NSF BIOGRAPHICAL SKETCH

NAME: Rushton, Gregory

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POSITION TITLE & INSTITUTION: DIRECTOR, TN STEM EDUCATION CENTER, MIDDLE TN STATE UNIVERSITY

(a) PROFESSIONAL PREPARATION

INSTITUTION	LOCATION	MAJOR / AREA OF STUDY	DEGREE (if applicable)	YEAR YYYY
UNIVERSITY OF SOUTHERN CALIFORNIA	LOS ANGELES, CA	CHEMISTRY	AB	1993
UNIVERSITY OF SOUTH CAROLINA	COLUMBIA, SC	SCIENCE EDUCATION	MED	1998
UNIVERSITY OF SOUTH CAROLINA	COLUMBIA, SC	CHEMISTRY	PHD	2004

(b) APPOINTMENTS

2018 - present DIRECTOR, TN STEM EDUCATION CENTER, MIDDLE TN STATE UNIVERSITY, MURFREESBORO, TN

2018 - present PROFESSOR, CHEMISTRY, MIDDLE TN STATE UNIVERSITY, MURFREESBORO, TN

2015 - 2018 ASSOCIATE PROFESSOR, SUNY-STONY BROOK, STONY BROOK, NY

2014 - 2014 VISITING ACADEMIC, CURTIN UNIVERSITY, PERTH, WA

2012 - 2018 ASSOCIATE EDITOR, JOURNAL OF CHEMICAL EDUCATION

2009 - 2015 ASSOCIATE PROFESSOR, KENNESAW STATE UNIVERSITY, KENNESAW, GA

2004 - 2008 ASSISTANT PROFESSOR, KENNESAW STATE UNIVERSITY, KENNESAW, GA

1998 - 2002 SCIENCE TEACHER, SPRING VALLEY HIGH SCHOOL, COLUMBIA, SC

1995 - 1998 SCIENCE TEACHER, LOWER RICHLAND HIGH SCHOOL, HOPKINS, SC

(c) PRODUCTS

Products Most Closely Related to the Proposed Project

1. Criswell B, Rushton G, Nachtigall D, Staggs S, Alemdar M, Cappelli C. Strengthening the vision: Examining the understanding of a framework for teacher leadership development by experienced science teachers. Science Education. 2018 November; 102(6):1265-1287. Available from: http://doi.wiley.com/10.1002/sce.21472 DOI: 10.1002/sce.21472
2. Criswell B, Rushton G, McDonald S, Gul T. A Clearer Vision: Creating and Evolving a Model to Support the Development of Science Teacher Leaders. Research in Science Education. 2017; 48(4):811-837. Available from: http://link.springer.com/10.1007/s11165-016-9588-9 DOI: 10.1007/s11165-016-9588-9
3. Alemdar M, Cappelli CJ, Criswell BA, Rushton GT. Evaluation of a Noyce program: Development of teacher leaders in STEM education. Eval Program Plann. 2018 Dec;71:1-11. PubMed PMID: 30059795.

4. Polizzi S, Head M, Barrett-Williams D, Ellis J, Roehrig G, Rushton G. The use of teacher leader roles in an online induction support system. Teaching and Teacher Education. 2018 October; 75:174-186. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0742051X17319066 DOI: 10.1016/j.tate.2018.06.010
5. Rushton G, Criswell B. Newly Hired Teachers of Science. Luft J, Dubois S, editors. Rotterdam: SensePublishers; 2015. Chapter Chapter 6, Plugging the 'Leaky Bucket' of Early Career Science Teacher Attrition through the Development of Professional Vision. 87-98p. Available from: http://link.springer.com/10.1007/978-94-6300-283-7_6 DOI: 10.1007/978-94-6300-283-7_6

Other Significant Products, Whether or Not Related to the Proposed Project

1. Rushton G, Lotter C, Singer J. Chemistry Teachers' Emerging Expertise in Inquiry Teaching: The Effect of a Professional Development Model on Beliefs and Practice. Journal of Science Teacher Education. 2017 February 23; 22(1):23-52. Available from: https://www.tandfonline.com/doi/full/10.1007/s10972-010-9224-x DOI: 10.1007/s10972-010-9224-x
2. Shah L, Hao J, Schneider J, Fallin R, Linenberger Cortes K, Ray H, Rushton G. Repairing Leaks in the Chemistry Teacher Pipeline: A Longitudinal Analysis of Praxis Chemistry Subject Assessment Examinees and Scores. Journal of Chemical Education. 2018 March 22; 95(5):700-708. Available from: https://pubs.acs.org/doi/10.1021/acs.jchemed.7b00837 DOI: 10.1021/acs.jchemed.7b00837
3. Shah L, Butler Basner E, Ferraro K, Sajan A, Fatima A, Rushton G. Diversifying Undergraduate Chemistry Course Pathways to Improve Outcomes for At-Risk Students. Journal of Chemical Education. 2020 June 05; 97(7):1822-1831. Available from: https://pubs.acs.org/doi/10.1021/acs.jchemed.9b00972 DOI: 10.1021/acs.jchemed.9b00972
4. Rushton GT, Dewar A, Ray HE, Criswell BA, Shah L. Setting a Standard for Chemistry Education in the Next Generation: A Retrosynthetic Analysis. ACS Cent Sci. 2016 Nov 23;2(11):825-833. PubMed Central PMCID: PMC5126716.
5. Shah L, Jannuzzo C, Hassan T, Gadidov B, Ray HE, Rushton GT. Diagnosing the current state of out-of-field teaching in high school science and mathematics. PLoS One. 2019;14(9):e0223186. PubMed Central PMCID: PMC6760793.

(d) SYNERGISTIC ACTIVITIES

1. (Current) Director of a STEM Education Research Center, focusing on STEM teacher quality
2. PI on NSF project to study longitudinal trends in beginning STEM teacher content knowledge, 2016-2018, DUE-1557292
3. PI on NSF project to study persistence of early-career STEM teachers, 2017-2020, DUE-1660736
4. PI on an Institute of Education Sciences (IES) project to promote K-12 teacher quality, 2018-2021, R305A180277
5. co-PI on institutional research grant focusing on inclusive pedagogies in STEM classrooms