

# Dr. Virgil Griffith

AVANT-GARDE TECHNOLOGIST · EXECUTIVE · SCIENTIST

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## Summary

Avant-garde tech executive mixing technology and social insight to do the impossible in polynomial time.

### Interests

civilizational digital infrastructure, blockchain, privacy enhancing technologies, data-science, Internet governance, machine intelligence, complexity theory

**Notable Work** [Blackboard](#), [Maiden Names](#), [Polyworld](#), [WikiScanner](#), [Musicthatmakesyoudumb](#),  $\phi$ , [Tor2web](#), [Tor Roster](#)

**Proficiencies** Ethereum, Holacracy, Python, R, ~~L~~**A**T~~E~~**X**, C++, MATLAB, DNS, Tor, dark web, statistics, information theory

## Education

### California Institute of Technology

Pasadena, CA

PH.D. COMPUTATION AND NEURAL SYSTEMS

Sept 2007 - Dec 2013

- Information theory and high-performance C++ for quantifying neural network complexity
- Thesis: [Quantifying Synergistic Information](#) / Advisor: [Christof Koch](#) / GPA 3.4

### University of Alabama

Tuscaloosa, AL

B.S. COMPUTER AND COGNITIVE SCIENCE

Sept 2002 - May 2004

- Graduated cum laude in May 2007. Studying cognitive psychology, neuroscience, biophysics. GPA 3.7

## Employment

### Ethereum Name Service

Cayman Islands

EXECUTIVE DIRECTOR

Jan 2018 - Jan 2020

- Decided roadmap for the #130 most popular cryptocurrency (US\$500M marketcap).

### Ethereum Foundation

Singapore

DIRECTOR OF EXPLORATIONS DIVISION

Oct 2017 - Jan 2020

- Got Ethereum declared [Shariah compliant](#).
- Founded the [ethresearch](#) board; Robust Incentives Group.

RESEARCH SCIENTIST

Oct 2016 - Oct 2017

- Reviewed technical papers in game theory, distributed systems, blockchains.
- Published [Ethereum 2's consensus mechanism](#).

### Singapore-MIT Alliance for Research and Technology

Singapore

POSTDOCTORAL RESEARCHER

Sept 2016 - Mar 2017

- Researching graph-theoretic patterns in Darkweb and quantifying of Singapore's social segregation.

### Intelllex

Singapore

SENIOR DATA SCIENTIST

March 2016 - Sept 2016

- Machine Learning for doing legal doc classification and search engines.

### National University Singapore: School of Computing

Singapore

RESEARCH FELLOW

Mar 2015 - Feb 2016

- Led dark web research group; advised cryptocurrency group.

### Toroken

San Francisco, CA

TECHNICAL PRODUCT MANAGER

Feb 2014 - Sept 2014

- Led team to develop a blockchain-based currency on Proof-of-Transmission.
- Won 250k at 2014 Texas Bitcoin Conference.

## Adruptive Industries

CO-FOUNDER

*San Francisco, CA*

*Dec 2008 – Jan 2012*

- Invented a targeted advertising method so effective browsers were patched to stop it.

## Indiana University: School of Informatics

RESEARCH ASSOCIATE

*Bloomington, IN*

*June 2004 – May 2007*

- Derived mother's maiden name for ~10% of Texans.

## University of Alabama: Arts and Sciences

NETWORK ADMINISTRATOR

*Tuscaloosa, AL*

*Feb 2003 – May 2004*

- Maintained department websites and over 400 servers/workstations.
- Supervised Beowulf supercomputing cluster

## Hecklers Entertainment

PHP AND PALM PILOT DEVELOPER

*Birmingham, AL*

*1999 – 2001*

## Notable Awards

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- 2015 **ISIF.asia Fellow**, APNIC
- 2015 **OpenTechFund Emerging Technologies Senior Fellow**, The Tor Project
- 2014 **Data Science Fellow**, Insight DataScience
- 2010 **USA Patent #20100169177**, Method and System for Assessing Behavior of a Webpage Visitor
- 2010 **Demetriades-Tsafka-Kokkalis Prize in Entrepreneurship**, Caltech
- 2009 **Creativity Top 50**, Creativity Magazine
- 2009 **Computational Science Graduate Fellowship**, USA Dept. of Energy (4 years funding)
- 2009 **Interview: The Grill**, Computer World Magazine
- 2008 **Innovation in Journalism Award**, Knight-Batten Foundation (\$10,000)
- 2007 **Future Famous Alumni**, Indiana University
- 2007 **2007 Year in Ideas**, The New York Times
- 2007 **Graduate Fellowship**, USA Dept. Homeland Security (3 years funding)
- 2007 **Win Against Spin award**, Center for Media and Democracy

## Research Experience

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### Georgetown University School of Law

RESEARCH ASSOCIATE

*Washington, DC*

*2025 - Present*

- Wrote on complexity theory and the neocypherpunk movement

### Santa Fe Institute

VISITING RESEARCHER

*Santa Fe, NM*

*2005 - 2014*

- Discovered mutational bounds for sustained machine self-reproduction.

### Massachusetts Institute of Technology: Center for Collective Intelligence

VISITING FELLOW

*Cambridge, MA*

*Winter 2013*

- Quantified cooperation in neural networks and cooperate teams.

### Harvard Law: Berkman Center for Internet and Society

INTERN

*Cambridge, MA*

*Summer 2009*

- Dissected Chinese censorship program "Green Dam Youth Escort."

### Stanford University: Dept. of Computer Science

HOMELAND SECURITY GRADUATE FELLOW

*Stanford, CA*

*Summer 2008*

- Analyzed Wikipedia edits to discover bad actors.

### Keck Graduate Institute

RESEARCH ASSISTANT

*Claremont, CA*

*Summer 2006*

- Quantified what languages are suitable for genetic programming.

- Quantified evolution of neural network complexity in the [Polyworld](#) artificial life simulator.

## Prominent Writing

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**Complexity Theory** 13 papers: [arXiv link](#)

**Computer Security** 4 papers: [Maiden Names](#), [Tor Analytics](#), [Freezing Bitcoin Assets](#), etc.

**Ethereum** 2 papers: [Casper Finality Rules](#), [Uses of Ethereum](#)

**Artificial Life** 2 papers: [arXiv link](#)

## Miscellaneous

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- Erdős number: 3 (via [Jonathan Harel](#))
- Bacon number: 3 (via [Curtis Armstrong](#))
- My complete DNA can be [downloaded](#) as part of the [data-set](#) for genetic corollaries for general intelligence.
- Estonian e-resident #38303060128
- The New York Times has dubbed me the “[Internet Man of Mystery](#)”
- Contestant on reality show “King of the Nerds” (2013)