

## Public CV for Søren Johansen

Søren Johansen  
Professor of Econometrics  
Økonomisk Institut  
Postal address:  
Øster Farimagsgade 5  
26  
26.2.02  
1353  
København K  
Email: [soren.johansen@econ.ku.dk](mailto:soren.johansen@econ.ku.dk)  
Phone: +45 35 32 30 71: <http://www.math.ku.dk/~sjo/>, <http://www.econ.ku.dk>

## Short presentation

**Research Fields:** Econometrics, mathematical statistics and probability theory, time series analysis, including cointegration and its applications, fractional processes, outlier detection, robust statistics.

**Research groups:** I am currently not a member of any research groups

**Most essential academic contribution:** My most influential work is related to cointegration of economic time series, which has had an impact on theory and practice in the application and analysis of macro economic time series. In collaboration with Katarina Juselius we have developed the theory and applications of these concepts and methods in the framework of the vector autoregressive model. The methods have widespread use in academia and applied macro economics.

## Qualifications

mathematical statistics, cand. stat, dr.phil, University of Copenhagen  
Award Date: 4 Feb 1964

## Presentation

Research Fields

Mathematical Statistics including times series analysis, cointegration, outlier detection robust inference fractional processes

Academic Contribution

My most influential work is related to cointegration of economic time series, which has had an impact on theory and practice in the application and analysis of macro economic time series.

In collaboration with Katarina Juselius we have developed the theory and applications of these concepts and methods in the framework of the vector autoregressive model. The methods have widespread use in academia and applied macro economics.

## CV

Born 6 November 1939

Cand. stat. University of Copenhagen 1964, dr. phil. University of Copenhagen 1974.

Previous Employment

Institute of Mathematical Statistics, University of Copenhagen, 1964-2006

European University Institute, Florence, 1996-2001

Current Employment

Department of Economics, University of Copenhagen 2007-

CREATES, Aarhus University, 2007-2017.

## Publications

### WEAK CONVERGENCE TO DERIVATIVES OF FRACTIONAL BROWNIAN MOTION

Johansen, Søren & Nielsen, M. Ø., 2024, In: *Econometric Theory*. p. 1-16

### A model where the least trimmed squares estimator is maximum likelihood

Berenguer-Rico, V., Johansen, Søren & Nielsen, B., 2023, In: *Journal of The Royal Statistical Society Series B-statistical Methodology*. 85, 3, p. 886-912

**Data Revisions and the Statistical Relation of Global Mean Sea Level and Surface Temperature**

Hillebrand, E., Johansen, Søren & Schmith, T., Dec 2020, In: *Econometrics*. 8, 4, 19 p., 41.

**Corrigendum: Analysis of the forward search using some new results for martingales and empirical processes**

Berenguer-Rico, V., Johansen, Søren & Nielsen, B., Nov 2019, In: *Bernoulli*. 25, 4A, p. 3201

**Models Where the Least Trimmed Squares and Least Median of Squares Estimators Are Maximum Likelihood**

Berenguer-Rico, V., Johansen, Søren & Nielsen, B., 27 Sep 2019, 39 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 19-11).

**Uniform Consistency of Marked and Weighted Empirical Distributions of Residuals**

Berenguer-Rico, V., Johansen, Søren & Nielsen, B., 18 Jun 2019, 22 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 19-09).

**The Analysis of Marked and Weighted Empirical Processes of Estimated Residuals**

Berenguer-Rico, V., Johansen, Søren & Nielsen, B., 28 May 2019, 30 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 19-05).

**The Knightian Uncertainty Hypothesis: Unforeseeable Change and Muth's Consistency Constraint in Modeling Aggregate Outcomes**

Frydman, R., Johansen, Søren, Rahbek, Anders & Tabor, M. N., 15 Mar 2019, 55 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 19-02).

**Cointegration and Adjustment in the  $\text{CVAR}(\infty)$  Representation of Some Partially Observed  $\text{CVAR}(1)$  Models**

Johansen, Søren, 10 Jan 2019, In: *Econometrics*. 7, 1, 10 p.

**Boundedness of M-estimators for linear regression in time series**

Johansen, Søren & Nielsen, B., 2019, In: *Econometric Theory*. 35, 3, p. 653-683

**Nonstationary Cointegration in the Fractionally Cointegrated VAR Model**

Johansen, Søren & Nielsen, M. Ø., 2019, In: *Journal of Time Series Analysis*. 40, 4, p. 519-543

**Cointegration and Adjustment in the Infinite Order CVAR Representation of Some Partially Observed  $\text{CVAR}(1)$  Models**

Johansen, Søren, 29 May 2018, 9 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 18-05).

**Nonstationary Cointegration in the Fractionally Cointegrated VAR Model**

Johansen, Søren & Nielsen, M. Ø., 29 May 2018, 27 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 18-04).

**Testing the CVAR in the Fractional CVAR Model**

Johansen, Søren & Nielsen, M. Ø., 19 Apr 2018, In: *Journal of Time Series Analysis*. 39, 6, p. 836-849

**The cointegrated vector autoregressive model with general deterministic terms**

Johansen, Søren & Nielsen, M. Ø., Feb 2018, In: *Journal of Econometrics*. 202, 2, p. 214-229

**Cointegration between Trends and Their Estimators in State Space Models and Cointegrated Vector Autoregressive Models**

Johansen, Søren & Tabor, M. N., 22 Aug 2017, In: *Econometrics*. 5, 3, p. 1-15 15 p.

**Improved Inference on Cointegrating Vectors in the Presence of a near Unit Root Using Adjusted Quantiles**

Franchi, M. & Johansen, Søren, 14 Jun 2017, In: *Econometrics*. 5, 2, p. 1-20 20 p.

**Cointegration between trends and their estimators in state space models and CVAR models**

Johansen, Søren & Tabor, M. N., 2017, 13 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 17-02).

**Improved inference on cointegrating vectors in the presence of a near unit root using adjusted quantiles**

Franchi, M. & Johansen, Søren, 2017, 19 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 17-09).

