Davis, CA
- 1987– 1988 **Primate Ethology Intern**, California National Primate Research Center, University of California, Davis, Davis, CA
- 1988 **Environmental Planning and Management Intern**, Department of Environmental Planning and Management, University of California, Davis, Davis, CA & California Department of Parks and Recreation, Sacramento, CA

CURRENT RESEARCH PROJECTS

- Chang, T.R. (*Research in progress*). Quantifying perceived affordances: Predicting space use and environmental preference using the fractal dimension.
- Chang, T.R. & Fine, L.I. (*Research in progress*). Developing the apprentice scientist: A comparison of feedback methods to improve scientific writing.

RESEARCH REPORTS

- Onifade, E.O., Chang, T.R., Jackson, D.M., & Currey-Owens, T. (*Manuscript in preparation*). Examining the effectiveness of take-home exams on learning: Diffusion of responsibility, free-loading, and performance.
- Chang, T. R., Bloomsmith, M.A., Maple, T.L. (*Manuscript in revision*). Factors influencing keepers' role in the implementation and use of behavioral management at zoos. *Zoo Biology*.
- Onifade, E.O., Jackson, D.M., Chang, T.R., Thorne, J., & Allen, C. (2011). Recall and the serial position effect: the role of primacy and recency on accounting students' performance. *Academy of Educational Leadership Journal*, 15(3), 65-87. (*Received the Academy of Educational Leadership Distinguished Research Award*).
- Chang, T.R., Bloomsmith, M.A., Maple, T.L. (2007). An evaluation of the effectiveness of goal-setting and dedicated support staff for promoting the use of behavioral enrichment and training by animal care personnel at zoos. In V.J. Hare and K.E. Worley (Eds.),

Proceedings of the Eighth International Conference on Environmental Enrichment. San Diego, CA: The Shape of Enrichment, Inc.

Chang, T.R. (2005). Knowledge, attitude and the use of behavioral enrichment by animal care personnel at zoos. In V.J. Hare and K.E. Worley (Eds.), *Proceedings of the Seventh International Conference on Environmental Enrichment* (p. 88). New York, NY: Wildlife Conservation Society.

Chang, T.R., Forthman, D.L., Maple, T.L. (1999). Comparison of confined mandrill (*Mandrillus sphinx*) behavior in traditional and “ecologically representative” exhibits. *Zoo Biology*, 18, 163-176.

Chang, T.R., Bloomsmith, M.A., Forthman, D.L., Kneidinger, L., Feldman, J.M., Maple, T.L. (1998). Development and scientific evaluation of a behavioral husbandry program at Zoo Atlanta. In V.J. Hare and K.E. Worley (Eds.), *Proceedings of the Third International Conference on Environmental Enrichment* (pp. 248-250). San Diego, CA: The Shape of Enrichment, Inc.

Forthman, D.L., Chang, T.R., Elder, S.D. (1994). Behavioral comparison of captive drills (*Papio leucophaeus*) and mandrills (*Papio sphinx*). In J.J. Roeder, B. Thierry, J.R. Anderson, N. Herrenschildt (Eds.), *Current Primatology, v. II: Social Development, Learning and Behavior* (pp. 193-198). Strasbourg, France: Universite Louis Pasteur.

PROFESSIONAL MEETING PRESENTATIONS & INVITED TALKS

Onifade, E.O., Jackson, D.M., Chang, T.R., Thorne, J., & Allen, C. (2010). Recall and the serial position effect: The role of primacy and recency on accounting students’ performance. Paper presented at the Allied Academies Spring 2010 International Conference, New Orleans, April 2010.

Chang, T.R. (2009). Peer-Led Team Learning (PLTL) in psychology. Invited presenter at the Expanding Peer Led Team Learning (PLTL) in the Sciences and Mathematics: Strategies for Successful Implementation National Conference at Morehouse College, Atlanta, GA.

