

Curriculum Vitae

Samir Amin Ph.D.

Associate Professor

California Polytechnic State University – San Luis Obispo

Department of Food Science and Nutrition

samin02@calpoly.edu

(805) – 756 – 6176

EDUCATION

Michigan State University, East Lansing, MI

Ph.D. in Food Science

2008

Dissertation: Characterization of heat cured and transglutaminase cross-linked whey protein-based edible films.

Michigan State University, East Lansing, MI

M.S. in Food Service Management

1999

University of Nevada Las Vegas, Las Vegas, NV

Bachelor of Science in Hotel Administration

1992

Culinary Institute of America, Hyde Park, NY

A.O.S. in Occupational Sciences

1988

TEACHING EXPERIENCE

California Polytechnic State University, San Luis Obispo

2015 –

- **Associate Professor of Culinary Science**

Department of Food Science and Nutrition

Current Courses Taught

- **FSN 121 Fundamentals of Food** – Theoretical aspects and practical applications of the principles of culinary science and food preparation.
- **FSN 244. Cereal and Bakery Science** – Applied science of cereal-based products. Theory and practice underlying preparation of doughs, batters, fillings, and glazes. Chemistry of baking doughs and batters and storage of finished products. Marketing and product development of breads, cakes, cookies, and pastries. Comparative nutritional evaluation of flours, grains, and finished products.
- **FSN 304. Advanced Culinary Principles and Practice** – Chemistry of starch, fat and proteins and its impact on texture, taste, flavor and appearance of food. Effects of microorganisms on changes of food during preparation and storage.
- **FSN 321. Contemporary Issues in Food Choice and Preparation** – Principles involved in the choice, purchase, and preparation of foods in a variety of settings and for various populations. Contemporary and ongoing issues associated with food and cooking in the context of nutrition and health. Planning and preparation of meals with emphasis on nutritional, aesthetic, economic and cultural aspects of food.
- **FSN 408. Food Product Development (Co-teach)** – Functionality of water, carbohydrates, proteins, lipids, additives and other food ingredients used in the formulation, development, and processing of foods. Product development processes from idea generation to marketing to consumer guided technical prototype development will be completed.

Courses Developed:

- **FSN 323 Culinary Internship** – Independent internship experience conducted under faculty supervision focusing on culinary science. This course is only open to students enrolled in the Culinology® concentration and satisfies the culinary internship requirement per the Research Chefs Association's Culinology® concentration.
- **AGED 570 – Selected Topics in Agricultural Education Teaching Food Science** – Instructional teaching methods for food science will include the following topics, Food Safety, Food Microbiology, Food Chemistry, Food Processing, Sensory Evaluation and Product Development
- **FSN 508 Food Product Innovation** – Focus on product innovation strategies, project management, product life cycle, project development team management, product innovation metrics, process optimization and cost management. Plan and execute an industry-relevant specialized project.

California State Polytechnic University, Pomona

2014 - 2015

- **Lecturer**

- *Department of Human Nutrition and Food Science*

- FST 319/319A Food Packaging- Exploration of the role of food packaging in food preservation. Discussion of food packaging materials and their impact on food products. Overview of product stability and shelf life extension. Demonstrations and field trips.
 - FST321L Experimental Foods Laboratory - This course provides an experimental approach to solve food preparation problems/develop alternatives to certain foods. Chemical reactions of food interactions will be discussed. Recent developments in food ingredient uses and food preparation techniques will be covered. Project design, data collection, critical analysis of data, oral and written presentation of findings will be demonstrated.
 - FST 390 Food Science Colloquium - Classroom interaction of students with selected food industry leaders focusing on technical, economic, regulatory and new product trends as they impact occupational opportunities in the food and beverage industries.
 - FST 429/429L Food Product Development - Application of food science and technology principles to research and development industrial practices. A course designed to implement critical thinking, decision-making, teamwork, and communication skills towards the design and development of new and improved food products

Southwest Minnesota State University Marshall, MN

2013 – 2015

- **Adjunct Professor of Culinology,**

- *Department of Culinology and Hospitality Management*

- CULG 360 Food Sensory Analysis - This course includes the fundamentals of sensory perception through food appearance, texture, aroma, flavor and physiology of sensory receptors. Test designs, methods, laboratory, and consumer panels are used in studying sensory qualities of foods and interpretation of data.
 - CULG 430 Fundamentals of Food Processing - gain an understanding of the principles and applications of food processing techniques and discuss how the commercial preparation of food is influenced by food safety concerns, product quality standards, government regulations, and consumer demands.
 - CULG 390 Food Product Development I - All aspects of new food product development from concept to store shelves will be covered, including market screening focus groups idea generation prototype development ingredient functionality and interactions statistical designs for product development processing packaging scale-up of operations regulatory

issues labeling physical, chemical, microbiological, and sensory evaluations quality control procedures and HACCP plans.

