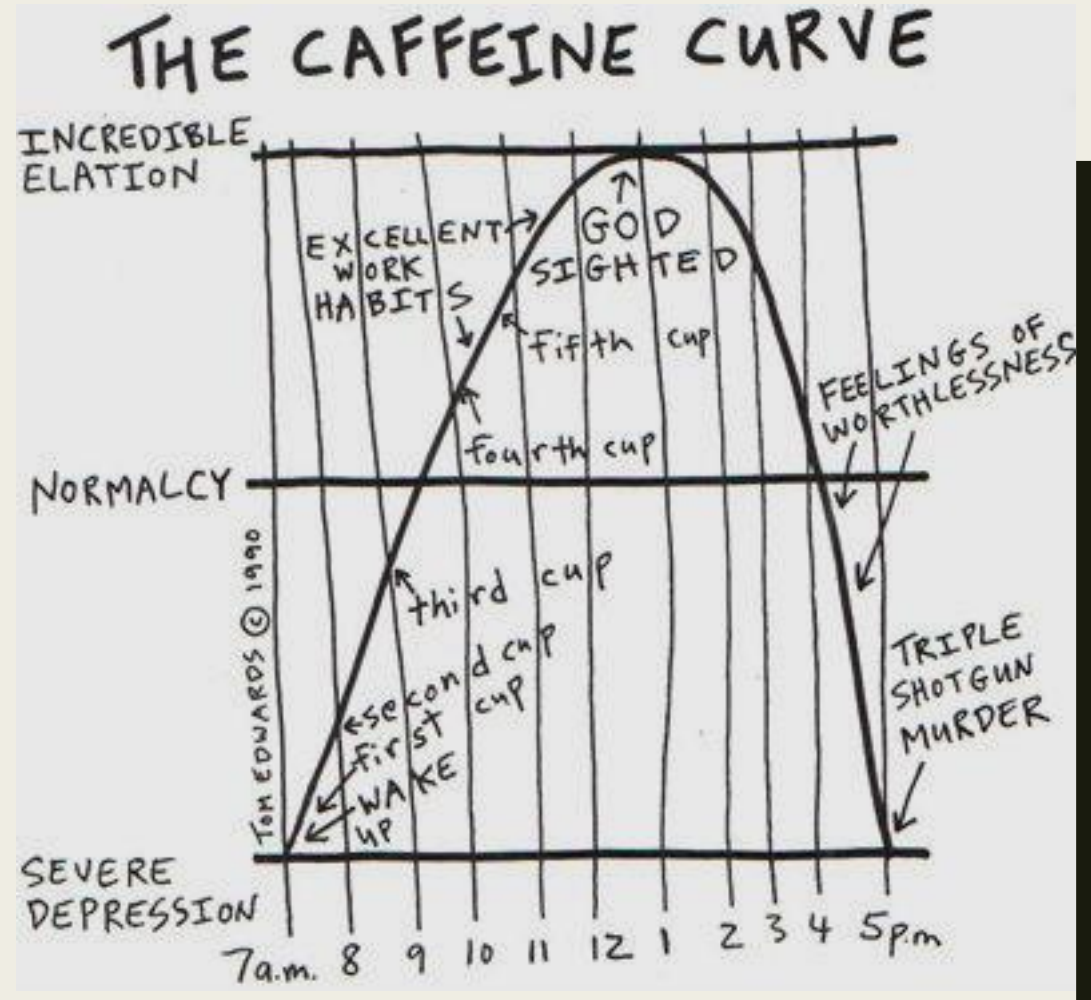


KEEP CALM  
AND  
DO  
“REALSTATS”



Karen Akaratovic  
Suffolk Mosquito Control

# Overview

- The importance of statistics
- Difficulties getting and using software
- What is RealStats?
- How do you use it?
- Example



# Why Statistics???

- Understand and use collected data
- View trends over time
- Discover relationships not easily seen with raw numbers
- Making predictions based on a relatively small sample
- Because your boss wants you to



# Difficulties with software

- Downloading software on a government computer
- User-friendliness
- Troubleshooting
- Interpreting output

# RealStats?



# What is RealStats?

- FREE
- Excel Add-in
- More Data Analysis Tools
- Works with PC and MAC
- Compatible with Excel 2007+  
(limited support for 2002-2003)

## Real Statistics Using Excel

*Everything you need to do real statistical analysis using Excel*



### Welcome

#### [What is Real Statistics Using Excel?](#)

*Real Statistics Using Excel* is a practical guide for how to do statistical analysis in Excel plus free statistics software which extends Excel's built-in statistical capabilities so that you can more easily perform a wide variety of statistical analyses in Excel.