Chang, T.R., Bloomsmith, M.A., Maple, T.L. (2007). An evaluation of the effectiveness of goal-setting and dedicated support staff for promoting the use of behavioral enrichment and training by animal care personnel at zoos. Poster presented at the 8th International Conference on Environmental Enrichment, Vienna, Austria.

Chang, T.R. (2005). Factors influencing the use of behavioral enrichment at U.S. zoos. Poster presented at the American Zoo and Aquarium Association (AZA) Annual Conference. Chicago, IL.

- Chang, T.R. (2005). Knowledge, attitude and the use of behavioral enrichment by animal care personnel at zoos. Paper presented at the Seventh International Conference on Environmental Enrichment, New York, NY.
- Chang, T.R. (2001). Environmental preference and the Savannah hypothesis. Paper presented at the University of Nairobi/Great Lakes Colleges Association Seminar of the Global Partners' Nairobi 2001 Symposium: East Africa in Transition: Identities, Images, and Institutions. University of Nairobi, Nairobi, Kenya.
- Forthman, D.L., Stoinski, T.S., Chang, T.R., Elder, S.D. (2000). Maternal behavior in captive drills. Paper presented at the 37th Annual Meeting of the Animal Behavior Society, Atlanta, GA.
- Chang, T.R., Maple, T.L. (1998). Use of Noldus' Observer for behavioral research at Zoo Atlanta's TECHlab. Poster presented at Measuring Behavior '98: 2nd International Conference on Methods and Techniques in Behavioral Research, Groningen, the Netherlands.
- Chang, T.R., Forthman, D.L. (1998). Behavioral development of mother-reared drills (*Mandrillus leucophaeus*). Paper presented at the XVIIth Congress of the International Primatological Society, Antananarivo, Madagascar.
- Chang, T.R., Bloomsmith, M.A., Forthman, D.L., Kneidinger, L., Feldman, J.M., Maple, T.L. (1997). Development and scientific evaluation of a behavioral husbandry program at Zoo Atlanta. Paper presented at the Third International Conference on Environmental Enrichment, Orlando, FL.
- Chang, T. R., Forthman, D.L., Maple, T.L. (1993). Naturalistic outdoor habitats and behavioral enrichment: promoting species-typical behavior in a group of captive mandrills (*Mandrillus sphinx*). Poster presented at the 1st Conference on Environmental Enrichment, Portland, OR.
- Forthman, D.L., Chang, T.R., Elder, S.D. (1992). Behavioral comparison of captive drills (*Papio leucophaeus*) and mandrills (*Papio sphinx*). Paper presented at the XIVth Congress of the International Primatological Society (IPS), Strasbourg, France.

AWARDS

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| 2010 | Academy of Educational Leadership Distinguished Research Award (with E. Onifade, D. Jackson, J. Thorne, C. Allen) |
| 2007 | Morehouse College Faculty Research Release Time Grant (<i>Fall Semester</i>) |
| 2006 | Morehouse College Faculty Research Release Time Grant (<i>Fall Semester</i>) |
| 2001 | Global Partners' Travel Grant for Research in Kenya/E. Africa |
| 2001 | Global Partners' University of Nairobi Seminar Grant |
| 1998 | Georgia Tech Graduate Student Fund (GSF) Travel Grant |
| 1997-1998 | Supported by National Institutes of Health/National Center for Research Resources Grant R01-RR03578 for dissertation research |

1994-1998 Graduate Research Assistantship and out-of-state tuition waiver (all years)
1988- 1991 Graduate Research Assistantship and out-of-state tuition waiver (all years)

