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# Michael A. Nestrud

*All that you taste... all that you eat.*

Research Interests   Multivariate statistics, food combinations, graph theory, psychophysics, culinary science, statistical methods for sensory evaluation, measuring emotion, trigeminal irritation

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## Education

- 2008–2011   **Ph.D.**, *Cornell University*, Ithaca, New York, USA.  
Major: Food Science-Sensory Evaluation, Minors: Flavor Chemistry, Psychology, Statistics
- 2006–2008   **B.S.**, *Cornell University*, Ithaca, New York, USA, *magna cum laude*.  
Major: Food Science
- 2003–2004   **A.O.S.**, *The Culinary Institute of America*, Hyde Park, New York, USA.  
Major: Culinary Arts
- 1999–2001   **n.d.**, *Georgia Institute of Technology*, Atlanta, Georgia, USA.  
Classes: Intro to Programming I & II, Compilers, Proofs, Prob. & Statistics, Psych. I & II

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## Honors and Awards

- 2011-Present   Oak Ridge Institute for Science & Education Postdoctoral Research Fellowship
- 2010   IFT Sensory and Consumer Sciences Division Ph.D. Scholarship
- 2010   Cornell University Department of Food Science Frank & Anne Kosikowski Award
- 2009   Rose Marie Pangborn Sensory Science Scholarship
- 2009   IFT Foundation Graduate Scholarship
- 2009   Institute for Perception Student Award
- 2008–2011   State University of New York Ph.D. Fellowship
- 2008   Society of Sensory Professionals Jean Caul Award
- 2007   Cornell Institute of Food Science Advisory Council Award
- 2007   Cornell Institute of Food Science Summer Scholar
- 2007   USDA Higher Education Scholar
- 2007   TIC Gums Achievement Award
- 2007-Present   Phi Tau Sigma Food Science Honor Society
- 2003   Culinary Institute of America Presidential Scholarship
- 1998   National Merit Finalist Scholarship
- 1997   Eagle Scout

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## Academic Experience

- 2011–Present **ORISE Postdoctoral Research Fellow**, *U.S. Army Natick Research, Development & Engineering Center*, Natick, Massachusetts.  
Engaged in research with the aim to improve warfighter performance.
- 2008–2011 **Graduate Teaching Assistant**, *Cornell University Department of Food Science*, Ithaca, New York.  
Teaching experience included head teaching assistant for Sensory Evaluation of Food for Food Science seniors and head teaching assistant for the global sustainability seminar course for undergraduate and graduate students in the U.S.A., Honduras, Costa Rica, Australia and Switzerland.
- 2004–2005 **Teaching Fellow**, *The Culinary Institute of America*, Hyde Park, New York.  
Taught students new culinary techniques while reinforcing old. Developed new course material on historical and modern American cuisine. Developed on-line presence for the class for the first time.
- 1999–2001 **Teaching Assistant**, *Georgia Institute of Technology College of Computing*, Atlanta, Georgia.  
Teaching Assistant for Intro to Computing Lab and Introduction to Programming; served on course development and exam team for Introduction to Programming.

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## Professional Experience

- 2008–Present **Consultant**, Marlborough, Massachusetts.  
  - Regularly conduct workshops teaching the R statistics package and multivariate sensory evaluation methods to industry professionals
  - Provide professional consulting services on cutting edge topics (see: Research Interests above) to sensory evaluation and product development laboratories, including Fortune 500 companies.
- Summer 2005 **Product Development Intern**, *The International Food Network*, Ithaca, New York.  
  - Project lead developing a healthy margarine product for Fortune 500 client
  - Developed sensory and physical property models to assess feasibility and performance of ingredient blends.
- 2004–2005 **Teaching Fellowship & Sous Chef**, *American Bounty Restaurant*, *The Culinary Institute of America*, Hyde Park, New York.  
  - Maintained day-to-day operations of the restaurant and was responsible for profitability.
  - Planned and executed large banquets almost daily.
  - Planned and executed seasonal menu transitions.