#### [What does Real Statistics Using Excel consist of?](#)

*Real Statistics Using Excel* is comprised of the following four components:

**Real Statistics Resource Pack:** an Excel add-in which extends Excel's standard statistics capabilities by providing you with advanced worksheet functions and data analysis tools so that you can more easily perform a wide variety of practical statistical analyses. This software supports Excel 2007, 2010, 2013, 2016 and 2019 for Windows and Excel 2011, 2016 and 2019 for the Mac. There is also limited support for Excel 2002 and 2003.

### Real Statistics Resources

[Free Download](#)

[Follow @RealStatistics](#)

### Search

### RSS Links

[RSS - Posts](#)

[RSS - Comments](#)



## Author



Dr. Charles Zaiontz has a PhD in mathematics from Purdue University and has taught as an Assistant Professor at the University of South Florida as well as at Cattolica University (Milan and Piacenza) and St. Xavier College (Milan).

Most recently he was Chief Operating Officer and Head of Research at CREATE-NET, a telecommunications research institute in Trento, Italy. He also worked for many years at BBN, one of the most prestigious research institutes in the US, and widely credited with implementing the Arpanet and playing a leading role in creating the Internet.

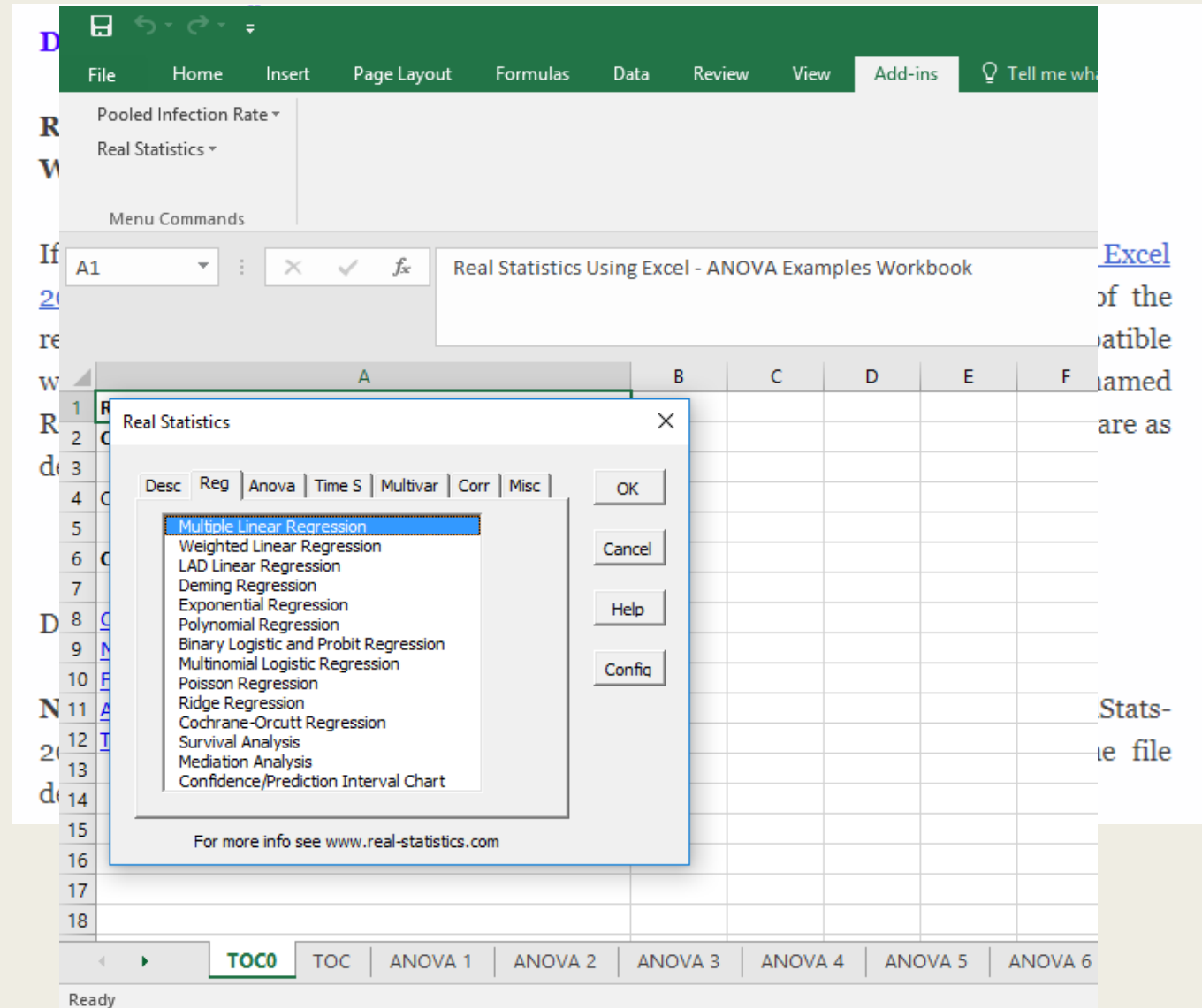
Dr. Zaiontz has held a number of executive management and sales management positions, including President, Genuity Europe, responsible for the European operation of one of the largest global Internet providers and a spinoff from Verizon, with operations in 10 European countries and 1,000 employees.

