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**ACADEMIC APPOINTMENTS**

- 2002 – Assistant Professor of Psychology  
 Rice University, Houston, TX
- 2000 – 2002 Research Associate  
 The University of Chicago, Chicago, IL  
 Advisor: M.K. McClintock
- 1998 – 2000 Postdoctoral Fellow  
 Monell Chemical Senses Center, Philadelphia, PA  
 Advisor: P. Dalton

**EDUCATION**

- 1992 – 1998 Rutgers University, New Brunswick, NJ  
 Ph.D. in Social / Developmental Psychology  
 Advisor: J. Haviland-Jones
- 1991 – 1993 The University of Chicago, Chicago, IL  
 M.A. in the Social Sciences  
 Advisor: R. Shweder
- 1987 – 1991 The University of Chicago, Chicago, IL  
 B.A. (Honors) in Psychology  
 Advisor: D. Freedman

**HONORS AND AWARDS**

- 1998-00 National Institute of Health Postdoctoral Fellow  
 1998 Tova Dissertation Fellowship Award, Olfactory Research Fund  
 1992-94 Walter C. Russell Scholarship, Rutgers University

**EXTERNAL GRANTS**

“Chemosensory communication of emotion in humans,” Denise Chen, PI. National Institute of Health, 2003 - 2008, \$242,358.

“A proposal to replicate and extend the experiment on human olfactory communication of emotion,” Denise Chen, Co-PI with Martha K. McClintock. International Flavors & Fragrances, Inc., Ocean Beach, NJ, 2001 - 2002, \$43,643.

“Human olfactory communication of emotional state and its modulations on emotion and cognition,” Denise Chen, Co-PI with Martha K. McClintock. Olfactory Research Fund, New York, NY, 2000 - 2001, \$60,128.

## **TEACHING EXPERIENCE**

Psyc 340 Research Methods  
(Spring 2003, 2004, Fall 2003, 2004)

Psyc 231 (formerly 221) Developmental Psychology  
(Spring 2004, 2005, Fall 2006, 2007, 2008, 2009)

Psyc 353 (formerly 460) Emotion and Motivation  
(Spring 2007, 2008, 2009, 2010)

Psyc 465/565 Seminar on Human Olfaction  
(Fall 2002, 2003, 2004, 2006, 2007, Spring 2008, 2009, 2010)

Guest lecture in:

Psyc 520 Foundations of Cognitive Psychology (Randi Martin, Fall 2008)

Rice Cognitive Psychology Summer Internship Training (Randi Martin, 2005)

BioE 592 Sensory Neuroengineering (Rob Raphael, Fall 2003)

Psyc 101 Introduction to Psychology (Sarah Burnett, Fall 2002)

## **DEPARTMENTAL SERVICE**

Undergraduate Committee, August 2002 –

Organizer, Cognitive Psychology Research Seminar, Spring 2008 –

Master Thesis Committee for Jennifer Chen, 2009 -

Ph.D. Thesis Committee for Wen Zhou, 2008 – 2009

Master Thesis Committee for Wen Zhou, 2006 - 2007

Master Thesis Committee for Madeline Campbell, 2003 - 2004

Supervisor, Undergraduate RUSP Honors Thesis (Kathy Zhang), 2008 – 2009

Supervisor, Undergraduate RUSP Honors Thesis (Sarah Ezzal), 2009 - 2010

Organizer, Interdisciplinary Seminar Series on Mind, Body, and Behavior, 2002 - 2004.

## **PROFESSIONAL SERVICE**

Referee for:

Chemical Senses

Journal of Neuroscience

Human Brain Mapping

International Journal of Psychophysiology

Neuroscience Letters

Biological Psychiatry

Hormones and Behavior

Neuroscience & Biobehavioral Reviews

Journal of Theoretical Biology

Brain Research

Frontiers in Evolutionary Neuroscience  
 PLoS ONE  
 National Science Foundation