- **Assistant Professor of Culinology** **2012 – 2013**
 - CULG 200 Culinary Essentials I - is an in-depth study of the basic core components in the creative study of culinary arts and food production.
 - CULG 210 Culinary Essentials II - Continued in-depth study of intermediate level processes in culinary arts and food production. Students study and apply cooking methods of scratch cookery through small batch assignments.
 - CULG 250 Introduction to Baking & Pastry - A fundamental course in baking methods and principles, to include yeast breads, quick breads, pastries, pies, cakes, custards, creams, and sauces.
 - CULG 251 Baking & Pastry II - A continued in-depth study of intermediate level baking methods and principles.
 - CULG 260 Principles of Garde Manger & Buffet - Students are introduced to the cold kitchen by their active involvement, participation, and planning of menu items created in this segment of the kitchen. Students practice techniques for artistic displays of hors d'oeuvres, canapes, pates, terrines, and charcuterie.
 - CULG 430 Fundamentals of Food Processing - gain an understanding of the principles and applications of food processing techniques and discuss how the commercial preparation of food is influenced by food safety concerns, product quality standards, government regulations, and consumer demands.
 - CULG 450 Advanced Culinary Science - is an examination of taste, cooking techniques, ingredients, and flavoring techniques designed to integrate students' culinary training, academic studies, and field experience using fundamental cooking techniques, topics of contemporary significance, food science, aesthetics, and sensory perception as frameworks.

Michigan State University East Lansing, MI

- **Instructor** **2002**
 - FSC 229 Unit Operation in Food Processing

- **Graduate Teaching Assistant** **1999-2002**
 - HNF 400 Art and Science of Food Preparation (2002)
 - HNF 440 Foodservice Operations (1999-2001)
 - FSC 432 Dairy Foods Processing (1999)

RELATED EXPERIENCE

PhDChef Consulting LLC

President **2012 – 2017**
 PhDChef is consulting service focusing on new product development and commercialization for small to midsize companies in the food industry. Projects include the development of gluten-free pasta, frozen Greek yogurt and fruit novelties, commercialization of savory pies, RTE sides, RTE proteins for retail sale, development meal replacement shake mixes and high protein shake mixes.

Two Chefs on a Roll

Director of Research and Development, Savory **2011 – 2012**
 Designing products, menu concepts and prototypes for customers and to meet market trends including custom soups, sauces, dips, dressings, bakery items and proteins. Develop formulas based on customer's specification and market trends. Involved in all phases of product development, from ideation to

commercialization. Investigate and identify new products and/or processes that allow Two Chefs on a Roll to maintain a competitive advantage.

Two Chefs on a Roll Senior Manager Research and Development, Savory	2010 – 2011
Two Chefs on a Roll Principal Scientist/ Research Chef	2008 – 2010
Two Chefs on a Roll Research Chef	2006 – 2008

GRADUATE ADVISING

Major Professor

- Ali Duval, M.S. Candidate (2017 -) Valorization of Carrot Waste

Committee Member

- Farnoosh Ayoughi M.S. degree, Parental Perspectives and Feeding Practices Effects on Food Neophobia in Elementary-Age Children. (Fall 2018)
- Maria Handley M.S. degree, The Investigation of Food Neophobia and Bitterness Sensitivity on Food Preference in Familiar and Unfamiliar Fruits and Vegetables in California Elementary Schools. (Fall 2018)
- Tara Egigian M.S. degree, Children’s acceptability of familiar and unfamiliar vegetables: Relationship between food neophobia, vegetable neophobia, picky eating, PROP sensitivity, and Mouth Behavior (Summer 2019)