TEACHING APPOINTMENTS

College level

2009-present **Associate Professor**, Dept. of Psychology, Morehouse College, Atlanta, GA
2003–2009 **Assistant Professor**, Dept. of Psychology, Morehouse College, Atlanta, GA
1999–2003 **Assistant Professor**, Dept. of Psychology, Morehouse College, Atlanta, GA
1998–1999 **Instructor**, Dept. of Psychology, Morehouse College, Atlanta, GA
1998 **Part-time Instructor**, Dept. of Psychology, Morehouse College, Atlanta, GA¹
1995 **Part-time Instructor**, School of Psychology, Georgia Tech, Atlanta, GA²
1990 **Teaching Assistant**, School of Psychology, Georgia Tech, Atlanta, GA

Courses taught:

- Introduction to Psychology²
- Introduction to Psychology as a Natural Science¹
- Research Methods
- Research Methods Laboratory
- Statistics I
- Industrial/Organizational Psychology
- Directed Studies
- Environment & Behavior Seminar
- Learning and Memory
- Learning and Memory Laboratory
- Research Methods and Statistics I
- Research Methods and Statistics Laboratory

Primary & secondary level

2000 **Instructor**, Research Methods. Trio Math/Science Program, Morehouse College, Atlanta, GA
1994 -1998 **Instructor**, Introduction to behavioral research at the zoo. Young Scientists and New Explorers Program, Education Department, Zoo Atlanta

UNDEGRADUATE & GRADUATE STUDENT MENTORING

Fellowship in Research & Science Teaching (FIRST) Postdoctoral Fellow Teaching Mentor. Emory University. (2013-present) in Research Methods & Statistics.

Fellowship in Research & Science Teaching (FIRST) Postdoctoral Fellow Teaching Mentor. Emory University. (2009-2011). Mentee: Jennifer Wilhelm, PhD in Learning & Memory Lecture & Laboratory.

Presentations

- Nails, B. & Chang, T.R. (2008). Human Visual Preference Using Fractals. Paper presented at the Nineteenth Annual Frederick Everett Mapp Science and Mathematics Symposium, Morehouse College, Atlanta, GA.
- Nails, B. & Chang, T.R. (2007). Quantifying Human Visual Preference Using Fractals. Paper presented at the 13th Annual SAEOPP/UTK McNair National Scholars Research Conference, Knoxville, TN.
- Nails, B. & Chang, T.R. (2007). Quantifying Human Visual Preference Using Fractals. Poster presented at the Nineteenth Annual Frederick Everett Mapp Science and Mathematics Symposium, Morehouse College, Atlanta, GA.
- Blocker, J., Varnell, S., Chang, T.R. & Forthman, D.L. (2006). Use of 17-alpha ethynyl estradiol as taste aversion agent in monkeys. Poster presented at the Southeastern Psychological Association's CEPO Program for Undergraduates. Atlanta, GA.
- Blocker, J., Varnell, S., Chang, T.R. & Forthman, D.L. (2006). Use of 17-alpha ethynyl estradiol as taste aversion agent in monkeys. Poster presented at the Eighteenth Annual Frederick Everett Mapp Science and Mathematics Symposium, Morehouse College, Atlanta, GA.
- Blocker, J., Varnell, S., Chang, T.R. & Forthman, D.L. (2006). Use of 17-alpha ethynyl estradiol as taste aversion agent in monkeys. Poster presented at the AUC Psychology Research Day, Spelman College, Atlanta, GA.
- Hassan, B. & Chang, T. R. (2006). The relationship of knowledge, attitude, and the use of behavioral enrichment in zoos: an application of the theory of reasoned action. Poster presented at the Georgia Psychological Association, Atlanta, GA.
- Hassan, B. & Chang, T. R. (2006). The relationship of knowledge, attitude, and the use of behavioral enrichment in zoos: an application of the theory of reasoned action. Poster presented at the AUC Psychology Research Day, Spelman College, Atlanta, GA.
- Few, A. & Chang, T.R. (2006). An evaluation and comparison of behavioral husbandry and animal care personnel at zoo facilities and research laboratories. Poster presented at the Southeastern Psychological Association's CEPO Program for Undergraduates. Atlanta, GA.
- Few, A. & Chang, T.R. (2006). An evaluation and comparison of behavioral husbandry and animal care personnel at zoo facilities and research laboratories. Poster presented at the AUC Psychology Research Day, Spelman College, Atlanta, GA.
- Archibald, J. & Chang, T.R. (2003). Emotional disgust and sexual attitudes as predictors of homonegativity. Paper presented at Fifteenth Annual Frederick Everett Mapp Science and Mathematics Symposium, Morehouse College, Atlanta, GA.

