

# Ryan A. Opel

Research Assistant, Computational Sleep Lab  
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## Employment

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PVAMC Computational Sleep Lab, *Research Assistant* 2015–Present

- Acted as primary data analyst, programmer, and statistician for this multidisciplinary lab.
- Used a combination of R and Python to analyze large repositories of EEG, animal behavior, biometric, and clinical data.

UCSB Vision & Image Understanding Lab, *Undergraduate Research Assistant* 2013–2015

- Played a critical role in the development, execution, and debugging of MATLAB-based experiments focusing on machine learning, computer vision, and human-computer visual interfaces.

## Education

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University of California, Santa Barbara 2011–2015  
*B.S. Pharmacology, Biopsychology*

## Professional Development

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Oregon Health & Science University 2016  
*Estimation and Hypothesis Testing for Applied Biostatistics (BSTA 511)*

- Earned an A grade while using R in this Stata-based course.

Johns Hopkins University 2015  
*R Programming*

- Completed this Coursera course *with distinction*, achieving a grade of 99%.

## Publications

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### *Invited Talks*

SLEEP Meeting, Denver, CO.  
*Sleep Disruption is Associated with Fearful Behavior in a Mouse Model of Post-Traumatic Stress.* 2016.

SLEEP Meeting, Denver, CO.  
*Developmental Sleep Fragmentation Impairs Social Development in Male, but not Female, Prairie Voles.* 2016.

### *Journal Articles*

**Opel RA**, Akins DA, Modarres M, Kuzma NN, Cocking DL, Lim MM. *Sleep EEG signatures predict outcomes in post-traumatic stress disorder.* 2017. (In Preparation)

Elliott JE, Weymann KB, Barsalou Y, Geiger M, Teutsch P, **Opel RA**, Oken BS, Lim MM. *Sleep disturbances and chronic pain in Veterans with mild traumatic brain injury*. SLEEP, 2017. (Under Review)

Elliott JE, De Luche SE, Churchill MJ, **Opel RA**, Cocking DL, Moore C, Meshul CK, Lim MM. *Decreased glutamatergic input to orexin neurons after mild TBI is restored by dietary BCAA supplementation in mice*. 2017. (In Preparation)

Navis, TM, Jones, CE, **Opel RA**, Lim MM. *Effect of Sleep Disturbance on Sensory Gating in the Prairie Vole*. 2016. (In Preparation)

### Conference Abstracts

**Opel RA**, Weymann KB, Kuzma NN, Lim MM. *Investigating the link between head trauma, REM sleep behavior disorder, and neurodegeneration*. 2017. Submitted to American Neurological Association in Baltimore, MD.

**Opel RA**, Weymann KB, Kuzma NN, Lim MM. *Disruptive nocturnal behavior and elevated EMG tone during sleep in Veterans with TBI and PTSD*. 2017. Submitted to SLEEP meeting in Boston, MA. To be published in Supplement of SLEEP.

Teutsch P, **Opel RA**, Chau AQ, Cayton J, Akins DJ, Lim MM. *Sleep and behavioral phenotype of a combined mouse model of TBI and PTSD*. 2017. Submitted to SLEEP meeting in Boston, MA. To be published in Supplement of SLEEP.

**Opel RA**, Akins DJ, Modarres M, Kuzma NN, Gieger MR, Lim MM. *Quantitative sleep EEG in a mouse model and in human subjects with post-traumatic stress disorder*. 2016. Submitted to Society for Neuroscience in San Diego, CA.

Hammock EAD, Champaigne RD, Cocking DL, **Opel RA**, Driessen RC, Lim MM. *Developmental sleep fragmentation impairs social development in male, but not female, prairie voles*. 2016. Submitted to SLEEP meeting in Denver, CO. To be published in Supplement of SLEEP.

Akins DJ, **Opel RA**, Modarres M, Kuzma NN, Gieger MR, Lim MM. *Sleep disruption predicts fearful behavior in a mouse model of post-traumatic stress disorder*. 2016. Submitted to SLEEP meeting in Denver, CO. To be published in Supplement of SLEEP.

**Opel RA**, Akins DJ, Modarres M, Kuzma NN, Gieger MR, Lim MM. *Quantitative EEG during sleep is associated with PTSD in mice and men*. 2016. OHSU Research Week.

### Competencies

*Languages & Scripting:* R, Python, PowerShell, Excel/VBA, L<sup>A</sup>T<sub>E</sub>X, bash, HTML/CSS

### References

#### **Miranda Lim**

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#### **Mike Lasarev**

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#### **Nick Kuzma**

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