

Scientific Writing

Writing High Impact Papers

Module 5

Prof. Dr. Valtencir Zucolotto

Prof. Dr. Valtencir Zucolotto

*Journal of Biomedical Nanotechnology - Associate Editor
Nanomedicine and Nanotoxicology Group - Coordinator
Physics Institute of São Paulo, University of São Paulo*



Module 1: Literary Genre

Module 2: Structure 1: *Abstract*

Module 3: Structure 2: *Introduction*

Module 4: Structure 3: *Results and Discussion, Conclusion*

Module 5: Style, Language 1: Complexity Problems 1

Module 6: Language 2: Complexity Problems 2, Rhythm

Module 7: Language 3: *Plain English and Topic Sentences*

Module 8: Manuscript Submission, The Editorial Process

Module 5



Scientific Writing Style



Use Abbreviations / acronyms with discretion

Ex: Use of combined CTPR and BTR3 increased the KMDN stock values in B2B companies

??????

A good reference material may be found at:

The *ACS Style Guide*, *Dodd, J. S.*, Ed;
American Chemical Society, Washington, DC, 2006



Think about it:

You are reporting a work that has been completed !!

This study **was** aimed at investigating.. (**The study**)

This paper **reports** a new strategy.....



Present forms preferable in

Conclusion Section

Present and even Future Tenses may be used!!



Passive voice **almost** always requires more words than
Active voice:

ACTIVE: “the melting processing *consumed* polymeric material at a higher rate..” (10 words)

PASSIVE: “Polymeric material *was consumed* by the melting process at a higher rate..” (12 words)

Mathews, JR and Mathews RW, *Successful Scientific Writing*, Cambridge University Press; 3 edition 2007)

Dodd, J. S., Ed. *The ACS Style Guide*; American Chemical Society: Washington, DC, 1986.).



Third person constructions has been preferred in Physical Sciences / Engineering.



Sometimes first person may be used to emphasize important information

Our research group has investigated....

We have demonstrated that....

For Social Areas



We investigate the economic value of a law degree and find that for most law school graduates, the present value of a law degree typically exceeds its cost by hundreds of thousands of dollars. The median and 25th-percentile earnings premiums justify enrollment. We track lifetime earnings of a large sample of law degree holders. Previous studies focused on starting salaries, generic professional degree holders, or the subset of law degree holders who practice law. We incorporate unemployment and disability risk and measure earnings premiums separately for men and for women. After controlling for observable ability sorting, we find that a law degree is associated with median increases of 73 percent in earnings and 60 percent in hourly wages. The mean annual earnings premium is approximately \$57,200 in 2013 dollars. Values in recent years are within historical norms. The mean pretax lifetime value of a law degree is approximately \$1 million.

JOURNAL OF LEGAL STUDIES , 43 (2), 249-289, 2014



Financial intermediation arises from the need for expertise in channeling capital from savers to borrowers in the presence of transaction costs. I present a framework for measuring the overall efficiency of financial intermediation and emphasize some key challenges in applying benefit-cost analysis to finance: long-run cycles in financial activity, the burden of proof between regulators and the regulated, and the interaction between benefit-cost analysis and academic research.

JOURNAL OF LEGAL STUDIES, 43 (2), S107-S120, 2014



For Business, Accounting and Economic Sciences:

We examine the link between increases in housing wealth, financial wealth, and consumer spending. We rely upon a panel of 14 countries observed annually for various periods during the past 25 years and a panel of U.S. states observed quarterly during the 1980s and 1990s. We impute the aggregate value of owner-occupied housing, the value of financial assets, and measures of aggregate consumption for each of the geographic units over time. We estimate regression models in levels, first differences and in error-correction form, relating consumption to income and wealth measures. We find a statistically significant and rather large effect of housing wealth upon household consumption.

Advances in Macroeconomics, 5, 2005 1



Recursive utility models of the type introduced by Kreps and Porteus (1978) are used extensively in applied research in macroeconomics and asset pricing in environments with uncertainty. These models represent preferences as the solution to a nonlinear forward-looking difference equation with a terminal condition. Such preferences feature investor concerns about the intertemporal composition of risk. In this paper we study infinite horizon specifications of this difference equation in the context of a Markov environment. We establish a connection between the solution to this equation and to an arguably simpler Perron-Frobenius eigenvalue equation of the type that occurs in the study of large deviations for Markov processes. By exploiting this connection, we establish existence and uniqueness results. Moreover, we explore a substantive link between large deviation bounds for tail events for stochastic consumption growth and preferences induced by recursive utility.

