Clinton Bowen

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EDUCATION

CAL STATE NORTHRIDGE
MASTERS IN APPLIED MATHEMATICS
Expected May 2015

BS IN APPLIED MATHEMATICS
May 2010

LINKS

in: LinkedIn

SOFTWARE

LANGUAGES
C
C++
C#
Java
LaTeX
Mathematica
Matlab
Python
SQL (MySQL, PostgreSQL, SQLite)
R

LIBRARIES, APIS, AND FRAME-WORKS
.NET
Sage Python
SciPy
RSA BSAFE
Gurobi
CPLEX
Django (and GeoDjango)
PeachFuzz
MiniFuzz

DEVELOPMENT OPERATIONS
IC-Agile Certified Professional
Secure Development Lifecycle
Practitioner
Top Secret SCI Active (No FSP)

SKILLS

SYSTEM ENGINEERING
GPS
Subject Matter Expert (SME) on C/A and
CNAV

CRYPTOGRAPHY + CYBER-SEC
Engineering Standards
SME on FIPS 140 to 202 • Cyber-Security
Framework • SME on Special Publications
800 Series • RFCs • CNSSPs • DODAF

EXPERIENCE

BOOZ ALLEN HAMILTON ENGINEERING SERVICES, LLC |
TECHNOLOGIST
June 2010 – Present | El Segundo, CA
- Directing weekly technical meetings between a team of software developers and clients for project management.
- Designed a SOAP software architecture for GPS SAASM Mission Planning System
- Corrected NIST test vectors for SHA-2 based digital signature algorithms.
- Contributed the 'K' in SHAKE for NIST FIPS-202.
- Designed and prototyped a cradle to grave management system for NIST compliant cryptographic keys that met NIST SP800-53 SC-12 (1) and (2).
- Developed a random number generation test suite in C#
- Built and demonstrated Zigbee 802.15.4 wireless data transfer software in C to potential business partners.
- Desgined, developed, & tested a MATLAB Reed-Solomon error correction code library
- Developed & tested cryptographic software for a C/C# based GPS receiver (ECDSA & SHA-2)
- Developed & demonstrated SHA-3 based embedded C software for a PIC24HJ12GP201I Controller
- Designed, developed, & tested message optimization software for GPS L2C and L5 signals in python

RESEARCH

LIE GROUPS, HOMOGENEOUS MANIFOLDS, AND COMPLEX PROJECTIVE SPACES | CO-AUTHORED WITH MAYRA MORAN AND ATOUR BEAN
May 2009
Partially funded by NSF Grant DMS-0502258

MESSAGE OPTIMIZATION OVER GPS CIVIL NAVIGATION SIGNALS | SUBMITTING TO ION GNSS+ 2015
2015
In this paper, we pose the problem of maximizing the number of special messages allowed while observing the messaging constraints defined in IS-200 and IS-705 for the GPS signals L2C and L5. The problem is posed using a graph of feasible message sequencing and then modelling the graphs as linear constraints for a linear programming (LP) problem.

PRESENTATIONS

2014	Permutation and Construction Library: A Library for Permutation Based Cryptography
2014	What the Heck is Fuzz-Testing?
2014	BlackHat, DEFCON, SHA-3, & DIAC: The Summer Conferences
2014	Configuration Management within Booz Allen Hamilton and an Introduction to C# Phalanx
2014	Message Optimization over L2C and L5
2013	Error Correction Codes over Finite Fields
2012	Mission Planning Optimization
2010	Reed Solomon Error Correction Codes