**Testing the CVAR in the fractional CVAR model**

Johansen, Søren & Nielsen, M. Ø., 2017, 13 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 17-23).

**The Qualitative Expectations Hypothesis: Model Ambiguity, Consistent Representations of Market Forecasts, and Sentiment**

Frydman, R., Johansen, Søren, Rahbek, Anders & Tabor, M. N., 2017, 38 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 17-10). (Institute for New Economic Thinking Working Paper Series; No. 59).

**The role of cointegration for optimal hedging with heteroscedastic error term**

Gatarek, L. & Johansen, Søren, 2017, 18 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 17-03).

**Rejoinder: Asymptotic theory of outlier detection algorithms for linear time series regression models**

Johansen, Søren & Nielsen, B., 15 Jun 2016, In: Scandinavian Journal of Statistics. 43, 2, p. 374-381 8 p.

**Asymptotic Theory of Outlier Detection Algorithms for Linear Time Series Regression Models**

Johansen, Søren & Nielsen, B., Jun 2016, In: Scandinavian Journal of Statistics. 43, 2, p. 321-348 28 p.

**Analysis of the Forward Search using some new results for martingales and empirical processes**

Johansen, Søren & Nielsen, B., 2016, In: Bernoulli. 22, 2, p. 1131-1183 53 p.

**The cointegrated vector autoregressive model with general deterministic terms**

Johansen, Søren & Nielsen, M. Ø., 2016, 28 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 16-07).

**Tightness of M-estimators for multiple linear regression in time for multiple linear regression in time series**

Johansen, Søren & Nielsen, B., 2016, 21 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 16-05).

**THE ROLE OF INITIAL VALUES IN CONDITIONAL SUM-OF-SQUARES ESTIMATION OF NONSTATIONARY FRACTIONAL TIME SERIES MODELS**

Johansen, Søren & Nielsen, M. Ø., 11 May 2015, In: Econometric Theory. 32, p. 1095-1139 45 p.

**Data Revisions and the Statistical Relation of Global Mean Sea-Level and Temperature**

Hillebrand, E. T., Johansen, Søren & Schmith, T., 2015, 14 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 9, Vol. 2015).

**Model Discovery and Trygve Haavelmo's Legacy**

Hendry, D. & Johansen, Søren, 2015, In: Econometric Theory. 31, 1, p. 93-114 22 p.

**Time Series: Cointegration**

Johansen, Søren, 2015, *International Encyclopedia of the Social & Behavioral Sciences*. Wright, J. D. (ed.). Oxford: Elsevier, Vol. 24. p. 322-330 9 p.

### **Times Series: Cointegration**

Johansen, Søren, 2015, *International Encyclopedia of the Social & Behavioral Sciences*. Wright, J. D. (ed.). 2 ed. Oxford: Elsevier, Vol. 24. p. 322--330 9 p.

### **An Asymptotic Invariance Property of Common Trends under Linear Transformations of the Data**

Johansen, Søren & Juselius, Katarina, 2014, In: *Journal of Econometrics*. 178, Part 2, p. 310-315 6 p.

### **Optimal hedging with the cointegrated vector autoregressive model**

Gatarek, L. & Johansen, Søren, 2014, Copenhagen: Økonomisk institut, Københavns Universitet, 11 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 22, Vol. 2014).

### **Outlier detection algorithms for least squares time series regression**

Johansen, Søren & Nielsen, B., 2014, Copenhagen: Økonomisk institut, Københavns Universitet, 39 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 23, Vol. 2014).

### **Least squares estimation in a simple random coefficient autoregressive model**

Johansen, Søren & Lange, Theis, Apr 2013, In: *Journal of Econometrics*. 177, 2, p. 285-288 4 p.

### **Asymptotic analysis of the Forward Search**

Johansen, Søren & Nielsen, B., 2013, Kbh.: Økonomisk institut, Københavns Universitet, 39 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 1, Vol. 13).

### **Outlier detection in regression using an iterated one-step approximation to the Huber-skip estimator**

Johansen, Søren & Nielsen, B., 2013, In: *Econometrics*. 1, 1, p. 53-70 18 p.

### **Likelihood inference for a fractionally cointegrated vector autoregressive model**

Johansen, Søren & Ørregård Nielsen, M., Nov 2012, In: *Econometrica*. 80, 6, p. 2667-2732 66 p.

### **A Necessary Moment Condition for the Fractional Central Limit Theorem**

Johansen, Søren & Nielsen, M., 2012, In: *Econometric Theory*. 28, p. 671-679 9 p.

### **Statistical analysis of global surface temperature and sea level using cointegration methods**

Schmidt, T., Johansen, Søren & Thejll, P., 2012, In: *Journal of Climate*. 25, 22, p. 7822-7833 12 p.

### **The Role of Initial Values in Nonstationary Fractional Time Series Models**

Johansen, Søren & Nielsen, M. Ø., 2012, Kbh.: Økonomisk institut, Københavns Universitet, 29 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 18, Vol. 12).

### **The Selection of ARIMA Models with or without Regressors**

Johansen, Søren, Riani, M. & Atkinson, A. C., 2012, Kbh.: Økonomisk institut, Københavns Universitet, 31 p. (University of Copenhagen. Institute of Economics. Discussion Papers (Online); No. 17, Vol. 12).

### **The analysis of nonstationary time series using regression, correlation and cointegration**

Johansen, Søren, 2012, In: *Contemporary Economics*. 6, 2, p. 40-57 18 p.

### **An extension of cointegration to fractional autoregressive processes**

Johansen, Søren, 2011, *The Yearbook of the Finnish Statistical Society 2010*. Helsinki: Finnish Statistical Society, p. 20-34 15 p.

### **Asymptotic Theory for Iterated One-Step Huber-Skip Estimators**

Johansen, Søren & Nielsen, B., 2011, Kbh.: Department of Economics, University of Copenhagen, 17 p.

