

## CURRICULUM VITAE

### **Miguel Angel Pedroza Villarreal, Ph.D.**

*Assistant Professor of Enology*

Department of Viticulture & Enology / Viticulture & Enology Research Center

California State University, Fresno

2360 E. Barstow Avenue MS VR89, Fresno, CA 93740-8003

Office: 559 278-1677 Email: [miguelp@csufresno.edu](mailto:miguelp@csufresno.edu)

#### **Professional Experience**

- 2017-present**    **Assistant Professor of Enology**  
Department of Viticulture & Enology, Fresno State, Fresno, California, USA
- 2016-2017**    **Research Engineer**  
**Centre de Neurosciences Cognitives-CNRS**  
Neuroeconomics, Reward and Decision Making Laboratory, Lyon, France
- 2014-2016**    **Postdoctoral Researcher**  
**Centre de Neurosciences Cognitives-CNRS**  
Neuroeconomics, Reward and Decision Making Laboratory, Lyon, France

#### **Education**

- 2012**    **PhD in Enology**    **Universidad de Castilla-La Mancha**  
Albacete, Spain.
- 2010**    **MSc Agricultural Science and Engineering**    **Universidad de Castilla-La Mancha**  
Albacete, Spain.
- 2009**    **Advanced Studies in Enology Diploma**    **Universidad de Castilla-La Mancha**  
Albacete, Spain.
- 2006**    **BSc Food Industries Engineering**    **Instituto Tecnológico y de Estudios Superiores de Monterrey**  
Monterrey, Mexico.

#### **Teaching**

##### **2017- Present Instructor, Department of Viticulture and Enology, California State University, Fresno**

Upper Division Undergraduate: Cellar operations (ENOL-166, Lecture and laboratory), Winery Equipment (ENOL-151, Lecture and laboratory), Winery Management (ENOL-175), Wine production and analysis (ENOL-164, Lecture and laboratory), Advanced Sensory Evaluation of Wines (ENOL 105, Lecture and laboratory)

#### **Scientific Publications in Peer Review Journals**

Cecotti, H., Rivera, A., Farhadloo, M., **Pedroza, M.** Grape detection with Convolutional Neural Networks. ***Expert Systems with Applications***. UNDER REVIEW Manuscript number ESWA-D-19-03189, submitted July 10, 2019

**Pedroza, M.A.**, Maggi, L., Amendola, D., Zalacain, A., De Faveri, D.M., Spigno, G. (2015). Microwave assisted extraction of phenolic compounds from dried waste grape skins. ***International Journal of Food Engineering***. 11(3), 359-370  
DOI: [10.1515/ijfe-2015-0009](https://doi.org/10.1515/ijfe-2015-0009).

**Pedroza, M. A.**, Carmona, M., Alonso, G. L., Salinas, M. R., & Zalacain, A. (2013). Prebottling use of dehydrated waste grape skins to improve color, phenolic, and aroma composition of red wines. ***Food Chemistry***, 136(1), 224-236.  
DOI: [10.1016/j.foodchem.2012.07.110](https://doi.org/10.1016/j.foodchem.2012.07.110)

**Pedroza, M. A.**, Carmona, M., Pardo, F., Salinas, M. R., & Zalacain, A. (2012). Waste grape skins thermal dehydration: potential release of colour, phenolic and aroma compounds into wine. ***CyTA - Journal of Food***, 10(3), 225-234.  
DOI: [10.1080/19476337.2011.633243](https://doi.org/10.1080/19476337.2011.633243)

**Pedroza, M. A.**, Carmona, M., Salinas, M. R., & Zalacain, A. (2011). Use of dehydrated waste grape skins as a natural additive for producing rosé wines: study of extraction conditions and evolution. *Journal of Agricultural and Food Chemistry*, 59(20), 10976-10986. DOI: [10.1021/jf202626v](https://doi.org/10.1021/jf202626v)

**Pedroza, M. A.**, Zalacain, A., Lara, J. F., & Salinas, M. R. (2010). Global grape aroma potential and its individual analysis by SBSE-GC-MS. *Food Research International*, 43(4), 1003-1008. DOI: [10.1016/j.foodres.2010.01.008](https://doi.org/10.1016/j.foodres.2010.01.008)