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## Computer skills

Scientific	Excel, JMP, R, SPSS	Operating Systems	UNIX/Linux, Windows
Typography	L <sup>A</sup> T <sub>E</sub> X, Word	Applications	Illustrator, Powerpoint
Languages	Bourne Shell, Java, HTML		

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## Professional Service

### Journal Reviewer

- 2011 Chemosensory Perception (2), Food Quality and Preference (2), Journal of Culinary Science & Technology (2), Journal of Food Science (3)
- 2010 Journal of Food Science, Journal of Sensory Studies (2)
- 2009 Journal of Food Science (2)

### Session Organizer

- 2010 Society of Sensory Professionals: Student seminar on sensory principles of olive oil with chef guided tasting.

### Professional Organizations

- 2011–present Sigma Xi
- 2011–present Society of Sensory Professionals: Scientific Committee Co-Chair
- 2010–2011 Society of Sensory Professionals: Executive committee, student member
- 2010–2011 Institute of Food Technologists, Sensory and Consumer Sciences Division: Executive committee, student member
- 2009–2011 Institute of Food Technologists, Sensory Science Annual Meeting Scientific Program Advisory Panel

### Other Service

- 2011–present Culinary Institute of America Research Advisory Council Member

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## Publications

### Journal Publications

**Michael A. Nestrud**, Ennis, John M., Fayle, Charles M., Ennis, Daniel M. and Lawless, Harry T. Validating a graph theoretic screening approach to food item combinations. *Journal of Sensory Studies*, 26(5):331–338, 2011.

**Michael A. Nestrud** and Harry T. Lawless. Recovery of subsampled dimensions and configurations derived from napping data by MFA and MDS. *Attention, Perception, & Psychophysics*, 73(4):1266–1278, 2011.

**Michael A. Nestrud** and Harry T. Lawless. Perceptual mapping of apples and cheeses using projective mapping and sorting. *Journal of Sensory Studies*, 25(3):390–405, 2010.

**Michael A. Nestrud** and Harry T. Lawless. Perceptual mapping of citrus juices using projective mapping and profiling data from culinary professionals and consumers. *Food Quality and Preference*, 19(4):431–438, 2008.

### Conference Proceedings

**Michael A. Nestrud**, Ennis, J.M., Cardello, A., Kennedy, J. and Lawless, H.T. A graph theoretic approach to U.S. Army field ration menu development. Toronto, Ontario, Canada, 2011. 9th Pangborn Sensory Science Symposium.

**Michael A. Nestrud**, Ennis, J., Fayle, C., Ennis, D. and Lawless, H.T. Validating a graph theoretic approach at the individual and group levels. Toronto, Ontario, Canada, 2011. 9th Pangborn Sensory Science Symposium.

K.W. Chapman, **Nestrud, M.A.** and Lawless, Harry T. Poster. evaluation of replicated napping of buttery spreads. 9th Pangborn Sensory Science Symposium, 2011.

Christopher Loss and **Nestrud, Michael A.** Oral Presentation. Principles and applications of perceptual mapping techniques in culinary research and menu development. Napa, California, 2010. Society of Sensory Professionals Bi-Annual Conference.

**Michael A. Nestrud** and Harry T. Lawless. Poster and Oral Presentation. Determining optimal number of subjects for napping and sorting via a modified jackknife resampling procedure. Chicago, Illinois, 2010. Institute of Food Technologists Annual Meeting.

**Michael A. Nestrud**, John M. Ennis, Charles M. Fayle, and Harry T. Lawless. Oral Presentation. Validating a graph theoretic approach to sensory science problems. Napa, California, 2010. Society of Sensory Professionals Bi-Annual Conference.

**Michael A. Nestrud**. Invited Lecture. Projective mapping as a tool for rapid and cost-effective generation of perceptual maps. Geneva, New York, 2010. American Society of Enology and Viticulture, Eastern Section 35th annual conference.