Proceedings of the National Academy of Sciences, 109(30): 11967-72, July, 2012



Avoid	Better
nowadays	presently, currently
on the contrary	in contrast
(up) until now	to date



Language I



The efficient writing is specific

“Novel financial models have been proposed to overcome the limitations regarding market prediction.”

Too general!!

What were the models?
What are the limitations?
What is the market?



“Stochastic models have been proposed to overcome the uncertainty exhibited by conventional models for stock market prediction.”

Better !!



1. Repetition

Title, abstract, discussion and conclusions ??



2. Wording

Stress the most important details in a sentence!!

Ex: High levels of the protein were found in the blood samples from patients with hemorrhagic infections.

What is the most important detail?

The protein, the levels or the infection?



Unexpected high levels of a protein were found in the blood samples from patients with hemorrhagic infections.

High levels of a very specific S100 family protein were found in the blood samples from patients with hemorrhagic infections.

High levels of a specific protein were found in the blood samples from examined patients. This may be the cause of the hemorrhagic infection.



A huge problem: **Long Sentences**

The mechanical analyses had been carried out using stress-strain measurements and indicated that the copper-based alloys are more resistant than the silver-based ones, which may be due to the fabrication process used for each composite material, since the copper alloys had been produced via casting, whereas the silver composites had been fabricated via reactive extrusion under high pressures, controlled atmosphere, and at temperatures ranging from 300 – 400 °C.

?????????

Too long!, Too wordy!

Too many ideas in a single sentence!!



“Collaborative Planning, Forecasting, and Replenishment (CPFR), based upon supply chain collaboration standards established by the Voluntary Interindustry Commerce Solutions (VICS) Association, are information systems that enable partnering firms to integrate their inventory planning, forecasting and replenishment processes by sharing information, developing joint forecasts and jointly crafting replenishment plans.

Journal of Operations Management 31 (2013) 285–297



A new methodology for protein purification is presented. Isolation techniques using HPLC are discussed. The amount of protein purified in each cycle is revealed.



Word Choice:

Be careful with:

as, only



Word Choice:

“Production costs increased as the companies reduced technical training”

????

The word “**as**” may be interpreted as “because” or “while”



“Production costs increased because companies reduced technical training”

Better



Unclear Pronoun

Since the platform has a support system connected to the equipment, it was mounted inside the lab.

What was mounted inside the lab????

It = The platform or the support system??



- Michael Alley. *The Craft of Scientific Writing*, 3rd edition (Springer-Verlag, 1996).

Mathews, JR and Mathews RW, *Successful Scientific Writing*, Cambridge University Press; 3 edition 2007)

Dodd, J. S., Ed. *The ACS Style Guide*; American Chemical Society: Washington, DC, 1986.).

Brawand et al., *Nature*, 2011, 478, 343

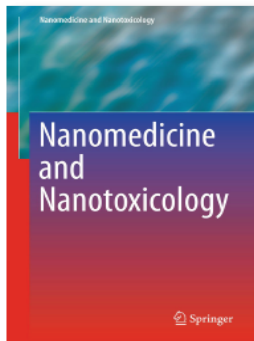
Urselmann, et al., *IEEE Transactions on Evolutionary Computation*, 15, 2011, 659

Prof. Zucolotto as a Scientific Editor

Journal of Biomedical Nanotechnology
Prof. Valtencir Zucolotto, Associate Editor
2013 Impact Factor: 7.578



springer.com



Nanomedicine and Nanotoxicology

Series Ed.: Zucolotto, Valtencir

"Nanomedicine and Nanotoxicology" is a book Series dedicated to the application of nanotechnology to achieve breakthroughs in healthcare as well as its risks and impact on the human body and environment. This book Series welcomes manuscripts on in vivo and in vitro diagnostics to therapy including targeted delivery, magnetic resonance imaging (MRI) and regenerative medicine; interface between nanomaterials (surfaces, particles, etc.) or analytical instruments with living human material (cells, tissue, body fluids); new tools and methods that impact significantly existing conservative practices; nanoparticles interaction with biological systems, and their risk assessments; among others.

Thank You

Valtencir Zucolotto

zuco@ifsc.usp.br

www.escritacientifica.com

www.zucoescrita.com

www.nanomedicina.com.br

www.twitter.com/Nanomedicina

www.twitter.com/writingpapers

www.twitter.com/escreverartigos