Lorenzo, C., Garde-Cerdán, T., **Pedroza, M. A.**, Alonso, G. L., & Salinas, M. R. (2009). Determination of fermentative volatile compounds in aged red wines by near infrared spectroscopy. *Food Research International*, 42(9), 1281-1286. DOI: [10.1016/j.foodres.2009.03.021](https://doi.org/10.1016/j.foodres.2009.03.021)

Marín, J., Ocete, R., **Pedroza, M.**, Zalacain, A., de Miguel, C., López, M. A., & Salinas, M. R. (2009). Influence of the mite *Carpoglyphus lactis* (L) on the aroma of pale and dry wines aged under flor yeasts. *Journal of Food Composition and Analysis*, 22(7-8), 745-750. DOI: [10.1016/j.jfca.2009.01.017](https://doi.org/10.1016/j.jfca.2009.01.017)

### Book Chapters

**Pedroza, M. A.**, Salinas, M. R., Alonso, G. L., & Zalacain, A. (2017). Chapter 10. Oenological applications of wine-making by-products. In C. M. Glanakis (Ed.), *Handbook of Grape Processing By-products: Sustainable Solutions*: Elsevier.

### Research Internships

<b>2011-2012</b> <b>(3 months)</b>	<b>Research Internship</b> Microwave assisted extraction of grape marc	Università Cattolica del Sacro Cuore Istituto di Enologia e Ingegneria Agroalimentare, Piacenza, Italy
<b>2010</b> <b>(2 months)</b>	<b>Research Internship</b> Waste grape skins preliminary evaluation in wines	Bodegas San Isidro Jumilla, Spain

### Grantsmanship and Awards

Awarded grants

<b>Period</b>	<b>Details</b>
2018-2020	Funding Agency: Agricultural Research Institute. California State University, Fresno. Campus Grant. Proposal Title: Characterization of emotions evoked by wine odorants using Autonomic Nervous System signals (EMOWINE). Role: Principal Investigator (PI)
2019	Funding Agency: Superior Farm Water Proposal Title: Evaluation of Ceramic Beads as a New Wine Stabilization Treatment Role: PI
2018-2019	Funding agency: Agricultural Research Institute. California State University, Fresno. Seed grant Proposal title: Bodily responses as a new parameter to estimate emotions evoked by wine aroma Role: PI
2018-2019	Funding Agency: California State University, Fresno College of Science and Mathematics Interdisciplinary Collaboration Research, Scholarly & Creative Activity Awards Proposal Title: Automatic Monitoring grape ripening through Digital Image Processing Role: Co-PI
2014-2017	Funding Agency: International Postdoctoral Fellowships from National Science and Technology Council of Mexico, CONACYT Award: Member of the National Researchers System (Level I)
2014-2016	Funding Agency: International Postdoctoral Fellowships from National Science and Technology Council of Mexico, CONACYT Proposal Title: Effect of wine labels on reward-related brain activity Role: Postdoctoral Fellow, No. 232086

2007-2012 Funding Agency: International Postdoctoral Fellowships from National Science and Technology Council of Mexico, CONACYT  
International Doctoral Fellowship  
Fellowship No. 207976

Applications without award

Call	Details
2019	Funding Agency: American Vineyard Foundation Proposal Title: Characterization of emotions evoked by wine odorants using Autonomic Nervous System signals (EMOWINE). Role: Principal Investigator (PI)
2018	Funding Agency: American Vineyard Foundation Proposal Title: Characterization of emotions evoked by wine odorants using Autonomic Nervous System signals (EMOWINE). Role: Principal Investigator (PI)
2013	Funding Agency: Marie Curie Intra-European Fellowship Candidate. 7th Framework Program Proposal Title: Effect of wine labels on reward-related brain activity Role: Co-PI

**Viticulture & Enology Professional and Academic Experience**

2013-2014	<a href="#">Domaine Xavier Reverchon</a> Poligny, France Region : Côtes de Jura	<b>Viticulture and Enology Internship</b> Harvest, winemaking of red, white and sweet, wine, assemblages, and sales work
2015	<b>Oregon State University.</b> Corvallis, OR, U.S.A.	<b>Semester Abroad Program</b> Courses: wine production and analysis, fruit and vegetable processing
2005	<a href="#">Château Peneau</a> Bordeaux, France	<b>Viticulture and Enology Internship</b> Region Premières Côtes de Bordeaux Vineyard maintenance winery and sales work
2005	<b>École Supérieure d'Agriculture PURPAN</b> Toulouse, France	<b>Summer School Program</b> Viticulture and Enology