**On a Graphical Technique for Evaluating Some Rational Expectations Models**

Johansen, Søren & Swensen, A. R., 2011, In: *Journal of Time Series Econometrics*. 3, 1, p. Article 9 27 p.

**Some Econometric Results for the Blanchard-Watson Bubble Model**

Johansen, Søren & Lange, Theis, 2011, Department of Economics, University of Copenhagen, 9 p.

**Statistical analysis of global surface air temperature and sea level using cointegration methods**

Schmith, T., Johansen, Søren & Thejll, P., 2011, Department of Economics, University of Copenhagen, 29 p.

**The Properties of Model Selection when Retaining Theory Variables**

Hendry, D. F. & Johansen, Søren, 2011, Department of Economics, University of Copenhagen, 4 p.

**A Necessary Moment Condition for the Fractional Functional Central Limit Theorem**

Johansen, Søren & Nielsen, M. Ø., 2010, Department of Economics, University of Copenhagen, 8 p.

**An Extension of Cointegration to Fractional Autoregressive Processes**

Johansen, Søren, 2010, Department of Economics, University of Copenhagen, 15 p.

**An Invariance Property of the Common Trends under Linear Transformations of the Data**

Johansen, Søren & Juselius, Katarina, 2010, Department of Economics, University of Copenhagen, 13 p.

**Discussion of 'The Forward Search: Theory and Data Analysis' by Anthony C. Atkinson, Marco Riani, and Andrea Ceroli**

Johansen, Søren & Nielsen, B., 2010, Department of Economics, University of Copenhagen, 13 p.

**Discussion: The Forward Search: Theory and Data Analysis**

Johansen, Søren & Nielsen, B., 2010, In: *Journal of the Korean Statistical Society*. 39, 2, p. 137-145 9 p.

**Likelihood Inference for a Fractionally Cointegrated Vector Autoregressive Model**

Johansen, Søren & Nielsen, M. Ø., 2010, Department of Economics, University of Copenhagen, 41 p.

**Likelihood inference for a nonstationary fractional autoregressive model**

Johansen, Søren & Ørregård Nielsen, M., 2010, In: *Journal of Econometrics*. 158, 1, p. 51-66 16 p.

**Some Identification Problems in the Cointegrated Vector Autoregressive Model**

Johansen, Søren, 2010, In: *Journal of Econometrics*. 158, 2, p. 262-273 12 p.

**Søren Johansen and Katarina Juselius: Interview**

Johansen, Søren & Juselius, Katarina, 2010, *European Economics at a Crossroads*. Rosser, Jr., J. B., Holt, R. P. F. & Colander, D. (eds.). Cheltenham, UK: Edward Elgar Publishing, p. 115-131 16 p.

**Testing hypotheses in an I(2) model with piecewise linear trends. An analysis of the persistent long swings in the Dmk/\$ rate**

Johansen, Søren, Juselius, Katarina, Frydman, R. & Goldberg, M., 2010, In: *Journal of Econometrics*. 158, 1, p. 117-129 13 p.

**The Analysis of Nonstationary Time Series Using Regression, Correlation and Cointegration with an Application to Annual Mean Temperature and Sea Level**

Johansen, Søren, 2010, Department of Economics, University of Copenhagen, 26 p.

**An analysis of the indicator saturation estimator as a robust regression estimator**

Johansen, Søren & Nielsen, B., 2009, *The Methodology and Practice of Econometrics: A Festschrift in Honour of David F. Hendry*. Shepard, N. & Castle, J. (eds.). Oxford: Oxford University Press, p. 1-36 36 p.

### **Cointegration: Overview and Development**

Johansen, Søren, 2009, *Handbook of Financial Time Series*. Andersen, T. G., Kreiss, J-P., Davis, R. A. & Mikosch, T. (eds.). Springer, p. 671-693 23 p.

### **On a Numerical and Graphical Technique for Evaluating some Models Involving Rational Expectations**

Johansen, Søren & Swensen, A. R., 2009, Department of Economics, University of Copenhagen, 30 p.

### **Representation of cointegrated autoregressive processes with application to fractional processes**

Johansen, Søren, 2009, In: *Econometric Reviews*. 28, 1-3, p. 121-145 25 p.

### **A Resolution of the Purchasing Power Parity Puzzle: Imperfect Knowledge and Long Swings**

Frydman, R., Goldberg, M. D., Johansen, Søren & Juselius, Katarina, 2008, Department of Economics, University of Copenhagen, 37 p.

### **A representation theory for a class of vector autoregressive models for fractional processes**

Johansen, Søren, 2008, In: *Econometric Theory*. 24, 3, p. 651-676 26 p.

### **Allowing the Data to Speak Freely: The Macroeconometrics of the Cointegrated Vector Autoregression**

Hoover, K. D., Johansen, Søren & Juselius, Katarina, 2008, In: *American Economic Review (Print Edition)*. 2 (Papers & Proceedings), p. 251-255 5 p.

### **An Analysis of the Indicator Saturation Estimator as a Robust Regression Estimator**

Johansen, Søren & Nielsen, B., 2008, Department of Economics, University of Copenhagen, 35 p.

### **Automatic selection of indicators in a fully saturated regression**

Hendry, D. F., Johansen, Søren & Santos, C., 2008, In: *Computational Statistics*. 23, 2, p. 317-335 19 p.

### **Correlation, regression, and cointegration of nonstationary economic time series**

Johansen, Søren, 2008, *Bulletin of the International Statistical Institute vol. LXII: Proceedings of the 56th session of the International Statistical Institute, 22-29 August 2007, Lisboa, Portugal*. Gomes, M. I., Martins, J. A. P. & Silva, J. A. (eds.). Instituto Nacional de Estatística, p. 19-26 8 p.

### **Exact rational expectations, cointegration, and reduced rank regression**

Johansen, Søren & Swensen, A. R., 2008, In: *Journal of Statistical Planning and Inference*. 138, 9, p. 2738-2748 11 p.