Developmental Psychology  
 Ethology

## PUBLICATIONS

1. Zhou, W. & Chen, D. Social anxiety and reduced recruitment of orbitofrontal cortex to human social chemosensory cues. Under review, *Neuropsychopharmacology*.
2. Chen, D., Nusbaum, H., & McClintock, M.K. Lightening the load: Human social chemosensory cues accelerate social cognition processing. Under invited resubmission, *Psychological Science*.
3. Zhou, W. & Chen, D. (2009). Binomial rivalry between the nostrils and in the cortex. *Current Biology*, 9, 1561-1565.
4. Zhou, W. & Chen, D. (2009). Sociochemosensory and emotional functions: Behavioral evidence for shared mechanisms. *Psychological Science*, 20, 1118-1124.
5. Zhou, W. & Chen, D. (2009). Chemosignals of fear modulate fear recognition in ambiguous facial expressions. *Psychological Science*, 20, 177-183.
6. Zhou, W. & Chen, D. (2008). Encoding human sexual chemosensory cues in the orbitofrontal and fusiform cortices. *Journal of Neuroscience*, 28, 14416-14421.
7. Chen, D., Katdare, A., & Lucas, N. (2006). Chemosignals of fear enhance cognitive performance in humans. *Chemical Senses*, 31, 415-423.
8. Chen, D. & Dalton, P. (2005). The effect of emotion and personality on olfactory perception. *Chemical Senses*, 30, 345-35.
9. Chen, D. (2005). Olfaction. In N.J. Salkind (Ed), *Encyclopedia of Human Development*. Sage Publications.
10. Chen, D. (2001). Invited book review of *Jacobson's Organ and the Remarkable Nature of Smell*. *The Aroma-Chology Review*, 9 (2), 13-14.
11. Chen, D. (2001). Natural human body odors can modulate mood independent of perceived odor pleasantness and intensity – a reply to Black. *Biological Psychology*, 55, 219-225.
12. Chen, D. & Haviland-Jones, J. (2000). Human olfactory communication of emotion. *Perceptual and Motor Skills*, 91, 771-781.
13. Chen, D. & Haviland-Jones, J. (1999). Rapid mood change and human odors. *Physiology & Behavior*, 68 (1-2), 241-250.
14. Chen, D. (1999). The influence of human body odors on mood and memory. *The Aroma-Chology Review*, 8 (1), 1-8.

## STUDENTS AND VISITORS

Graduate student (current):	Jennifer Chen
Graduate student (past):	Wen Zhou (Current position: Assistant Professor, Institute of Psychology, Chinese Academy of Sciences, Beijing, China)
Visiting scholar (2007-08):	Meng Zhang, Assistant Professor, Harbin Medical University, Harbin, China
Undergraduate students (current):	Sarah Ezzell (Rice University Scholars Programs), Stephanie Marten-Ellis (Century Scholar), Tracey Isidro, Anish Patel (Rice University /Baylor College of Medicine Scholar), Jessie Kim, Shao-Bo Li, Victorial Liu, Irene Mbah

## INVITED TALKS

“Olfaction and its clinical applications.” (January, 2010). Invited speaker on Symposium of Advances in Neuroscience, Harris County Department of Education, Houston, TX.

“Scent, emotion, and awareness.” (August, 2009). University of Colorado Health Science Center, Denver, CO.

“Encoding human sexual chemosensory cues in the orbitofrontal and fusiform cortices.” (March, 2009). Invited short talk. Keystone Symposia: The Neurobiology of Chemical Senses: Receptors and Circuits, Tahoe City, CA.

“Olfaction and cognitive information processing.” (April, 2009). Invited speaker on Symposium “Follow the head, not only the nose: Top-down influences on olfactory perception.” Association of Chemoreception Sciences Annual Meeting, Sarasota, FL.

“Communication of socioemotional messages via chemical signals.” (October, 2008). 5<sup>th</sup> World Congress for Psychotherapy, Beijing, China.

“Olfaction and social behavior.” (October, 2008). Institute of Psychology, Chinese Academy of Social Sciences, Beijing, China.

“Olfaction and social behavior.” (October, 2008). Beijing Normal University, Beijing, China.

“Chemosensory communication of emotion in humans.” (May, 2008). Zhejiang University, Hangzhou, China.

“Chemosensory communication of emotion in humans.” (May, 2008). National Institute of Biological Sciences, Beijing, China.

“Scenting emotion: Neuroimaging and behavioral studies of chemosensory communication in humans.” (February, 2008). Monell Chemical Senses Center, Philadelphia, PA.

“Scenting emotion: Neuroimaging and behavioral studies of chemosensory communication

