

Volatility Forecasting Using Similarity-based Parameter Correction and Aggregated Shock Information

David P. Lundquist¹ and Daniel J. Eck¹

¹Department of Statistics, University of Illinois Urbana-Champaign

Objectives

- Donec fringilla, velit id lobortis commodo, eros dui consectetur mi, ut interdum lorem dui sed mauris.
- Nulla ac nulla rhoncus est bibendum ullamcorper:
- Quisque vestibulum, nisl sit amet gravida ultricies dis parturient montes, nascetur ridiculus musobortis commodo, eros dui consectetur mi.

Introduction

Donec fringilla, velit id lobortis commodo, eros dui consectetur mi, ut interdum lorem dui sed mauris. Duis id sem nunc, a pharetra odio. Phasellus posuere **semper massa**, id bibendum ligula tristique at. Integer sit amet vulputate turpis. Sed erat lacus, faucibus at viverra et, mattis nec sem. Cras faucibus scelerisque cursus. Opet volutpat ligula.

Duis semper lorem eget dui dignissim porttitor. **Nulla facilisi**. In ullamcorper lorem quis dolor iaculis nec egestas enim ultricies. Cras ut mauris elit, ut lacinia dui. Proin in ante et libero hendrerit iaculis. Nulla eu erat a urna laoreet auctor id a turpis. Nam mollis tristique neque eu luctus. Suspendisse rutrum congue nisi sed convallis. Aenean id neque dolor.

Materials

- Vestibulum nisl, quis euismod velit eros in ligula.
 - Cras rhoncus quam et augue convallis in elementum urna tincidunt.
- Proin ut vestibulum augue.
 - Donec dapibus sagittis neque eu ultrices.



Figure 1: Anther of thale cress (*Arabidopsis thaliana*), fluorescence micrograph. Source: Heiti Paves, <https://commons.wiki-media.org/wiki/File:Tolmukapea.jpg>.

Methods

- International support:
 - åääãääëëëïíïðóôõöøùúûüýÿñčšž
 - ÄÅÄÃÄÄÊÊÊËÏÏÏÖÖÖØØØÙÙÙÛÛÛÝŸ
 - ßÇÆĖČŠŽ
- Maecenas Vel Nisl Elit
 - Suspendisse potenti. Fusce a est eget turpis rhoncus varius sed sed dui. Cras justo nibh, bibendum a cursus eget, consequat et dui. Maecenas vel nisl elit, sed dignissim dolor.
 - In hac habitasse platea dictumst.
- Viewpoint Matching Constraints
 - Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.
 - Proin in nisi diam.
 - Nam ultricies pellentesque nunc, ultrices volutpat nisl ultrices a.

Mathematics

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent porttitor arcu luctus, imperdiet urna iaculis, mattis eros. Pellentesque iaculis odio vel nisl ullamcorper, nec faucibus ipsum molestie. Sed dictum nisl non aliquet porttitor.

$$X \rightarrow r(X) = \arg \max_c \left\{ \max_n \left\{ \sum_{x_i \in X} \delta(x_i, Y_{n,c}) \right\} \right\} \quad (1)$$

Etiam vulputate arcu dignissim, finibus sem et, viverra nisl. Aenean luctus congue massa, ut laoreet metus ornare in. Nunc fermentum nisi imperdiet lectus tincidunt vestibulum at ac elit. Nulla mattis nisl eu malesuada suscipit.

$$\cos^3 \theta = \frac{1}{4} \cos \theta + \frac{3}{4} \cos 3\theta \quad (2)$$

Results: Tables

- Ased Aliquet Luctus Lectus

Table 1: Table caption.

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Aliquam arcu turpis, ultrices sed luctus ac, vehicula id metus. Morbi eu feugiat velit, et tempus augue. Proin ac mattis tortor. Donec tincidunt, ante rhoncus luctus semper, arcu lorem lobortis justo, nec convallis ante quam quis lectus.

Table 2: Another table caption.

Location		
East Distance	West Distance	Count
100km	200km	422
350km	1000km	1833
600km	1200km	890

- Vivamus lobortis eros et massa porta porttitor.