### **Reduced Rank Regression**

Johansen, Søren, 2008, *The New Palgrave Dictionary of Economics*. Durlauf, S. N. & Blume, L. E. (eds.). 2 ed. Palgrave Macmillan, 7 p.

### **Allowing the Data to Speak Freely: The Macroeconometrics of the Cointegrated Vector Autoregression**

Hoover, K. D., Juselius, Katarina & Johansen, Søren, 2007, Department of Economics, University of Copenhagen, 10 p.

### **Comment on "A Semi-Empirical Approach to Projecting Future Sea-Level Rise"**

Johansen, Søren, Schmith, T. & Thejll, P., 2007, In: *Science*. 317, 5846, p. 1866

### **Correlation, Regression, and Cointegration of Nonstationary Economic Time Series**

Johansen, Søren, 2007, Department of Economics, University of Copenhagen, 9 p.

### **Exact Rational Expectations, Cointegration, and Reduced Rank Regression**

Johansen, Søren & Swensen, A. R., 2007, Department of Economics, University of Copenhagen, 10 p.

**Likelihood Inference for a Nonstationary Fractional Autoregressive Model**

Johansen, Søren & Nielsen, M. Ø., 2007, Department of Economics, University of Copenhagen, 45 p.

**Selecting a Regression Saturated by Indicators**

Hendry, D. F., Johansen, Søren & Santos, C., 2007, Department of Economics, University of Copenhagen, 17 p.

**Some Identification Problems in the Cointegrated Vector Autoregressive Model**

Johansen, Søren, 2007, Department of Economics, University of Copenhagen, 26 p.

**Testing Hypotheses in an I(2) Model with Applications to the Persistent Long Swings in the Dmk/\$ Rate**

Johansen, Søren, Juselius, Katarina, Frydman, R. & Goldberg, M., 2007, Department of Economics, University of Copenhagen, 33 p.

**Cointegration. Overview and Development**

Johansen, Søren, 2006, Department of Applied Mathematics and Statistics / University of Copenhagen, p. 1-22.

**Cointegration: a survey**

Johansen, Søren, 2006, *Handbook of Econometrics: Vol 1 Econometric Theory*. Mills, T. C. & Palgrave, K. P. (eds.). Palgrave Macmillan, Vol. 1. p. 540-577

**Confronting the Economic Model with the Data**

Johansen, Søren, 2006, *Post Walrasian Macroeconomics. Beyond the Dynamic Stochastic General Equilibrium Model*. Colander, D. (ed.). Cambridge University Press, p. 287-300

**Extracting information from the data: a European view on empirical macro**

Juselius, Katarina & Johansen, Søren, 2006, *Post Walrasian Macroeconomics: Beyond the Dynamic Stochastic General Equilibrium Model*. Colander, D. (ed.). Cambridge: Cambridge University Press, p. 301-333

**Statistical analysis of hypotheses on the cointegrating relations in the I(2) model**

Johansen, Søren, 2006, In: *Journal of Econometrics*. 132, p. 81-115

**A Note on testing restrictions for the cointegration parameters of a VAR with I(2) variables**

Johansen, Søren & Lütkepohl, H., 2005, In: *Econometric Theory*. 21, p. 653-658

**A Representation Theory for a Class of Vector Autoregressive Models for Fractional Processes**

Johansen, Søren, 2005, Department of Applied Mathematics and Statistics, p. 1-22.

**Confronting the Economic Model with the Data**

Johansen, Søren, 2005, Department of Applied Mathematics and Statistics, p. 1-13.

**Extracting Information from the Data: A European View on Empirical Macro**

Johansen, Søren & Juselius, K., 2005, Department of Applied Mathematics and Statistics, p. 1-26.

**Maximum Likelihood Estimation and Inference on Cointegration -with Applications to the Demand for Money**

Johansen, Søren & Juselius, Katarina, 2005, *General-to-Specific Modelling, Vol 1*. Campos, J., Ericsson, N. & Hendry, D. (eds.). Edward Elgar Publishing, p. 512-553

**Moderne Økonometri**

Johansen, Søren & Juselius, Katarina, 2005, In: *Samfundsøkonomen*. 3, p. 4-7

**Representation of Cointegrated Autoregressive Processes with Application to Fractional Processes**

Johansen, Søren, 2005, Department of Applied Mathematics and Statistics, p. 1-23.

**Testing Weak Exogeneity and the Order of Cointegration in the UK Money Demand Data**

Johansen, Søren, 2005, *General-to-Specific Modelling, Vol II*. Campos, J., Ericsson, N. & Hendry, D. (eds.). Edward Elgar Publishing, p. 589-610

**The interpretation of cointegrating coefficients in the cointegrated vector autoregressive model**

Johansen, Søren, 2005, In: *Oxford Bulletin of Economics and Statistics*. 67, 1, p. 93-104

**A Small Sample Correction of the Dickey-Fuller Test**

Johansen, Søren, 2004, *Afdeling for Anvendt Matematik og Statistik / Københavns Universitet*, p. 1-18.

**A Small Sample Correction of the Dickey-Fuller Test**

Johansen, Søren, 2004, *New Directions in Macromodelling*. Elsevier, p. 49-68

**Cointegration; An Overview**

Johansen, Søren, 2004, *Afdeling for Anvendt Matematik og Statistik / Københavns Universitet*, p. 1-37.

**Cointegration; a survey**

Johansen, Søren, 2004, *Palgrave Handbook of Econometrics: Volume 1*. Bind 1, Chapter 15 ed. Palgrave Macmillan: Palgrave Macmillan, p. 1-37

**Discussion of: Pesaran, M.H., Schuermann T., and Weiner S. M., Modeling regional interdependencies using a global error-correcting macroeconomic model**

Johansen, Søren, 2004, In: *Journal of Business and Economic Statistics*. 22, 2, p. 169-172

**Erik Sparre Andersen**

Johansen, Søren, 2004, *Det Kongelige Danske Videnskabernes Selskab: oversigt over Selskabets virksomhed 2002-2003*. Det Kongelige Danske Videnskabernes Selskab, p. 231-239 9 p.