### Professional wine tasting and sensory evaluation

2019	California State Fair Wine Competition, Sacramento CA Expert jury
2018	California State Fair Wine Competition, Sacramento CA Expert jury
2018	San Joaquin Valley Wine Competition, Fresno CA Expert jury
2017	Concours International de Lyon Expert Jury
2017	Concours des Vins ELLE a table, Magazine ELLE, Bron, France Expert jury
2017	Concours Général Agricole, Paris, France Expert jury
2016	Chardonnay du Monde 2016 International wine contest. Château des Ravatys, France Expert jury for Burgundy, Spain and Morocco wines
2016	Chardonnay du Monde International wine contest. Institut Paul Bocuse, Ecully, France Expert jury training.
2016	Concours Général Agricole, Paris, France Expert jury: Cotes de Brouilly, Alsace
2015	Concours Général Agricole, Paris, France Expert jury: Champagne, South-west wines, Beer
2014	Concours Général Agricole Paris, France Expert jury: Saint Emilion Grand Cru

### Collaboration in Research Projects

<b>2012</b>	Evaluation of a methodology for determining grape and wine aroma precursors at wineries	<b>Universidad de Castilla-La Mancha</b> Agricultural Chemistry Laboratory Albacete, Spain	Financing Organization: Bodega Martín Códax (DO Rías Baixas, Galicia, Spain), Bodegas y Viñedos Pittacum (DO Bierzo, Castila León, Spain), Bodega Heredad Ugarte (DOC Rioja Alavesa, Spain)
<b>2010-2011</b>	Optimization of phenolic and aroma extracts from grape processing by-products. Project Reference: 0114101087	<b>Universidad de Castilla-La Mancha</b> Agricultural Chemistry Laboratory Albacete, Spain	<b>Financing Organization:</b> Junta de Comunidades de Castilla-La Mancha (Regional Government of Castilla-La Mancha, Spain)- Julian Soler S.A. Grape Juice Concentrate Factory
<b>2011</b>	Testing of BIOLAN biosensors to determine wine and grape aroma potential	<b>Universidad de Castilla-La Mancha</b> Agricultural Chemistry Laboratory Albacete, Spain	<b>Financing Organization:</b> BIOLAN S. L. <b>Participant wineries and laboratories:</b> Bodegas y Viñedos Labastida Solagüen, La Rioja, Spain; Bodega Contador, San Vicente de la Sonsierra, La Rioja, Spain; Estación Enológica de Haro, La Rioja, Spain.
<b>2008-2010</b>	Evaluation of dehydrated waste grape skins as new enological product for enhancing wine color and aroma <b>Project ID:</b> PAI08-0148-9842	<b>Universidad de Castilla-La Mancha</b> Agricultural Chemistry Laboratory Albacete, Spain	<b>Financing Organization:</b> Junta de Comunidades de Castilla-La Mancha (Regional Government of Castilla-La Mancha, Spain)

## Teaching Experience

**Cellar Operations ENOL166**

**Winery Management ENOL 175**

**Winery Equipment ENOL 151**

**Wine Analysis and Production ENOL 164**

**Advanced Sensory Evaluation of Wine ENOL 105**

Department of Viticulture & Enology  
California State University, Fresno

**Internship Advisor**

Undergraduate student of Biology

Topic: *fMRI data analysis and wine stimuli*

Ecole Normal Superior de Lyon  
CNRS Institut de Science Cognitive Marc Jeannerod UMR 5229  
Neuroeconomics, Reward and Decision Making Laboratory,  
Lyon, France. 2016

**Internship Advisor**

Master 1 student

Topic: *fMRI data analysis and wine stimuli*

Ecole Normal Superior de Lyon  
CNRS Institut de Science Cognitive Marc Jeannerod UMR 5229  
Neuroeconomics, Reward and Decision Making Laboratory,  
Lyon, France. 2016

**Internship Advisor**

Master 1 Student

Biologie Intégrative Physiologie et Neurosciences

Topic: *multisensory integration and brain activity*

Université Claude Bernard Lyon 1  
CNRS Institut de Science Cognitive Marc Jeannerod UMR 5229  
Neuroeconomics, Reward and Decision Making Laboratory,  
Lyon, France 2016