**Michael A. Nestrud**. Oral Presentation. Chemosensory Sorcery: Trigeminal Sensations and Culinary Innovations. Phoenix, Arizona, 2010. Research Chef's Association Annual Conference.

A. Bauer and **Nestrud, Michael A.** Poster. Molecular gastronomy and the masses: Deciphering the marketability of the new cuisine to mainstream America. Dallas, Texas, 2009. Research Chefs Association Annual Conference.

Harry T. Lawless and **Nestrud, Michael A.** Oral Presentation. A comparison of sorting and nappe analyses by Multidimensional Scaling and Multifactor Analysis. Cincinnati, Ohio, 2008. Society of Sensory Professionals Bi-Annual Conference.

Harry T. Lawless and **Nestrud, Michael A.** Oral Presentation. Recovery of Subsampled Dimensions by Multifactor Analysis of Projective Mapping and Multidimensional Scaling of Sorting Data. Guelph, Canada, 2008. Sensometrics Society Bi-Annual Conference.

**Michael A. Nestrud** and Harry T. Lawless. Poster. the distribution of the rv coefficient for comparing multivariate configurations. Sensometrics Society Annual Conference, 2008.

**Michael A. Nestrud** and Harry T. Lawless. Poster. Perceptual mapping of apples and cheese using projective mapping and sorting. Cincinnati, Ohio, 2008. Society of Sensory Professionals Bi-Annual Conference.

**Michael A. Nestrud** and Harry T. Lawless. Poster. Methods of analysis of "nappe map" technique and a comparison of citrus juice preference between culinary professionals and consumers. Minneapolis, Minnesota, 2007. 7th Pangborn Sensory Science Symposium.

#### Others

**Michael A. Nestrud**. Invited Lecture. Chemosensory Sorcery: Trigeminal Sensations and Culinary Innovations. Ithaca, New York, 2009,2010. Food Science 4940: Chef's Chemistry, Cornell University.

**Michael A. Nestrud**. Invited Lecture. Graph theory applications to flavor research. Boston, Massachusetts, 2010. American Chemical Society Flavor Workshop.

**Michael A. Nestrud**. Invited Lecture. Culinary Psychophysics: The Chef's Perspective. Hyde Park, New York, August 21, 2009. Culinary Institute of America Science and Art Lecture Series.

**Michael A. Nestrud**. Invited Lecture. Sustainability: The Culinary Perspective. Ithaca, New York, Spring 2009. Food Science 4800: Global Sustainability, Cornell University.

**Michael A. Nestrud**. Radio Interview. Science Out Of the Box: It's Shocking, But You Eat It. National Public Radio: All Things Considered, February 28, 2009.

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## Press

### Press

Jason Chen. How to Cook Pasta Correctly. lifehacker. May 26, 2011. <http://lifehacker.com/5805897/how-to-cook-pasta-correctly>.

Caroline Scott-Thomas. Trigeminal sensations: An emerging area for innovation. Food Navigator USA. March 25, 2010. <http://www.foodnavigator-usa.com/Science/Trigeminal-sensations-An-emerging-area-for-innovation>.

Christopher Loss. Feeling flavors and textural contrast in food. The Culinary Institute of America Menu Research & Development Press Release. September 1st, 2009. <http://menuscience.ciachef.edu/node/391>.

NPR. It's Shocking, But You Eat It. NPR Online. February 28, 2009. <http://www.npr.org/templates/story/story.php?storyId=101304548>.

Vanessa Hoffman. Annual Chili Cook-off Attracts Local Talent. The Cornell Daily Sun. February 19, 2007. <http://www.cornellsun.com/node/21474>.

Archives. Ithacans Taste Chili At Annual Cook-off. The Cornell Daily Sun. February 19, 2006. <http://www.cornellsun.com/node/16712>.