# Clayton Thomas Stanley

Cognitive Scientist
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## Education

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| 2007-2009 | M.A. (May, 2009) in Psychology with emphasis in computational cognitive modeling, Rice University, Houston, TX. Thesis title: *Visual Displays: Developing a Computational Model Explaining the Global Effect.* Advisor: Dr. Mike Byrne |
| 2003-2007 | B.S. in Physics, United States Air Force Academy<br>Distinguished Graduate |

## Awards

- Winner of 'Kenneth R. Laughery Award', given to best master's thesis in Psychology, Rice University, 2009
- 'Outstanding Cadet in Applied Physics', United States Air Force Academy, 2007
- Winner of 'Cadet Inter-Service Computer Programming Competition', United States Air Force Academy, 2007

## Research Interests

Cognitive science, large scale cognitive modeling, parallel/distributed programming, systems engineering, theoretical and experimental physics, acoustical engineering

## Paper Presentations

Stanley, C. (2009). Visual displays; developing a computational model explaining the global effect. Master's thesis, Rice University, Houston, TX.

Stanley, C. & Byrne, M. (2008). Effects of frequency sorting; towards finding optimal organizations of hierarchical file structures. *HFES Conference,* New York, NY.

Stanley, C. & Byrne, M. (2008). Processes influencing visual search efficiency in conjunctive search; a rational analysis approach. *ACT-R Summer Workshop,* Pittsburg, PA.

Wetterer, C., Stanley, C., & Stikeleather, J. (2006). Lightcurve inversion program for non-resolved space object identification. *MHPCC Application Briefs*, Maui, HI.

## Posters

Stanley, C. & Wetterer, C. (2006). Lightcurves of model geostationary satellites. *University of Colorado, Colorado Springs (UCCS),* Colorado Springs, CO.

## Research Experience

2009-present, Cognitive Scientist, United States Air Force Research Laboratory, Cognitive Models and Agents Branch. Working to integrate Large Scale Cognitive Modeling with existing Systems of Systems (SoS) architectures, and leverage the Mind Modeling distributed computing network as a SoS simulator. Supervisors: Dr. Kevin Gluck & Dr. Scott Douglass.

2007-2009, Research Assistant, Computer Human Interaction Laboratory (CHIL), Rice University. Explored the underlying mechanisms involved in producing various phenomena found in visual search tasks (e.g., distractor ratio effect, global effect) through modeling empirical data using the ACT-R cognitive architecture. Supervisor: Dr. Mike Byrne.

2006-2007, Research Assistant, Department of Physics, United States Air Force Academy. Helped research, restructure, and reprogram a parallelized lightcurve inversion program developed in Matlab, which was successfully ported and run on *Hoku* (Cray XD-1 Linux computing system), located at MHPCC. Supervisor: LtCol Charles Wetterer.

## Membership & Service

- United States Air Force active duty 1st Lieutenant (May 30, 2007–present)

## Additional Skills

- Programming expertise in Matlab; moderate expertise in Lisp
- Experience in parallelizing sequential code in Matlab, using both fine-grained and coarse-grained parallel parameter search algorithms

## Professional References

Michael D. Byrne, Ph. D.
Associate Professor, Rice University Department of Psychology, 6100 S. Main, MS-25, Houston, TX 77005, 713.348.3770, byrne@rice.edu

David M. Lane, Ph. D.
Associate Professor, Rice University Department of Psychology, 6100 S. Main, MS-25, Houston, TX 77005, 713.348.3412, lane@rice.edu

Martin Carlisle, Ph. D.
Department Head, United States Air Force Academy Department of Computer Science, 2354 Fairchild Drive, Suite 6G-101, USAF Academy, CO 80840, 719.333.3590, martin.carlisle@usafa.edu

LtCol Charles Wetterer, Ph. D.

Professor, United States Air Force Academy Department of Physics, 2354 Fairchild Drive, USAF Academy, CO 80840, 719.333.3510, charles.wetterer@usafa.edu