

# **Curriculum Vitae: Christopher S. Brownell (PhD.)**

## **Education:**

Doctor of Philosophy of Education (Mathematics, Policy and Practice)  
Claremont Graduate University (Fall 2015) (Dissertation defended and approved on October 21, 2105)

Title: “An Investigation into the Implementation of the Common Core State Standards in Mathematics: Teacher Concerns and Understandings of Transformation Geometry”  
Claremont, CA. Areas of Concentrated Study: GIS Analysis, Social Network Analysis, Hierarchical Linear Models applied to Educational Settings, Probability Theory, Mathematical Knowledge for Teaching, and Educational Policy.

Master of Arts in Mathematics Education (Secondary Emphasis)  
Fresno Pacific University (May, 1999)  
Fresno, CA

Bachelor of Arts in Mathematics (Teaching Emphasis)  
California State University Fresno (December, 1985)  
Fresno, CA

## **Professorial, Teaching and Research Experience:**

Present positions: Program Director & Associate Professor of Mathematics & STEM Education, School of Education, Fresno Pacific University; Fresno CA. Co-appointment as The Coordinator of Outreach, The AIMS Center for Mathematics & Science Education Research (Since August 2014).

August 2014 to August 2016: Fresno Pacific University Assistant Professor of Mathematics & STEM Education, Program Director Mathematics and STEM Education.

July 2014 to Present: AIMS Center for Math & Science Education; Fresno CA. Coordinator of Outreach: focused on Center/FPU relations, Supervision of IRB preparation, Colloquium Series coordination, ZPC: The Zone of Potential Construction Podcast Host and Originator. Partnership with various Math & Science Education organizations throughout the region.

June 2011 to July 2014: Claremont Graduate University; Claremont CA.  
Grant Coordinator (Teachers Employing Applied Mathematics to Engage Students TEAMES) and Faculty Advisor (Teacher Education Internship Program TEIP).

October 2010 to June 2011: Fresno Pacific University; Fresno CA.  
Title V: Paseo, STEM Cohort Grant Coordinator and Assistant Professor of Mathematics

August 2000 to October 2010: Fresno Pacific University; Fresno CA.  
Faculty in Mathematics/Department Chairman Undergraduate Mathematics Department of the  
School of Natural Sciences.

1987 – 1999: Central Unified School District; Fresno CA: Central High School (West then East  
Campuses): Department Chairman and Teacher of Mathematics.

1985 – 1999: Fresno City College; Fresno CA: Adjunct Faculty in Mathematics.

### **Administrative Work Since 2006:**

2015 & ongoing: Principal Investigator; California Math-Science Partnership (MSP); Fresno  
Pacific University/Kings County Office of Education.

2014 through present: Program Director; Mathematics & STEM Education programs, Fresno  
Pacific University; Fresno CA.

2011 through 2014 Grant Coordinator Teachers Employing Applied Mathematics to Engage  
Students (TEAMES) (US Dept. of Education (US ED), Teaching for a Competitive Tomorrow),  
Claremont Graduate University; Claremont CA.

2010 through June 2011 Grant Coordinator Paseo-STEM Cohort (US ED Title V) program,  
Fresno Pacific University; Fresno CA.

2006 through 2011 Department Chair Undergraduate Mathematics department, Fresno Pacific  
University; Fresno CA.

### **Publications and Presentations**

Stone, L., Brownell, C. (July, 2017) “Versatile Genius: A Case Study Intersecting Math, Science,  
Art, and California’s National Parks.” Proceedings of Bridges Math-Art, Waterloo 2017  
Conference. pp. 221-228.

Brownell, C. (27-April-2017) “A Brief History & Status Update on Mathematics Curricula in the  
USA” Invited talk, Jyväskylä University Conference on Mathematics Curriculum Innovation and  
Research. Jyväskylä, Finland.

Brownell, C. (20-April-2017) “On HexaFlexagons and the Binary Representation of Integers” a  
presentation to Finnish teachers at the “Experience Workshop” Kuoppio, Finland.

