

ANDY GUYADER, PHD

CONTACT
866.640.3484
contact@theq5.com

THE Q5
P.O. Box 15344
San Luis Obispo, CA 93406

EXPERIENCE

- 2014 - Present FOOTBALL ANALYTICS CONSULTANT
- Cal Poly, FCS
 - Play-by-play analysis aiding in call sheet decisions
 - Drive analysis linking to play success within drives
 - Lenoir-Rhyne, D-II
 - Play-by-play analysis for practice and game decisions regarding playbook
 - Determining the residual effect of play calls and first down analysis
 - USA Football
 - Game Map information surrounding 2015 IFAF tournament
 - Opponent and self-scout for drives and play-by-play data
- 2014 - Present CIVIL AND MECHANICAL ENGINEERING LECTURER, CAL POLY SAN LUIS OBISPO
Current Research Interests
- Team and unit performance trends in football games
 - Criteria developed for drive and individual play success
 - Performance trends calculable in real-time
 - Success criteria applied to NFL draft history through career data
 - Database developed on Matlab for draft choices since 1971 and combine data since 1999
 - Career productivity catalogued by games, years as primary starter and pro bowl selections
 - Correlations between draft success and win-loss records
 - Foundational concept methodology for introductory engineering courses
 - Learner-based teaching principles
- 2009-2013 ASSISTANT COACH, ARMY
Head Coach: Rich Ellerson
- ANALYTICS, RECRUITING COORDINATOR, QBs, FBs, WRs
- Created a proprietary game analysis procedure focusing on success measurements for play types, situations, sequences and drive results. Used to shape critical practice and play call decisions
 - Direct audio exchange with play-caller during series
 - 2013 - #6 national ranking in rushing offense with 309 ypg
 - Collaborated with academy faculty on analytics related to prospect identification, recruitment and retention
 - Advisory role in a cadet senior project focusing on football analytics

- Developed and implemented a state-of-the-art kinesthetic quarterback simulator and virtual playbook technology
- Performance psychology liaison through The Center for Enhanced Performance
 - Developed and coordinated pre-training camp objectives and exercises
 - Oversaw staff implementation to unify philosophy and verbage
 - Collaborated on weekly recording of gameday audio script
- Constructed recruiting database methodology for national implementation
 - Increased athletic and academic evaluation efficiency and accountability
 - Simple coach-friendly interface and easy travel itinerary formulation
 - Annual savings of over 80% versus the current system
- Integral member of team developing proprietary web-scraping algorithms to collect prospect video links and objective data on recruits
- Coordinated recruiting weekend itineraries, academy leadership involvement, travel grids and host pairings
- Recruiting (2014 and 2013):
 - ESPN #45 OT from Denver, CO with four PAC-12 offers
 - Scout.com #22 and Rivals 3-star OC commitment from Phoenix, AZ
 - ESPN #32 OG from Phoenix, AZ with two PAC-12 offers
 - Rivals 3-star DL from Denver, CO
- Recruited FB Hayden Tippett: Wuerffel Trophy and Rhodes Scholar finalist
- Led effort to author and compile playbook and coordinated position manuals with entire offensive staff to deliver consistent philosophy and terminology
- Developed bank of more than twenty team building exercises exclusively used during multiple training camps
- Camp director for one-day prospect camps, hosting over 300 participants
- 2010 Armed Forces Bowl - first Army bowl victory since 1985
- Converted 6'-10" 285 lb. LT to WR for senior season (2009) - 500+ yds., 5 TD

2010 MATHEMATICS GUEST LECTURER, UNITED STATES MILITARY ACADEMY
Probability and Statistics

2004-2008 ASSISTANT COACH, CAL POLY
Head Coach: Rich Ellerson
WIDE RECEIVERS, SLOT BACKS AND RECRUITING COORDINATOR

- Directly responsible for four of the six ball carriers on every play
- Held position meetings for upwards of 25 players using multiple learner-based teaching techniques
- Led sideline adjustments with entire offense
- Developed detailed position manuals for all position groups
- Developed and implemented a recruiting database system

1992-1996 QUARTERBACK, CAL POLY SAN LUIS OBISPO
Two-time letter winner. Two years injured with torn rotator cuff
Head Coach / Offensive Coordinator
Andre Patterson / Phil Earley (1994-1996)
Lyle Setencich / John Pettas (1992-1993)

 NOTABLE PLAYERS COACHED

- Ramses Barden 85th pick in 2009 NFL Draft - NY Giants
 Finalist - 2008 Walter Payton Award
 Cal Poly school records for catches (206), yards (4,203) and TDs (50)
- Ali Villanueva Moved from LT to WR for final collegiate season at Army (2009)
 Believed to be the tallest WR in college football history (6'-10", 295 lbs.)
 Led team in recs, yards and TDs and was 2010 East West Shrine Game selection
 Largest infantry officer in the history of the United States Army
 Currently with the Pittsburgh Steelers

 EDUCATION AND UNIVERSITY TEACHING TIMELINE

- 2014 - Present Civil and Mechanical Engineering, Cal Poly San Luis Obispo
 Seismic Engineering, Mechanics of Materials, Statics
- 2004-2008 Engineering and Computer Science Lecturer, Cal Poly San Luis Obispo
 Courses include: Seismic Analysis and Design, Numerical Analysis,
 Matrix Structural Analysis and Computer Analysis of Structures
- 1997-2003 Ph.D. Civil Engineering, Caltech
 Thesis: *A Statistical Approach to Equivalent Linearization with Application to Performance-Based Engineering*
 Created a methodology to derive analytical expressions of optimal effective linear parameters for several nonlinear hysteretic models subjected to earthquake time histories. Designed a new graphical solution procedure for the capacity spectrum method of analysis - a nonlinear static procedure. Work was adopted into FEMA 440.
- 1992-1997 B.S. Architectural Engineering, Cal Poly San Luis Obispo

 PUBLICATIONS

- Guyader, A.C. and W.D. Iwan (2006). New Methodology for Determining Equivalent Linear Parameters for use in Performance-Based Engineering, *Journal of the Structural Division, American Society of Civil Engineering, Vol. 132, No. 1.*
- Guyader, A.C. and W.D. Iwan (2004). AutoCSM - Automated Capacity Spectrum Method of Analysis, Version 1.1, *Earthquake Engineering Research Laboratory, California Institute of Technology, 2004.*
- Iwan, W.D. and A.C. Guyader (2001). A Study in the Accuracy of the Capacity Spectrum Method in Engineering Analysis, *Workshop on Performance-Based Earthquake Engineering Methodology, Seattle, WA, 2001.*