Results: Figure

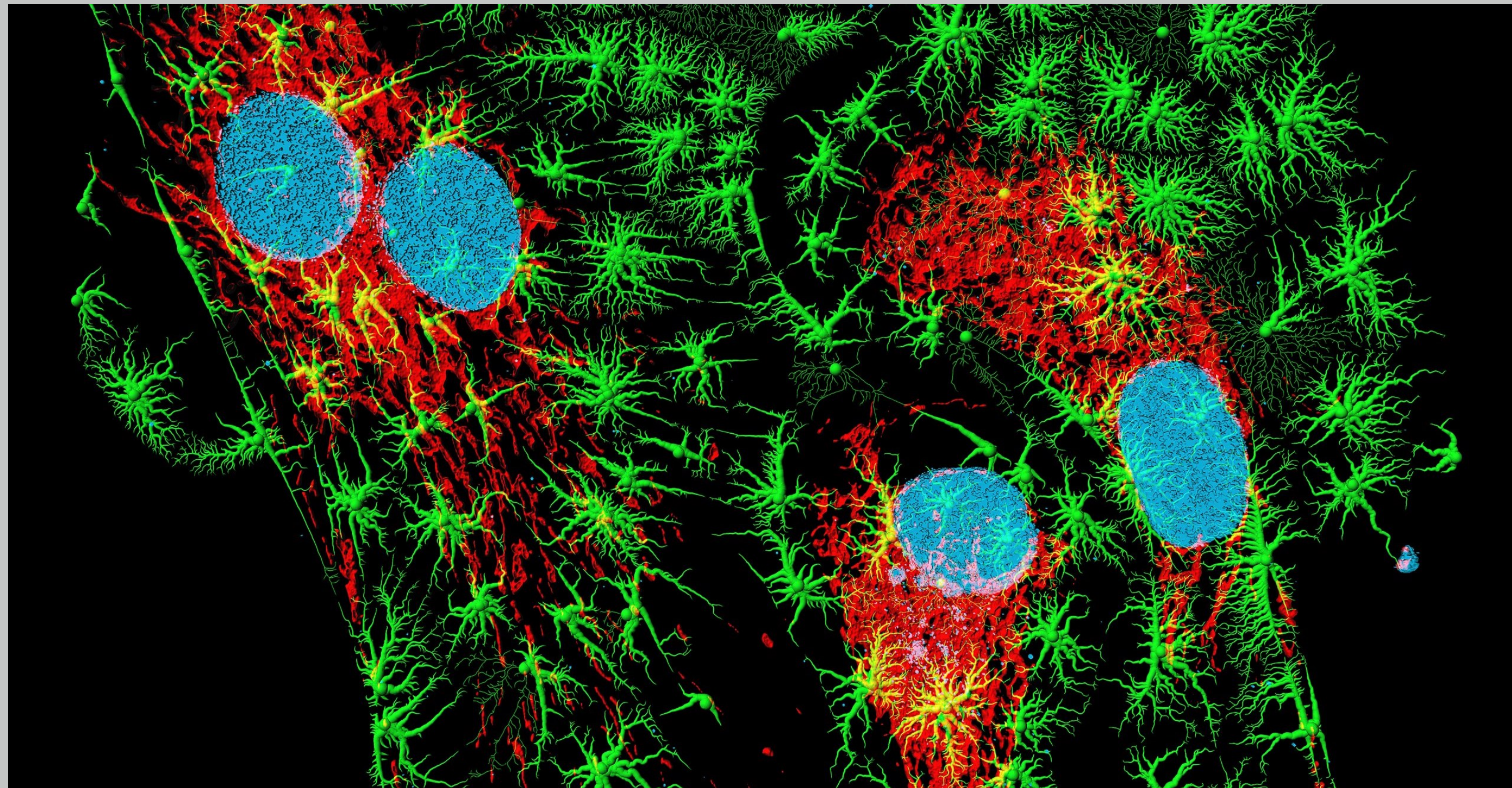


Figure 2: Bovine pulmonary artery endothelial cells in culture. Blue: nuclei; red: mitochondria; green: microfilaments. Computer generated image from a 3D model based on a confocal laser scanning microscopy using fluorescent marker dyes. Source: Heiti Paves, <https://commons.wikimedia.org/wiki/File:Fibroblastid.jpg>.

Conclusions

- Opet volutpat ligula**. Duis semper lorem eget dui dignissim porttitor. Nulla facilisi. In ullamcorper lorem quis dolor iaculis nec egestas enim ultricies. Cras ut mauris elit, ut lacinia dui. Proin in ante et libero hendrerit iaculis.
- Nulla eu erat a urna laoreet auctor id a turpis**. Nam mollis tristique neque eu luctus. Suspendisse rutrum congue nisi sed convallis.
- Opet volutpat ligula**. Duis semper lorem eget dui dignissim porttitor. Nulla facilisi. In ullamcorper lorem quis dolor iaculis nec egestas enim ultricies. Cras ut mauris elit, ut lacinia dui. Proin in ante et libero hendrerit iaculis.

References

- J. M. Smith and A. B. Jones. *Book Title*. Publisher, 7th edition, 2023.
- A. B. Jones and J. M. Smith. Article Title. *Journal title*, 13(52):123–456, 3 2024.

Acknowledgements

Nam mollis tristique neque eu luctus. Suspendisse rutrum congue nisi sed convallis. Aenean id neque dolor. **Pellentesque habitant** morbi tristique senectus et netus et malesuada fames ac turpis egestas.

Contact Information

- Web: <https://www.university.edu/labname>
- Email: davidl11@illinois.edu
- Phone: +1 (000) 111 1111