Student Awards

Bryan Nails. (2008). Senior Mapp Award Winner for Psychology for “Quantifying Human Visual Preference Using Fractals.” Paper presented at the Twentieth Annual Frederick Everett Mapp Science and Mathematics Symposium, Morehouse College, Atlanta, GA, April, 2008.

Bryan Nails. (2007). *Second Place Oral Presentation in the Social Sciences* for “Quantifying Human Visual Preference Using Fractals.” Paper presented at the 13th Annual SAEOPP/UTK McNair National Scholars Research Conference, Knoxville, TN, June/July, 2007.

Jonathan Blocker. (2006). *Psi Chi Regional Research Award* for “Use of 17-alpha ethynyl estradiol as taste aversion agent in monkeys.” Poster presented at the Southeastern Psychological Association’s CEPO Program for Undergraduates. Atlanta, GA, March, 2006.

Jonathan Blocker & Sorinthia Varnell. (2006). Third place (tie) for poster presentation for “Use of 17-alpha ethynyl estradiol as taste aversion agent in monkeys.” Poster presented at the AUC Psychology Research Day, Atlanta, GA, April, 2006.

Sorinthia Varnell. (2006). *Psi Chi Regional Research Award* for “Use of 17-alpha ethynyl estradiol as taste aversion agent in monkeys.” Poster presented at the Southeastern Psychological Association’s CEPO Program for Undergraduates. Atlanta, GA, March, 2006.

Archibald, James (2003). First place for oral presentation for “Emotional disgust and sexual attitudes as predictors of homonegativity.” Paper presented at the Morehouse College Psychology Research Day, Atlanta, GA, April, 2003.

PROFESSIONAL CONSULTING

- 1999 **Consultant**, Project Exposure—Male Involvement, Atlanta, GA
Developed a supplemental survey for PEMI; summarized survey results.
- 1998 **Behavioral Management Consultant**, Stone Mountain Wildlife Preserve, Stone Mountain, GA
Developed new research and management protocols for behavioral enrichment and training.
- 1997 **Consultant**, National Flare Company, Davis, CA
Developed customer needs and satisfaction survey.

SERVICE

Academic

- 2009-2012 **Member**, Curriculum and Educational Policy Committee
- 2006-2010 **Member**, Center for Behavioral Neuroscience, Undergraduate Education Committee
- 2006-2009 **Member**, Library and Media Committee, Morehouse College

2006-2008 **Member**, Division of Science & Mathematics Junior Faculty Committee
2006-2009 **Member**, Frederick Everett Mapp Science and Mathematics Symposium
Organizing Committee
2006-2007 **Member**, General Education Item Review Committee
2005-2008 **Member**, Core Pilot Group Advisor for Psychology
2005-2006 **Member**, WebCT Pilot Group
2005-2008 **Member**, Committee for Faculty Research, Morehouse College
2005-2008 **Member**, Information Technology Liaison for the Psychology Department,
Morehouse College
2004-2013 **Member**, Institutional Animal Care and Use Committee (IACUC) of Atlanta
University Center-Morehouse School of Medicine
2002-2004 **Member**, Admissions Committee, Morehouse College
2002-2003 **Chair**, Appeals Committee, Morehouse College.
1999-2002 **Member**, Appeals Committee, Morehouse College
1998-present **Member**, Statistics Group, Dept. of Psychology, Morehouse College