- in humans." (February, 2008). Princeton University, Princeton, NJ.
- "Scenting emotion: Neuroimaging and behavioral studies of chemosensory communication in humans." (February, 2008). University of Pennsylvania, Philadelphia, PA.
- "Scenting emotion: Neuroimaging and behavioral studies of chemosensory communication in humans." (February, 2008). Pennsylvania State University, State College, PA.
- "Olfaction and human social interactions." (February, 2007). 24<sup>th</sup> Annual Houston Conference on Biomedical Engineering Research, University of Houston, Houston, Texas.
- "Scents we live by: Olfactory communication in humans." (February, 2006). Wellcome Department of Imaging Neuroscience, London, United Kingdom.
- "Scents we live by: Olfactory communication in humans." (February, 2006). Oxford University, Oxford, United Kingdom.
- "The Smell of Emotion: Olfactory Communication of Emotion in Humans." (January, 2004). Society of Rice University Women.
- "Olfaction and Human Social Behavior." (October, 2003). Rice University, Houston, Texas.
- "Human Olfactory Communication." (January, 2003). Mini-symposium on Interdisciplinary Biology, Rice University, Houston, Texas.
- "Human Olfactory Communication of Emotions." (June, 2002). University of Chicago, Chicago, Illinois.
- "Human Olfactory Communication: The Smell of Emotion and Other Social Signals." (November, 2001). Rockefeller University, New York, New York.
- "Human Olfactory Communication: The Smell of Emotion and Other Social Signals." (November, 2001). Columbia University, New York, New York.
- "Human Olfactory Communication: The Smell of Emotion and Other Social Signals." (November, 2001). University of Chicago, Chicago, Illinois.
- "Human Olfactory Communication: The Smell of Emotion and Other Social Signals." (October, 2001). Rice University, Houston, Texas.
- "Human Olfactory Communication: The Smell of Emotion and Other Social Signals." (October, 2001). University of Houston, Houston, Texas.
- "Mood, personality and odor perception." (May, 2000). Monell Chemical Senses Center In House Seminar Series, Philadelphia, Pennsylvania.
- "Human olfactory communication of social and biological information." (December, 1999). International Flavors & Fragrances, Inc., Ocean Beach, New Jersey.
- "Mood, personality and odor perception." (October, 1999). Monell Chemical Senses Center,

Philadelphia, Pennsylvania.

## CONTRIBUTED PRESENTATIONS

Zhou, W., & Chen, D. (2009). Olfactory rivalry: Competing olfactory processing between the two nostrils and in the cortex. Poster presented at the Society for Neuroscience Annual Meeting, October 17 - 21, Chicago, IL.

Zhou, W., & Chen, D. (2009). Social anxiety and reduced recruitment of orbitofrontal cortex to human social chemosensory cues. Poster presented at the Society for Neuroscience Annual Meeting, October 17 - 21, Chicago, IL.

Zhang, K., Zhou, W., & Chen, D. (2009). Social anxiety and reduced recruitment of orbitofrontal cortex to human social chemosensory cues. Poster presented at the Association to Chemoreception Science Annual Meeting, Sarasota, FL, April 22-29.

Chen, J., Zhou, W., Zhang, M., & Chen, D. (2009). Long-term reductions of olfactory sensitivity due to short-term exposures to a peri-threshold odorant. Poster presented at the Association to Chemoreception Science Annual Meeting, Sarasota, FL, April 22-29.

Zhou, W., & Chen, D. (2009). Olfactory rivalry: Competing olfactory processing between the two nostrils and in the cortex. Poster presented at the Association to Chemoreception Science Annual Meeting, Sarasota, FL, April 22-29.

Zhou, W. & Chen, D. (2008). "Chemosignals of fear modulate fear recognition in ambiguous facial expressions". Poster presented at the Association for Chemoreception Sciences/International Association for Olfaction and Taste joint conference, San Francisco, CA, July 21-16.

Chen, D. & Zhou, W. (2007). "Neural substrates of human sexual chemosignals." Slide talk presented at the Society for Neuroscience Annual Meeting, San Diego, CA, November 3-7.

Chen, D. & Zhou, W. (2006). "Relationship between emotional competencies and olfactory competencies." Poster presented at the Association for Chemoreception Sciences Annual Meeting, Sarasota, FL, April 26-30.

Hou, P., Steinberg, J.L., Chen, D., Moeller, F.G., & Narayana, P.A. (2006). "Asymmetric spin echo in fMRI at 3T: A Quantitative Evaluation of BOLD response and signal drop off." Poster presented at the American Association of Physicists in Medicine Annual Meeting, Orlando, FL, July 30-August 3.

Chen, D., Zhou, W., Hou, P., & Burton, P. (2006). "Brain activations to chemical signals. Poster presented at the Association for Chemoreception Sciences Annual Meeting, Sarasota, FL, April 26-30.

Netsiri, P., & Chen, D. (2005). "Developing a user-friendly olfactometer for research involving human olfaction." Poster presented at the Society of Neuroscience Annual Meeting, Washington D.C., November 12-16.