Brownell, C. (4-December-2016) “Understanding a Deep Principle of Number via Doubling”  
paper and presentation delivered at California Mathematics Council-North. Asilomar, CA

Brownell, C. (3-November-2016 scheduled) “Understanding a Deep Principle of Number via Doubling” paper and presentation delivered at California Mathematics Council-South conference. Palm Springs, CA

Brownell, C. (ongoing broadcast) “The Zone of Potential Construction” a weekly podcast of the AIMS Center for Mathematics & Science Education Research. Access @ [www.aimsedu.org/zpc/](http://www.aimsedu.org/zpc/)

Brownell, C., Blanks, D., Friesen, T., Hoff, L., McAleenan, A., Merritt, S., Perry, R. (13-November-2016). “Fresno Pacific University visits Finland & Estonia” a presentation to the faculty in Faculty Seminar at FPU. Reporting upon a research tour of educational systems in Finland and Estonia in May 2016.

Brownell, C. Pauls, S. (10-October, 2016) “The Physics of Falling Objects: An Opportunity for Cross-Curricular Integration” a workshop presented at the California STEM Symposium, Anaheim, CA.

Brownell, C. Pauls, S. (24-October, 2016) “Graphical Analysis: Where Science & Mathematics Meet” paper & workshop presented California Science Teachers Association, Palm Springs, CA.

Brownell, C. (12-September, 2016). “Mathematical Modeling in the K-12 Classroom: How to Assess and Encourage Creativity” A paper and presentation given at the AIMS Center Colloquium Series 2016-2017.

Brownell, C. (29-July-2016) “Using Mystery to Enhance Joy of Learning” A TED-Talk delivered to the “Better Together: National Teachers Summit” held at Fresno Pacific University; Fresno, CA.

Brownell, C. Pauls, S. (25-July thru 29 July 2016) “The Integration of Life, and Earth Sciences and Mathematics to the teaching of California Eco-systems” a week-long presentation of content, pedagogy, and philosophy of learning in conjunction with the California Math-Science Partnership in Kings County California. (Co-PI’s and presenters)

Brownell, C. (24-February-2016) “Teacher Understandings of Transformation Geometry” A Seminar delivered to the Faculty @ Fresno Pacific University.

Brownell, C., Pauls, S. (29-October-2015) “Graphical Analysis: Linking the Mathematical and Scientific to Engage Students” a presentation @ California STEM Symposium; Anaheim CA.

Brownell, C. & Pauls, S. (2015). *Art, math, and physics: All about FOR*. The STEAM Journal vol. 2 issue 1. Published online @ <http://scholarship.claremont.edu/steam/vol2/iss1/29/>

Brownell, C. (December 2013) “Where do you find good problems to model in class: You don’t, make them yourself!” presentation @ California Math Council, Asilomar CA.

Brownell, C. & Foster, I. (November 2013) “Mathematical Models in the 7-12 Classroom” presentation @ California Math Council, Palm Springs, CA.

Brownell, C. & Foster, I. (October 2013) “TEAMES: Engagement via Applied Mathematics” paper presentation to National Council Teachers of Mathematics Regional Conference, Las Vegas NV.

Brownell, C. (2013). *Equations of light: The STEAM journal inaugural issue, cover art*. The Steam Journal v. 1 issue 1. Published online @ <http://scholarship.claremont.edu/steam/vol1/iss1/>

Brownell, C. (2013). “A Short story about long lines: From Euclid to Hyperbole” invited speech for the launch event for the “Inaugural Edition of the STEAM Journal” delivered 28-March-2013 at The Claremont Graduate University; Claremont CA.

Presentations and papers prior to 2013, available upon request, include work with or for the following: Education Testing Service Pre-AP, College Preparatory Mathematics (CPM) Professional Development Team, San Joaquin Valley Mathematics Project, Fresno, Madera, Tulare, Inyo, San Joaquin, and Sacramento Counties, California Mathematics Council, California State Department of Education.

### **Contact Information:**

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