**Internship Advisor**

Master 1 Student

Biologie Intégrative Physiologie et Neurosciences

Topic: *Perceptual collective decisions of wine*

Université Claude Bernard Lyon 1  
CNRS Institut de Science Cognitive Marc Jeannerod UMR 5229  
Neuroeconomics, Reward and Decision Making Laboratory,  
Lyon, France. 2015

**Internship Advisor**

Master 1 student

Biologie Intégrative Physiologie et Neurosciences

Topic: *Intégration Multimodal, Rôle de la vision dans le saveur du vin*

Université Claude Bernard Lyon 1  
CNRS Institut de Science Cognitive Marc Jeannerod UMR 5229  
Neuroeconomics, Reward and Decision Making Laboratory,  
Lyon, France 2015

**Internship Advisor**

Undergraduate student

Topic: new product development using grape marc

Universidad de Castilla-La Mancha  
Agricultural Chemistry Laboratory, Albacete, Spain  
Academic Year 2011-2012

**Teacher Assistant**

Experimental Enological Chemistry Laboratory

Universidad de Castilla-La Mancha  
Agricultural Chemistry Laboratory, Albacete, Spain  
Academic Year 2008-2010

**Invited Lecturer**

Advances in Enological Chemistry (MSc course)

**Summer Course: Introduction to Enology**

(5 hours)

Universidad de Castilla-La Mancha  
Agricultural Chemistry Laboratory, Albacete, Spain. 2009-2011  
Instituto Tecnológico y de Estudios Superiores de Monterrey,  
Monterrey, Mexico. 9-11 June 2007

## Participation in Scientific Congresses

Wegley, B., Hernandez, L., Rodriguez-Cetto, A., Munk, K., Shapiro, M., Cecotti, H., **Pedroza, M.A.** (2019). Autonomic nervous system responses as a new Sensory tool to predict wine odorant valence. Poster presented at the **70th ASEV National Conference**, Napa, CA.

**Pedroza, M. A.** (2019). *Perspectives on wine flavor and human body interactions*. Invited Speaker at the **Unified Grape and Wine Symposium**, Sacramento, CA. Jan 31.

**Pedroza, M. A.**, Park, S. A., & Dreher, J. C. (2017). *Of wines and minds: genetic traits and color-odor interactions modulate wine perception and brain activity*. Poster presented at the **Seventh International Symposium on Biology of Decision Making, Bordeaux**, France.

**Pedroza, M. A.**, Park, S. A., DeSousa, C., Gerardin, A., & Dreher, J. C. (2016). Influences of genetic polymorphism in olfactory sensitivity on wine multisensory integration decisions. Paper presented at the Human Decision Neuroscience Workshop, Delmenhorst, Germany.

Serrano de la Hoz, K., **Pedroza, M.A.**, Bonilla, I., Carmona, M., Salinas, M.R. (2013). Diferentes prácticas agronómicas en el potencial aromático glicosídico de uvas de la variedad Tempranillo. In: **Congreso Nacional de Investigación Enológica GIENOL**. Madrid, Spain.

Spigno, G., **Pedroza, M. A.**, Amendola, D., Maggi, L., Zalacain, A., DeFaveri, D.M. (2012) Polyphenols microwave assisted extraction from waste grape skins. **Proceedings of the International Conference Bio & Food Electrotechnologies**. ISBN: 978-88-903261-8-9. Salerno, Italy

**Pedroza, M. A.**, Carmona, M., Alonso, G. L., Salinas, M. R., & Zalacain, A. (2012). Polyphenol and color release from dehydrated waste grape skins into stored red wines. In: **26th International Conference on Polyphenols**. Florence, Italy.

**Pedroza, M. A.**, Amendola, D., Maggi, L., Zalacain, A., & Spigno, G. (2012). Microwave assisted extraction and antioxidant power of dried waste grape skins polyphenols. In: **26th International Conference on Polyphenols**. Florence, Italy.

Alonso, G. L., Carmona, M., Serrano-Díaz, J., Martínez-Gil, A.M. Serrano-de-La-Hoz, K., Maggi, L., **Pedroza, M. A.**, Zalacain, A. & Salinas, M. R. (2012). Influencia de los carotenoides en la calidad del azafrán y de las uvas de vinificación. In: **International Workshop Carotenoides como ingredientes de alimentos funcionales**. Universidad de Sevilla, Seville, Spain.