**Kointegration og fælles stokastiske tendre**

Johansen, Søren, 2004, In: *mat Matilde*. 19, p. 11-13

**More on testing exact rational expectations in vector autoregressive models: Restricted constant and linear term**

Johansen, Søren & Swensen, A. R., 2004, In: *Econometrics Journal*. 7, p. 389-397

**The variance of the estimated roots in a cointegrated vector autoregressive model**

Johansen, Søren, 2003, In: *Journal of Time Series Analysis*. 24, 6, p. 663-678

**Likelihood analysis of the I(2) model**

Johansen, Søren, 2003, *Recent Developments in Time Series, Vol I*. Newbold, P. & Leyborne, S. (eds.). Edward Elgar Publishing, p. 243-272

**More on testing exact rational expectations in vector autoregressive models: Restricted drift term**

Johansen, Søren & Swensen, A. R., 2003, *Københavns Universitet*, p. 1-11.

**A Small Sample Correction for Tests of Hypotheses on the Cointegrating Vectors**

Johansen, Søren, 2002, In: *Journal of Econometrics*. 111, 2, p. 195-221

**A Small Sample Correction of the Test for Cointegrating Rank in the Vector Autoregressive Model**

Johansen, Søren, 2002, In: *Econometrica*. 70, p. 1929-1961 33 p.



**A simulation study of some functionals of random walk**

Johansen, Søren, Hansen, Henrik & Fachin, S., 2002, Københavns Universitet.

**Discussion of: Jansen, E.S., Statistical issues in macroeconomic modelling**

Johansen, Søren, 2002, In: Scandinavian Journal of Statistics. 29, p. 213-216

**Statistical analysis of hypotheses on the cointegrating relations in the I(2) model**

Johansen, Søren, 2002, Københavns Universitet, p. 1-27.

**The interpretation of cointegrating coefficients in the cointegrated vector autoregressive model**

Johansen, Søren, 2002, Københavns Universitet, p. 1-11.

**Cointegration in the VAR model**

Johansen, Søren, 2001, *A Course in Time Series Analysis*. Peña, D., Tiao, G. C. & Tsay, R. S. (eds.). Wiley, p. 408-435  
28 p.

**Cointegration in the VAR model**

Johansen, Søren, Pena, D. (ed.), Tiao, G. C. (ed.) & Tsay, R. S. (ed.), 2001, *A Course in Time Series Analysis*. New York: Wiley

**Controlling Inflation in a Cointegrated Vector Autoregressive Model with an Application to US Data**

Juselius, Katarina & Johansen, Søren, 2001, Department of Economics, University of Copenhagen, 41 p.

**A Bartlett correction factor for tests on the cointegrating relations**

Johansen, Søren, 2000, In: *Econometric Theory*. 16, 5, p. 740-778 39 p.

**Cointegration analysis in the presence of structural breaks in the deterministic trend**

Johansen, Søren, Nielsen, B. & Mosconi, R., 2000, In: *Econometrics Journal*. 3, 2, p. 216-249 34 p.

**Modelling cointegration in the vector autoregressive model**

Johansen, Søren, 2000, In: *Economic Modelling*. 17, 3, p. 359-373 15 p.

**Granger's Representation Theorem and Multicointegration**

Engsted, T. & Johansen, Søren, 1999, *Cointegration, Causality and Forecasting: Festschrift in Honour of Clive Granger*. Engle, R. & White, H. (eds.). Oxford University Press, p. 200-212 12 p.

**Likelihood Analysis of Seasonal Cointegration**

Johansen, Søren & Schaumburg, E., 1999, In: *Journal of Econometrics*. 88, 2, p. 301-339 39 p.

**Some tests for parameter constancy in cointegrated VAR-models**

Hansen, Henrik & Johansen, Søren, 1999, In: *Econometrics Journal*. 2, 2, p. 306-333 28 p.

**Statistical Analysis of some Non-Stationary Time series**

Johansen, Søren, 1999, *Econometrics and Economic Theory in the 20th Century: The Ragnar Frisch Centennial Symposium*. Strøm, S. (ed.). Cambridge University Press, p. 433-457 25 p. (Econometric Society Monographs; No. 31).

**Testing exact rational expectations in cointegrated vector autoregressive models**

Johansen, Søren & Swensen, A. R., 1999, In: *Journal of Econometrics*. 93, 1, p. 73-91 9 p.

**Asymptotic inference on cointegrating rank in partial systems**

Harbo, I. S., Johansen, Søren, Nielsen, B. & Rahbek, Anders, 1998, In: *Journal of Business and Economic Statistics*. 16, p. 388-399

**Workbook on Cointegration**

Johansen, Søren & Hansen, P. R., 1998, Oxford University Press. 176 p.

**Likelihood analysis of the I(2) model**

Johansen, Søren, 1997, In: Scandinavian Journal of Statistics. 24, 4, p. 433-462 30 p.

**Likelihood Based Inference for Cointegration of Non-Stationary Time Series**

Johansen, Søren, Cox, D. R. (ed.), Barndorff-Nielsen, O. E. (ed.) & Hinkley, D. (ed.), 1996, *Likelihood, Time Series with Econometric and other Applications*. Cox, D. R., Hinkley, D. & Barndorff-Nielsen, O. E. (eds.). Taylor & Francis

**A Statistical Analysis of Cointegration for I(2) Variables**

Johansen, Søren, 1995, In: Econometric Theory. 11, 1, p. 25-59 35 p.

**Diskussion of Tong, H.: A personal overview of non-linear time series analysis from a chaos perspective**

Johansen, Søren, 1995, In: Scandinavian Journal of Statistics. 22, p. 428-430

**Identifying restrictions of linear equations with applications to simultaneous equations and cointegration**

Johansen, Søren, 1995, In: Journal of Econometrics. 69, 1, p. 111-132

**Likelihood-based inference in cointegrated vector auto-regressive models**

Johansen, Søren, 1995, Great Britain: Oxford University Press. 267 p.