UNDERGRADUATE ADVISING

SENIOR PROJECT

Completed	Student Name	Project Title
Winter 2016	Chelsea Glasnow, Lauren Bosio, MacKenna Jaeger	Asian Ginger Sweet Chili Sauce Formulation and Experimentation
Fall 2016	Amanda Aguirre, Julianna Bell, Rachael Martinez	Development of a Chocolate Truffle with Superfoods and Probiotics.
Winter 2017	Cristina Pena, Jeremy Neilson, Anthony Flores	Characterization of Commercially Produced Carrot Pomace.
Winter 2018	Samantha Aiello, Nicole Cortese, Maria Frauenfelder, Lauren Schulman	Large Lima Bean Flour Use in Pasta
Fall 2018	Catalina Ramirez	Paper and paperboard manufacturing from carrot pomace
Spring 2019	Camille Bidwell, James Han, Johanna Taormina	The Fortification of Durum Semolina Pasta with Lima Bean Flour and Transglutaminase: Validation of Manufacturing Processes and Testing Procedures
Spring 2019	Quinn Cotter	Utilizing Carrot Mash as a Value-Added Ingredient in Beef Patties
Spring 2019	James Wong	Sous Vide Cooking and Eggs

GRANTS/CONTRACTS AS PRINCIPAL INVESTIGATOR (PI), CO-INVESTIGATOR (CI) AND COLLABORATOR (C) (ROLE IN BRACKET)

Amin S (CI), Nazmi A SNAP-Ed on CSU Campuses, USDA - Food and Nutrition Service (FNS) via CA Dept of Social Services via Chico State University, Funded \$225,708 (2019 -)

Amin S (PI), Jung S, Carrot Pomace as a source of Carotenoids and Nondigestible Oligosaccharide. California State University Agricultural Research Initiative, Funded \$49,467 (2018 -)

Amin S (CI), Lammert A, Product Labels for Three Proprietary Dairy Products, Torch Foods, Funded \$1,066 (2018)

Amin S (PI), Texture Analyzer for Evaluation of Mechanical Characteristics in Foods in Teaching and Research. SCIFTS 2017 Education / Research Grant, Funded \$15,671 (2017)

Amin S (CI), Lammert A, Nutritional Analysis of Selected Products. Titan Foods, Funded \$3,637 (2017)

Amin S (PI), Jung S, Brown J W, Characterization of Commercially Produced Carrot Pomace. California State University Agricultural Research Initiative, Funded \$17,666 (2016 -)

Amin S (PI), Large Lima Bean Flour use in Pasta. California State University Agricultural Research Initiative, Funded \$5,000 (2016 -)

PUBLICATIONS

Amin, S., Ustunol, Z. (2007) Solubility and mechanical properties of heat-cured whey protein-based edible films compared with that of collagen and natural casings. *International Journal of Dairy Technology* 60 (2), 149–153. doi:10.1111/j.1471-0307.2007.00305.x

Amin, S., Knutson, B., Ustunol, Z. and Allen, W. (2001). Acceptability of whey protein based edible packaging to culinary arts students and instructors. *J. Natl. Assoc. of Collage & Univ Food Serv.* 23(1): 18-27.

REFEREED CONFERENCE ABSTRACTS AND PRESENTATIONS

The (*) identifies invited paper/conference.