**Pedroza, M. A.**, Carmona, M., Pardo, F., Alonso, G. L., Salinas, M. R., & Zalacain, A. (2011). Building Rosé Wines from Dehydrated Waste Grape Skins (Poster 141). In: **XXXIV OIV World Congress of Vine and Wine**. Porto, Portugal.

**Pedroza, M. A.** (2011). Recent advances in industrial reprocessing of waste grape skins. In: **XXXIV OIV World Congress of Vine and Wine**. Porto, Portugal. **(Oral communication)**

**Pedroza, M. A.**, Alonso, G. L., Carmona, M., Salinas, M. R., & Zalacain, A. (2010). Estudio de la dosificación, tiempo de maceración y granulometría de hollejos deshidratados sobre el color y la composición fenólica en vino sintético. In: **VII Foro Mundial del Vino**. Logroño, Spain.

**Pedroza, M. A.**, Alonso, G. L., Carmona, M., Salinas, M. R., & Zalacain, A. (2010). Evaluation of dehydrated white grape skins as copigment in red wine model solutions. In: **VI International Congress on pigments in food: chemical, biological and technological aspects** (pp. 113-116) ISBN 978-963-9970-04-5. Budapest, Hungary.

**Pedroza, M. A.**, Carmona, M., Alonso, G. L., Salinas, M. R., & Zalacain, A. (2010). Use of red grape skins to enhance the phenolic composition of wines. In: **\*VI International Congress on pigments in food: chemical, biological and technological aspects** (pp. 345-347) ISBN 978-963-9970-04-5. Budapest, Hungary.

**Pedroza, M. A.**, Alonso, G. L., Carmona, M., Salinas, M. R., & Zalacain, A. (2009). Efecto de la deshidratación en la composición fenólica de hollejos de distintas viníferas. In: *X Congreso Nacional de Investigación Enológica GIENOL*. ISBN 978-84-8158-438-7. Ourense, Spain.

**Pedroza, M. A.**, Lara, J. F., Zalacain, A., & Salinas, M. R. (2008). Resultados Preliminares sobre la determinación del potencial aromático de uvas tintas mediante SBSE-TD-GC-MS. In: *XIV Congreso Nacional de Enólogos*. San Lorenzo del Escorial, Madrid, Spain. (**Invited Speaker**).

#### **Scientific Divuligation**

**Pedroza, M.A.**, Licon C.C. (2019). Wine and cheese pairing workshop. Fresno State Winery Sensory Development Seminars. Fresno, CA

**Pedroza, M.A.** (2019). White wine varietal aroma workshop. Fresno State Winery Sensory Development Seminars. Fresno, CA. Apr, 25

**Pedroza, M.A.** (2019), Wine aroma defects. Fresno State Winery Sensory Development Seminars. Fresno, CA. Feb 28

**Pedroza, M.A.** (2018) Fresno State wine and food pairing workshop. Department of Food Science and Nutrition, Fresno State. (Invited speaker). August 16. Fresno, CA.

**Pedroza, M.A.** (2018) Bodily responses evoked by wine flavor. Grape-Day, Department of Viticulture and Enology, Fresno State, Fresno. August 7. Fresno, CA

**Pedroza, M.A.** (2018). Current perspectives on measuring emotions evoked by wine flavor. San Joaquin Valley Winegrowers Association Research Roadshow. June 6. Fresno, CA

**Pedroza, M.A.** (2018). The flavor of wine: from molecules to neurons. CSU-CalPoly. February 23. San Luis Obispo, CA

**Pedroza, M.A.** (2017). How does wine chemistry looks like in the brain?. Fresno State, Chemistry Department Seminar Series. November 3. Fresno, CA

**Pedroza, M.A.**, Licon, C.C. (2017) Webinar: The flavor of wine: from molecules to neurons. Institut Paul Bocuse, Lyon, France. September 27. Fresno, CA.

Licon, CC., **Pedroza, M.A.** (2017). Le bon gout...Ca s'explique?. Pint of Science-France (Science Festival). Lyon, France, May 17.