He grew up in New York City and lived in Indiana, Florida, Oregon and finally Boston, before moving to Europe 31 years ago where he has lived in London, England and northern Italy.

He is married to Prof. Caterina Zaiontz, a clinical psychologist who is an Italian national. In fact, it was his wife who was the inspiration for this website on statistics. A few years ago she was working on a research project and used SPSS to perform the statistical analysis. Dr. Zaiontz decided that he could perform the same analyses using Excel. To accomplish this, however, required that he had to create a number of Excel programs

# How do you use RealStats?

- Download
- Install
- Use



# Types of analysis

- Linear regressions
- Multiple Regressions
- Poisson Regressions
- Non-parametrics Tests
- ANOVA
- 2 and 3 Factor ANVOA
- ANCOVA
- MANOVA

**And the list goes on!**



# Not sure what you need?

- Website offers fairly detailed tutorials and descriptions
- Or just ask!

**Multi**

In the ...  
using t ...  
the mu ...  
the me ...  
analysi ...

ANOVA ...  
ANOVA ...  
when t ...

Topics:

- [Bas](#)
- [Rea](#)
- [Effe](#)
- [Ass](#)
- [Fol](#)
- [Fol](#)

- [Multinomial Distribution](#)
- [Poisson Distribution](#)
- [Binomial Distribution and Random Walks](#)
- [Runs](#)
- [Statistical Power for One Sample Testing using Binomial Distribution](#)
- [Sample Size Required for One Sample Testing using Binomial Distribution](#)

**Leave a Reply**

Your email address will not be published. Required fields are marked \*

Comment

Name \*


Email \*

Website

Post Comment

**RSS Links**

- [RSS - Posts](#)
- [RSS - Comments](#)



Charles Zaiantz

- [Multinomial Distribution](#)
- [Poisson Distribution](#)
- [Binomial Distribution and Random Walks](#)
- [Runs](#)
- [Statistical Power for the Binomial Distribution](#)
- [Required Sample Size for the Binomial Testing](#)

# Example

3 Factor

Latin Squares Design  
ANOVA

The screenshot shows the Microsoft Excel interface with the 'Add-ins' tab selected. The spreadsheet contains a 3x3 Latin square design matrix and a corresponding ANOVA table. A 'Latin Squares Design' dialog box is open, showing the input range, alpha level (0.05), and output range (J14).

Latin Squares with replications							
	1	2	3	1	2	3	
1	A	B	C	11	12	15	
2	B	C	A	8	7	5	
3	C	A	B	9	3	6	
4	1	C	B	A	13	5	10
5	2	B	A	C	9	4	9
6	3	A	C	B	7	14	11
7	1	B	A	C	15	9	13
8	2	A	C	B	7	11	9
9	3	C	B	A	12	3	11

Descriptive Statistics				
	rep	row	col	treat
1	8.44444	11.4444	10.1111	7.44444
2	9.11111	7.66667	7.55556	8.66667
3	10	8.44444	9.88889	11.4444

Latin Square Design						
ANOVA				Alpha 0.05		
	SS	df	MS	F	p-value	sig
Treatment	75.6296	2	37.8148	5.68275	0.01222	yes
Rows	71.6296	2	35.8148	5.38219	0.01471	yes
Columns	36.0741	2	18.037	2.71058	0.09354	no
Replication	10.963	2	5.48148	0.82375	0.45466	no
Error	119.778	18	6.65432			
Total	314.074	26	12.0798			

Latin Squares Design dialog box settings:

- Input Range: [ ]
- Alpha: 0.05
- Input Format:  Excel format with data to right of treatments
- Follow-up test options:  Contrasts,  Tukey HSD
- Alpha correction for contrasts:  Bonferroni,  Dunn/Sidak, # 1
- Output Range: J14

# Acknowledgements

- Dr. Zaiontz
- Suffolk
- Google



# Thank You!

[www.real-statistics.com](http://www.real-statistics.com)

Karen Akaratovic  
Suffolk Mosquito Control  
757-514-7608  
[kakaratovic@suffolkva.us](mailto:kakaratovic@suffolkva.us)