1. **Amin, S*.**, (2019) Indian Street Food, RCA Event in Napa
2. Le, A., Pantaleon, M., Zenker, L., **Amin, S.**, (2019) Utilization of Commercially Produced Carrot Pomace in Creaming Method Cakes., Summer Undergraduate Research Program Symposium, Cal Poly San Luis Obispo
3. Sagaral, J., Pantaleon, M., Zenker, L., **Amin, S.**, (2019) Large Lima Bean Flour Use in Pasta, Summer Undergraduate Research Program Symposium, Cal Poly San Luis Obispo
4. McNairn, M., Pantaleon, M., La Frano, M., **Amin, S.**, Sagaral, J., Le, A., Pilolla, K., Fanter, R., (2019) Investigation of Food Intake Biomarkers for Validating Dietary Questionnaires, Summer Undergraduate Research Program Symposium, Cal Poly San Luis Obispo
5. Handley, M., Ayoughi, F., Garza, J., **Amin, S.**, Volpe, R., Lammert, A., Investigation of Food Neophobia and Bitterness Sensitivity on Food Preference of Familiar and Unfamiliar Fruit and Vegetable Products in Elementary School Children, 13th Pangborn Symposium
6. Ayoughi, F., Handley, M., Garza, J., **Amin, S.**, Volpe, R., Lammert, A., (2019) Association of Parental Feeding Practices and Food Neophobia with their 6-12 Years Old Children, 13th Pangborn Symposium
7. La Frano, M., **Amin, S.**, Fanter, R., (2019) Utilization of metabolomics to teach undergraduate students nutritional metabolism. *Nutrition* 2019
8. **Amin, S*.**, (2019) E-Commerce Trends for Dressings & Sauces and Packaging Requirements, Association of Dressings and Sauces Technical Meeting
9. Duval, A., Jung, S., **Amin, S.** (2019) Effect of Enzymatic Pretreatment on the Extraction of Carotenoids, Soluble Sugar, and Oligosaccharides from Commercially Produced Carrot Mash. Institute of Food Technologists Annual Meeting
10. **Amin, S.**, Cotter, Q., Duval, A., Zenker, L. (2018) Utilizing Enzymatic Pretreatments to Enhance the Extraction of Carotenoids and Soluble Sugars in Carrot Processing Waste. Summer Undergraduate Research Program Symposium, Cal Poly San Luis Obispo
11. **Amin, S.** Jung, S., Pena, C., Lau, D., Neilson, J., Flores, A. (2017) Selected Properties of Commercially Produced Carrot Pomace Compared to Lab Produced Pomace. Research Chefs Association Annual Meeting
12. **Amin, S.**, Ramirez, C. (2017) Utilization of Commercially Produced Carrot Pomace in Muffins. Summer Undergraduate Research Program Symposium, Cal Poly San Luis Obispo

13. **Amin, S.**, Mijalli, S (2017) Development of Pasta Using Large White Lima Beans. Summer Undergraduate Research Program Symposium, Cal Poly San Luis Obispo
14. **Amin, S.**, Neilson, J (2016) Functional Properties of Commercially Produced Carrot Pomace. Summer Undergraduate Research Program Symposium, Cal Poly San Luis Obispo
15. **Amin, S.** (2015) “Combining Culinary Arts, Food Science and Nutrition to Combat Obesity” at the Cal Poly STRIDE - UC Berkeley School of Public Health Joint Obesity Symposium.
16. Bonner,N., Iserman, E., Traynor,M., **Amin, S.**, Hobson, A. (2014). Consumer acceptability and appropriateness of a novel pea protein supplement shake in comparison to whey and soy protein supplement shake. Research Chefs Association Annual Meeting
17. **Amin, S.**, Booren, A. M., Harte, B., Ustunol Z. (2003). Water solubility and mechanical properties of heat cured whey protein isolate-based edible films: A comparison to commercial collagen and natural casings. IFT Annual Meeting
18. **Amin, S.**, Booren, A. M., Ustunol Z. (2002). Water solubility and mechanical properties of heat cured whey protein isolate-based edible films: A comparison to commercial collagen and natural casings. J. Dairy Sci. 85(suppl 1): 121
19. **Amin, S.**, Knutson, B., Ustunol, Z. and Allen, W. (2001). Acceptability of whey protein based edible packaging to culinary arts students. IFT Annual Meeting Program

COMMITTEE INVOLVMENT

COLLEGE

- 2016 – Present CAFES Diversity and Inclusion Committee
- 2016 – Present CAFES Boswell Building Design Committee
- 2016 – Present CAFES Branding Committee
- 2016 – 2016 The Wonderful Scholars Camp
- 2015 – 2018 CAFES Land Use Committee

Department

- 2018 – Present Search Committee for Nutrition Recruitments (TT Foodservice) – MEMBER
- 2018 – Present RCA Application for the Culinology® program Lead
- 2017 – Present Foodster Scholarship Application Review/Selection Committee Member
- 2017 – Present Scholarship Committee Member
- 2017 – Present College Based Fee Committee / Program Needs Committee Member
- 2016 – Present IFT Product Development Teams Co-Advisor
- 2017 -2017 Mustang Family Weekend – Nutrition Program Representative
- 2017 -2017 Open House– Nutrition Program Representative

Professional

- 2018 – Present Editorial Review Board of the Journal of Culinary Science & Technology.
- 2017 – Present Research Chefs Association Higher Education Committee Member
- 2015 – 2016 Chair of the Research Chefs Association Continuing Education Subcommittee

MEMBERSHIPS

- Research Chefs Association (Chef Member)
- Institute of Food Technologists (Professional Member)
- American Chemical Society
- American Association for the Advancement of Science