**Pedroza, M.A.** (2016). NeuroEnologia. Seminarios sobre neurociencia aplicada a los alimentos. Universidad de Castilla-La Mancha, Albacete, April 7. Spain. (Invited speaker)

**Pedroza, M.A.** (2016). La perception du vin : un experience multi-sensorielle. Round table in : *La Semaine du cerveau*, Musee Claude Bernard, Saint-Julien-sous-Montmelas, March 18th, France. (Invited speaker)

**Pedroza, M.A.** (2015). Neuroscience perspective of wine flavor. Foreign Researchers Welcome Event Organized by Espace Ulys-Euraxess. Universite de Lyon. Lyon, France. February 5. (Invited Talk)

**Pedroza, M.A.**, Dreher, J.C. (2014). Modulation de la perception de l'arôme du vin par sa robe: une étude d'imagerie cérébrale originale. Dossier Spécial Neurosciences et vin. *Revue des Oenologues*. 153s (Written Article)

**Pedroza, M.A.**, Carmona, M., Alonso, G.L., Salinas, M.R., Zalacain, A. (2011). Innovación en el uso de subproductos vitivinícolas: Hollejos de uva deshidratados. Revista Winetech.2, 22-24 (Written article)

**Pedroza, M.A.** (2009). Evaluación del uso de hollejos agotados de uva para mejorar las características aromáticas y cromáticas de los vinos. Seminar La ciencia In Vivo. Universidad de Castilla-La Mancha. Albacete, Spain. (Invited speaker)

### Analytical Apparatus, Data Analysis, and Computational Skills

**Psychophysiological recording of EDA, EMG, and ECG**

BIOPAC MP160, Bionomadix Sensors

**Sensory Evaluation software**

Compusense

### **Functional Magnetic Resonance Imaging**

Neurobehavioral Systems Presentation

Statistical Parametric Mapping (SPM)

Matlab

### **Liquid and Gas Chromatography**

I have 5 years of experience operating and performing maintenance of both chromatographs.

Agilent GC-MSD 6890 and 7980

Agilent HPLC-DAD 1200

Agilent Chemstation Software for HPLC-DAD and GC-MS

### **Stir Bar Sorptive Extraction**

I have used this technique for analyzing grapes, must, wine, and water.

Gerstel Twister Stir Bar Sorptive Extraction

Gerstel Maestro Software

### **Data Analysis-Statistical Software**

I have used both software for performing data analysis statistical tests of ANOVA, Factor Analysis, GLM, Discriminant Analysis, and PCA.

IBM-SPSS Statistics 19

Statgraphics XVI Centurion

### Relevant Courses/Experience

#### **Functional and anatomical Magnetic Resonance Imaging Workshop**

Institut National de la Santé et de la Recherche Médicale

INSERM

Lyon, France February 2-6, 2015

#### **Fundamentals of Neuroscience II**

Approved

<https://verify.edx.org/cert/4bf869b883cb4182b20779e392774e06>

HarvardX

<http://www.mcb80x.org>

January, 2015

#### **Fundamentals of Neuroscience I**

Approved

<https://verify.edx.org/cert/f060d5397e4d46d29cb480a9c150a423>

HarvardX

<http://www.mcb80x.org>

February, 2014

#### **Advanced Viticulture**

Online Course (120 hours)

InfoAgro Spain

<http://www.infoagro.com>

**Sustainable agriculture and use of pesticides: Control and Risks** (30 hours)

University of Murcia,

Águilas, Spain July, 2009

### Journal and Grant reviewer

#### **Food Chemistry**

Elsevier

#### **Journal of the Science of Food and Agriculture**

Ed. Wiley

#### **PhD Grants Evaluator, CONACYT**

National call for outgoing international applications

National Science and Technology Council

May 2015, Mexico

#### **PhD Grants Evaluator, CONACYT**

National call for outgoing international applications

National Science and Technology Council

May 2014, Mexico

### Other Professional Experience

#### **GRUMA-Molinos Azteca S.A. de C.V.**

Quality Assurance engineer

Guadalupe, Nuevo León

September 2006 - January 2007, Mexico



	<u>Languages</u>		
<b>Language</b>	<b>Speaking</b>	<b>Reading</b>	<b>Writing</b>
Spanish		Native language	
English	Fluently	Fluently	Fluently
French	Fluently	Fluently	Intermediate
Italian	Beginner	Beginner	Beginner

September 2019