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NICHOLAS KULLMAN

SUMMARY OF QUALIFICATIONS

- Experience building and solving spatially- and temporally-explicit mathematical programming models
- Computer programming – Java, Python, D3, CPLEX, JavaScript, HTML, R
- Extensive quantitative training – B.S. Physics (3.98 GPA), pursuing M.S. in QERM
- Fast-learner; effective problem solver and communicator; proven ability to adapt and collaborate

EDUCATION

UNIVERSITY OF WASHINGTON – M.S. QUANTITATIVE ECOLOGY & RESOURCE MANAGEMENT

Pursuing M.S., expected June 2016. Thesis topic: *Assessing changes in forest ecosystem services under climate change with multi-objective optimization*

UNIVERSITY OF MISSOURI – B.S. PHYSICS (2011)

Phi Beta Kappa with departmental and Latin honors (summa cum laude, 3.98 GPA). Minor in Mathematics. Semester abroad in Barcelona, Spain. Foreign language: Spanish

ACADEMIC AND PROFESSIONAL EXPERIENCE

GRADUATE RESEARCH ASSISTANT – UNIVERSITY OF WASHINGTON (2013-PRESENT)

Model and solve mathematical programs for spatial and temporal optimization of forest management activities. Build Java programs to solve multi-objective optimization. Develop interactive visualizations of results. Perform post-optimization data and decision analysis.

TELECOM DESIGN ENGINEER – SPRINT (2011-2013)

Performed mathematical analysis to ensure frequency deployments were free of intermodulation distortion. Designed and led product testing for site-level telecom equipment. Provided technical expertise on LTE performance of bi-directional amplifiers.

UNDERGRADUATE RESEARCH ASSISTANT – UNIVERSITY OF MISSOURI (2008-2011)

2010-2011: Ran experiments in digital holography
2008-2010: Measured gas (H_2, N_2, CH_4) adsorption in carbon samples to assess potential for increasing storage capacity in alternative-fuel vehicles.

REU RESEARCH ASSISTANT – UNIVERSITY OF CALIFORNIA – DAVIS (2010)

Analyzed astronomical images for photometric differences to detect extrasolar planets.

TEACHING ASSISTANT – UNIVERSITY OF MISSOURI (2009, 2010)

Led problem solving and discussion sessions for undergraduate physics classes.

GEOSPATIAL ANALYST – NATIONAL GEOSPATIAL INTELLIGENCE AGENCY (2009)

Derived novel method to calculate error propagation in ortho-rectified satellite imagery.

COMPUTER SKILLS	Java, Python, JavaScript, ArcGIS, CPLEX (incl. Java Concert Technology), HTML, R, LaTeX, Office
OTHER ACADEMIC PURSUITS	**SELECTED DATA VISUALIZATION PROJECTS** SIEVE (Statistical Interactive Explorer for Vaccine Efficacy) Ecosystem service optimization in the Deschutes National Forest **COURSES IN URBAN STUDIES** URBDP 538 – Public Health and the Built Environment (UW - Winter 2014) US/AH 360 – The City as a Place to Live (completed at IES Barcelona in Spring 2010)
SELECTED PATENTS	• Communications-tower antenna mount (US Pat. 8,896,497) • Enhanced multipath environments for MIMO wireless networks (US Pat. 8,897,383) • Wireless Communication System with Multiple Device-to-Device (D2D) Communication Configurations (US Pat. 20,140,321,367)
COMMUNITY INVOLVEMENT	**Uptown Alliance** – Transportation committee, Parks committee **USDOT Beyond Traffic Forum** – volunteer **Queen Anne Greenways** – volunteer
REFERENCES	**AVAILABLE UPON REQUEST**