- Chen, D., Zhou, W., Meusbürger, T., Netsiri, P., & Hou, P. (2005). "Brain activations to chemosignals." Poster presented at the Society of Neuroscience Annual Meeting, Washington D.C., November 12-16.
- Chen, D., Zhou, W., Meusbürger, T., and Lucas, N. (2005). "Emotional familiarity and detections of emotional chemosignals." Poster presented at the Association of Chemoreception Sciences Annual Conference, Sarasota, FL, April 13-17.
- Chen, D., Katdare, A., & Lucas, N. (2005). "The smell of fear enhances cognitive performance in humans." Poster presented at the Cognitive Neuroscience Annual Conference, New York, NY, April 10-12.
- Chen, D., Katdare, A., & Lucas, N. (2004). "The effect of affective chemosignals on attention." Poster presented at the American Psychological Society Annual Meeting, Chicago, IL, May 27-30.
- Chen, D., Miller, L., Nomura, M., Umeh, Y., Vilarreal, R. & Lucas, N. (2004). "Human olfactory detections of social and nonsocial chemosignals." Hot Topic Talk presented at the American Psychological Society Annual Meeting, Chicago, IL, May 27-30.
- Chen, D., Katdare, A., & Lucas, N. (2004). "The effect of affective chemosignals on task performance." Presented at the Association for Chemoreception Sciences Annual Meeting, Sarasota, FL, April 21-25.
- Chen, D., Lucas, N., Miller, L., Nomura, M., Umeh, Y., Vilarreal, R. (2004). "Human olfactory detections of social and nonsocial chemosignals." Presented at the Association for Chemoreception Sciences Annual Meeting, Sarasota, FL, April 21-25.
- Chen, D. & McClintock, M.K. (2003). "Discriminations of emotional odors: Olfactory acuity or emotional awareness." Slide talk presented at the Society for Neuroscience Annual Meeting, New Orleans, LA, November 8-12.
- Chen, D. & McClintock, M.K. "Individual differences in human olfactory communication of emotions." (2003). Hot topic talk presented at the American Psychological Society Annual Meeting, Atlanta, GE, May 29–June 1.
- Chen, D. & McClintock, M.K. (2003). "Discriminations of emotional odors: Olfactory acuity or emotional awareness." Poster presented at the Association for Chemoreception Sciences Annual Meeting, Sarasota, FL, April 8-13.
- Chen, D. & McClintock, M. K. (2002). The smell of emotion: Olfactory communication of emotion in humans. Talk presented at the Annual Meeting of the European Chemoreception Research Organization, Erlangen-Nuremberg, Germany, July 23-27.
- Chen, D. & McClintock, M. K. (2002). The smell of emotion: Olfactory communication of emotion in humans. Hot Topic talk presented at the American Psychological Society Annual Meeting, New Orleans, LA, June 6-9.
- Chen, D. & McClintock, M. K. (2002). The smell of emotion: Olfactory communication of emotion in humans. Poster presented at the Annual Association of Chemoreception Sciences XXIV, Sarasota, FL, April 24-28.

- Chen, D. & McClintock, M. K. (2001). Human olfactory discrimination and identification of emotional states. Poster presented at the Annual Association of Chemoreception Sciences XXIII, Sarasota, FL, April 25-29.
- Chen, D. & Dalton, P. (2000). Mood, Personality, and odor perception. Poster presented at the Annual Association of Chemoreception Sciences XXII, Sarasota, FL, April 26-30.
- Chen, D. Mood, Personality, and Odor Perception. (2000). Paper presented at the symposium on the "Psychology of perceiving odors: How expectation and experience determine what we smell," Eastern Psychological Association, 71<sup>st</sup> Annual Meeting, Baltimore, MA, March 24-26.
- Chen, D. & Haviland-Jones, J. (1999). The effect of body odors on the content of autobiographical memory recollections. Paper presented at the Annual Association of Chemoreception Sciences XXI, Sarasota, FL, April 14-18.
- Haviland-Jones, J. & Chen, D. (1998). Human olfactory communication of emotion. Poster presented at the Annual Association of Chemoreception Sciences XX, Sarasota, FL, April 22 –26.
- Chen, D. & Haviland, J. (1998). People's reactions to age and gender effects on odors. Paper presented at the Annual Association of Chemoreception Sciences XX, Sarasota, FL, April 22-26.
- Chen, D. & Haviland, J. (1997). A social-historical perspective on the detection and influence of social odors in mammals. Poster presented at the Chemical Signals in Vertebrates 8, Cornell University, Ithaca, NY, July 20-25.
- Chen, D. & Haviland, J. (1997). A social-historical perspective on the detection and influence of social odors in mammals. Poster presented at the International Symposium on Olfaction and Taste XII and AChemS XIX, San Diego, CA, July 7-12.
- Chen, D., Sullivan, M., & Lewis, M. (1995). Shame and pride expressions and self- and task-orientations in 4- to 5-year-old children. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Indianapolis, IN, March 30 – April 2.

## **PROFESSIONAL AFFILIATIONS**

Association for Chemoreception Sciences  
Society for Neuroscience