**Test for cointegration rank in partial systems**

Johansen, Søren, Harboe, I., Nielsen, B. & Rahbek, Anders, 1995, København, p. 32.

**The Role of Ancillarity in Inference for Non-stationary Variables**

Johansen, Søren, 1995, In: Economic Journal. 105, 429, p. 302-320

**A Likelihood Analysis of The I(2) Model**

Johansen, Søren, 1994, København, p. 26.

**Estimating Systems of Trending Variables**

Johansen, Søren, 1994, In: Econometric Reviews. 13, 3, p. 351-386

**Identification of the long-run and the short-run structure: an application to the ISLM model**

Johansen, Søren & Juselius, Katarina, 1994, In: Journal of Econometrics. 63, 1, p. 7-36

**Testing Exogeneity and the Order of Cointegration in U.K. Money Demand Data**

Johansen, Søren, 1994, *Testing Exogeneity. Advanced Texts in Econometrics*. Ericsson, N. & Irons, J. (eds.). Oxford: Oxford University Press, p. 121-143

**Testing Rational Expectations in Vector Autoregressive Models**

Johansen, Søren & Swensen, A. R., 1994, Copenhagen, p. 12.

**The Role of Ancillarity in Inference for Non-Stationary Variables**

Johansen, Søren, 1994, København, p. 21.

**The Role of the Constant and Linear Terms in Cointegration Analysis of Nonstationary Variables**

Johansen, Søren, 1994, In: Econometric Reviews. 13, 2, p. 205-229

**Likelihood based inference for cointegration of non stationary time series**

Johansen, Søren, 1993, København, p. 30.

**Recursive Estimation in Cointegrated VAR-Models**

Johansen, Søren & Hansen, Henrik, 1993, København, p. 20.

**A Representation of Vector Autoregressive Processes Integrated of Order 2.**

Johansen, Søren, 1992, In: *Econometric Theory*. 8, p. 188-202

**An I(2) Cointegration Analysis of the Purchasing Power Parity between Australia and the United States**

Johansen, Søren, 1992, *Macroeconomic Modeling of the Long Run*. Hargreaves, C. (ed.). England: Elgar, p. 229-248

**Cointegration in partial systems and the efficiency of single-equation analysis**

Johansen, Søren, 1992, In: *Journal of Econometrics*. 52, p. 389-402

**Determination of Cointegration Rank in the Presense of a Linear Trend**

Johansen, Søren, 1992, In: *Oxford Bulletin of Economics and Statistics*. 54, 3, p. 384-97

**Identification of the Long-Run and the Short-Run Structure. An Application to the ISLM Model**

Johansen, Søren & Juselius, Katarina, 1992, Københavns Universitet, p. 35.

**Identifying Restrictions of Linear Equations**

Johansen, Søren, 1992, København, p. 18.

**Recursive Estimation in Cointegrated VAR-Models**

Hansen, Henrik & Johansen, Søren, 1992, Institute of Economics, University of Copenhagen, 20 p.

**Testing Structural Hypotheses in a Multivariate Cointegration Analysis of the PPP and the UIP for UK**

Johansen, Søren & Juselius, Katarina, 1992, In: *Journal of Econometrics*. 53, 1-3, p. 211-244

**Testing Weak Exogeneity and the Order of Cointegration in UK Money Demand Data**

Johansen, Søren, 1992, In: *Journal of Policy Modeling*. 14, 3, p. 313-334

**The Role of the Constant Term in Cointegration Analysis of Nonstationary Variables**

Johansen, Søren, 1992, Københavns Universitet, p. 26.

**A Statistical Analysis of Cointegration for I(2) Variables**

Johansen, Søren, 1991, Københavns Universitet, p. 26.

**An I(2) Cointegration Analysis of the Purchasing Power Parity between Australia and USA**

Johansen, Søren, 1991, København, Kbh.Univ., p. 25.

**Comments on E.E. Leamer: A Bayesian perspective in inference from macroeconomic data**

Johansen, Søren, 1991, In: *Scandinavian Journal of Economics*. 93, p. 249-51

**Determination of Cointegration Rank in the Presence of Linear Trend**

Johansen, Søren, 1991, Københavns Universitet, p. 15.

**Estimating Systems of Trending Variables**

Johansen, Søren, 1991, Københavns Univversitet, p. 35.

### **Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models**

Johansen, Søren, 1991, In: *Econometrica*. 59, 6, p. 1551-80

### **Globally Convergent Algorithms for Maximizing Likelihood Function**

Jensen, S. T., Johansen, Søren & Lauritzen, Steffen, 1991, In: *Biometrika*. 78, 4, p. 867-877 11 p.

### **Globally convergent algorithms for maximizing a likelihood function**

Jensen, S. T., Johansen, Søren & Lauritzen, S. L., 1991, In: *Biometrika*. 78, 4, p. 867-77

### **Statistical Analysis of Cointegration Vectors**

Johansen, Søren, 1991, *Long-Run Economic Relationships-Readings in Cointegration*. Granger, C. & Engle, R. (eds.). Oxford University Press, p. 131-52

### **Testing Weak Exogeneity and the Order of Cointegration in UK Money Demand Data**

Johansen, Søren, 1991, Københavns Universitet, p. 31.

### **The Power Function of the Likelihood Ratio Test for Cointegration**

Johansen, Søren, 1991, *Econometric Decision Models: New Methods of Modeling and Applications: Proceedings of the 2nd International Conference on Econometric Decision Models*. Gruber, J. (ed.). Springer, p. 324-335 23 p.

### **A Survey of Product-Integration with a View Towards Applications in Survival Analysis.**

Johansen, Søren & Gill, R. D., 1990, In: *Annals of Statistics*. 18, p. 1501-1555 55 p.

### **Hotelling's Theorem on the Volume of Tubes: some Illustrations in Simultaneous Inference and Data Analysis.**

Johansen, Søren & Johnstone, I., 1990, In: *Annals of Statistics*. 2, p. 652-684 33 p.

### **Maximum Likelihood Estimation and Inference on Cointegration — with Applications to the Demand for Money. Oxford Bulletin of Economics and Statistics 52, 169–210 (1990). (With K. Juselius)**

Johansen, Søren & Juselius, Katarina, 1990, In: *Oxford Bulletin of Economics and Statistics*. 52, p. 169-210 42 p.

### **Statistical Analysis of Cointegration Vectors.**

Johansen, Søren, 1988, In: *Journal of Economic Dynamics and Control*. 12, p. 231-254 24 p.

### **The Mathematical Structure of Error Correction Models**

Johansen, Søren, 1988, In: *Contemporary Mathematics*. 80, p. 359--386 28 p.

### **Estimation of Proportional Covariances.**

Johansen, Søren & Tolver Jensen, S., 1987, In: *Statistics & Probability Letters*. 6, p. 83-85 3 p.

### **The Asymptotic Properties of the Cornish-Bowden Eisenthal Median Estimator.**

Johansen, Søren & Dalgaard, P., 1987, In: *Journal of Statistical Planning and Inference*. 15, p. 279-299 21 p.

## **Activities**

### **To condition or not to condition**

Johansen, Søren (Lecturer)

29 Oct 2015

### **Optimal hedging with the cointegrated vector autoregressive model**

Johansen, Søren (Lecturer)

26 Oct 2015

**Likelihood inference for a vector autoregressive model for fractional and cofractional processes**

Johansen, Søren (Lecturer)

20 Oct 2015

**Optimal hedging and optimal Sharpe ratio in the cointegrated vector autoregressive model**

Johansen, Søren (Lecturer)

17 Sep 2015

**Cointegration in times series**

Johansen, Søren (Lecturer)

23 Aug 2015

**A stochastic expansion of the Huber-skip estimator for multiple regression Huber-skip estimator**

Johansen, Søren (Lecturer)

15 Jun 2015

**Optimal hedging with the cointegrated vector autoregressive model**

Johansen, Søren (Lecturer)

23 Feb 2015

**Sixth Italian congress of econometrics and empirical economics**

Johansen, Søren (Speaker)

21 Jan 2015

**Communications in Statistics (Journal)**

Johansen, Søren (Review editor)

2015 → ...

**Econometrics (Journal)**

Johansen, Søren (Review editor)

2015 → ...

**Scandinavian Journal of Statistics (Journal)**

Johansen, Søren (Peer reviewer)

2015 → ...

**e-economics (Journal)**

Johansen, Søren (Review editor)

2015 → ...

**Theoretical developments: an overview of recent results and some future problems Cointegration: Theory and Applications**

Johansen, Søren (Lecturer)

27 Nov 2014

**Asymptotic analysis of the Forward Search**

Johansen, Søren (Lecturer)

20 Mar 2014

**Cointegration in the vector autoregressive model**

Johansen, Søren (Lecturer)

9 Jan 2014

**Journal of Common Market Studies (Journal)**

Johansen, Søren (Peer reviewer)

2014 → ...

**Journal of International Trade and Economic Development (Journal)**

Johansen, Søren (Peer reviewer)

2014 → ...

**Journal of Statistical Planning and Inference (Journal)**

Johansen, Søren (Peer reviewer)

2014 → ...

**Mathematical Problems in Engineering (Journal)**

Johansen, Søren (Peer reviewer)

2014 → ...

**Ocean Dynamics (Journal)**

Johansen, Søren (Peer reviewer)

2014 → ...

**The econometric Journal (Journal)**

Johansen, Søren (Peer reviewer)

2014 → ...

**journal of econometrics (Journal)**

Johansen, Søren (Peer reviewer)

2014 → ...

**Asymptotic theory of M-estimators for multiple regression Huber-skip estimator**

Johansen, Søren (Lecturer)

12 Dec 2013

**Matematisk Statistiske Modeller**

Johansen, Søren (Lecturer)

7 Nov 2013

**An asymptotic invariance property of the common trends under linear transformations of the data**

Johansen, Søren (Lecturer)

22 Oct 2013

**Likelihood inference for a vector autoregressive model for fractional and cofractional processes**

Johansen, Søren (Lecturer)

19 Sep 2013

**A stochastic expansion of the Huber-skip estimator for multiple regression Huber-skip estimator**

Johansen, Søren (Lecturer)

5 Sep 2013

**Asymptotic analysis of the Forward Search**

Johansen, Søren (Lecturer)

25 May 2013

**Central European Journal of Operations Research (Journal)**

Johansen, Søren (Review editor)

2013 → ...

**MIT Press (Journal)**

Johansen, Søren (Review editor)

2013 → ...

**Stochastic Environmental Research and Risk (Journal)**

Johansen, Søren (Review editor)

2013 → ...

**Likelihood inference for a vector autoregressive model for fractional and cofractional processes**

Johansen, Søren (Lecturer)

10 Nov 2012

**Invariance of common trends to the information set -with applications to term structure data**

Johansen, Søren (Lecturer)

23 Oct 2012

**Likelihood inference for a vector autoregressive model for fractional and cofractional processes**

Johansen, Søren (Lecturer)

17 Oct 2012

**The analysis of nonstationary time series using cointegration -- with an application to annual mean temperature and sea level**

Johansen, Søren (Lecturer)

6 Jun 2012

**Likelihood inference for a vector autoregressive model for fractional and cofractional processes**

Johansen, Søren (Lecturer)

24 May 2012

**Universal versus ex post Probability Formulations**

Johansen, Søren (Lecturer)

17 Apr 2012

**Outlier detection in regression using robust statistics**

Johansen, Søren (Lecturer)

16 Mar 2012

**Some econometric results for the Blanchard-Watson bubble model**

Johansen, Søren (Lecturer)

12 Jan 2012

**African Journal of Business Management (Journal)**

Johansen, Søren (Review editor)

2012 → ...

**Econometric Theory (Journal)**

Johansen, Søren (Review editor)

2012 → ...

**Economic Modelling (Journal)**

Johansen, Søren (Review editor)

2012 → ...

**Hacettepe Journal of Mathematics and Statistics. (Journal)**

Johansen, Søren (Review editor)

2012 → ...

**Journal of Iranian Statistical Society (Journal)**

Johansen, Søren (Review editor)

2012 → ...

**Oxford Bulletin of Economics and Statistics (Journal)**

Johansen, Søren (Review editor)

2012 → ...

**Statistical Methods and Applications (Journal)**

Johansen, Søren (Review editor)

2012 → ...

**The analysis of nonstationary time series using cointegration -- with an application to annual mean temperature and sea level**

Johansen, Søren (Lecturer)

7 Nov 2011

**Some econometric results for the Blanchard-Watson bubble model**

Johansen, Søren (Lecturer)

3 Nov 2011

**Asymptotic theory for iterated one-step Huber-skip estimators . A stochastic fixed point theorem**

Johansen, Søren (Lecturer)

29 Oct 2011

**Some new results on the IIS algorithm**

Johansen, Søren (Lecturer)

29 Oct 2011

**Transformation of cointegration and common trends under linear transformations of the data**

Johansen, Søren (Lecturer)

15 Sep 2011

**Statistical Analysis of Fractional Data**

Johansen, Søren (Lecturer)

1 Sep 2011

**An econometric analysis of the Blanchard-Watson bubble model**

Johansen, Søren (Lecturer)

1 Jul 2011

**The fractionally cointegrated vector autoregressive process**

Johansen, Søren (Lecturer)

28 Jun 2011

**Towards a theory of statistical inference for fractionally cointegrated vector autoregressive processes**

Johansen, Søren (Lecturer)

27 May 2011

**Likelihood Inference for a Fractionally Cointegrated Vector Autoregressive Model**

Johansen, Søren (Lecturer)

17 Mar 2011



**Likelihood Inference for a Fractionally Cointegrated Vector Autoregressive Model**

Johansen, Søren (Lecturer)

11 Mar 2011

**Communications in Statistics – Theory and Methods. (Journal)**

Johansen, Søren (Review editor)

2011 → ...

**Journal of Applied Econometrics (Journal)**

Johansen, Søren (Review editor)

2011 → ...

**Journal of Applied Econometrics. (Journal)**

Johansen, Søren (Review editor)

2011 → ...

**Journal of Econometrics (Journal)**

Johansen, Søren (Review editor)

2011 → ...

**METHODOLOGY - European Journal of Research Methods for the Behavioral and Social Sciences (Journal)**

Johansen, Søren (Review editor)

2011 → ...

**Oxford Bulletin of Economics and Statistics (Journal)**

Johansen, Søren (Review editor)

2011 → ...

**Statistical analysis of global surface temperature and sea level using analysis of non stationary time series**

Johansen, Søren (Lecturer)

20 Feb 2010

**Advances in Data Analysis and Classification (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**CHAOS (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**Computational Statistics and Data Analysis (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**Econometric Theory (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**Economic Letters (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**Journal of Applied Econometrics (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**Journal of Econometrics (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**Journal of Theoretical Probability (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**Journal of the American Statistical Association (Journal)**

Johansen, Søren (Review editor)

2010 → ...

**Confronting the model with the data.**

Johansen, Søren (Lecturer)

18 Dec 2009

**25 year with cointegration**

Johansen, Søren (Lecturer)

10 Dec 2009

**An analysis of the indicator saturation estimator as a robust regression estimator**

Johansen, Søren (Lecturer)

19 Jun 2009

**An analysis of the indicator saturation estimator as a robust regression estimator**

Johansen, Søren (Lecturer)

14 Apr 2009

**Likelihood Inference for a Vector Autoregressive Model which allows for Fractional and Cofractional Processes**

Johansen, Søren (Lecturer)

20 Mar 2009

**Some Topics in Fractional Cointegration**

Johansen, Søren (Lecturer)

9 Mar 2009

**Statistical analysis of global surface temperature and sea level using analysis of non stationary time series**

Johansen, Søren (Lecturer)

22 Jan 2009

**Econometric Theory (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2009 → 31 Dec 2009

**Journal of Econometrics (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2009

**Journal of Theoretical and Applied Finance (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2009 → ...

**Likelihood inference for a vector autoregressive model which allows for fractional and cofractional processes**

Johansen, Søren (Lecturer)

8 Jun 2008

**The Cointegrated Vector Autoregressive Model**

Johansen, Søren (Lecturer)

9 Apr 2008

**Indicator Saturation**

Johansen, Søren (Lecturer)

8 Feb 2008

**Econometric Theory (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2008 → 31 Dec 2008

**Economics (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2008 → 31 Dec 2008

**Energy Journal (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2008 → 31 Dec 2008

**Journal of Applied Econometrics (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2008 → 31 Dec 2008

**Journal of Econometrics (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2008 → 31 Dec 2008

**Oxford Bulletin of Economics and Statistics (Journal)**

Johansen, Søren (Peer reviewer)

1 Jan 2008 → 31 Dec 2008

**Discussion of Presentation by Andrew Harvey**

Johansen, Søren (Lecturer)

6 Dec 2007

**Indicator Saturation**

Johansen, Søren (Lecturer)

8 Aug 2007

**Spurious Regression and Correlation**

Johansen, Søren (Lecturer)

6 Aug 2007

**Three identification problems in cointegration**

Johansen, Søren (Lecturer)

3 Jun 2007

**Confronting the economic model with the data**

Johansen, Søren (Lecturer)

8 Apr 2007

**Fractional Cointegration**

Johansen, Søren (Lecturer)

20 Mar 2007

**On a numerical and graphical technique for evaluating some models involving rational expectations**

Johansen, Søren (Lecturer)

20 Sep 2001