

Karsten Vesterholm  
Department of Biology  
Sound Communication and Behaviour  
**Email:** kav@sdu.dk  
**Phone:** +4565507279



## Employment

### Department of Biology

SDU

Odense M

12. May 2022 → 30. Mar 2024

### Postdoc

Sound Communication and Behaviour

SDU

12. May 2022 → 30. Mar 2024

## Research outputs

### Conditional linear approximation of nonlinear systems using Operational Modal Analysis

Friis, T., Vesterholm, K. K., Katsanos, E. I., Brandt, A. & Brincker, R., Dec 2021, In: Structural Control and Health Monitoring. 28, 12, 24 p., e2844.

### Random Decrement Based Vibration Analysis of Nonlinear Systems

Vesterholm, K. K., 31. Mar 2021, Syddansk Universitet. Det Tekniske Fakultet. 252 p.

Corrigendum to "Random decrement technique for detection and characterization of nonlinear behavior" [Mech. Syst. Signal Process. 143 (2020) 106841] (Mechanical Systems and Signal Processing (2020) 143, (S0888327020302272), (10.1016/j.ymssp.2020.106841))

Vesterholm, K. K., Brincker, R. & Brandt, A., 15. Feb 2021, In: Mechanical Systems and Signal Processing. 149, 107247.

### Some Aspects of Using the Random Decrement Technique for Nonlinear Systems

Vesterholm, K. K., Brincker, R. & Brandt, A., 2021, *Nonlinear Structures and Systems, Volume 1 - Proceedings of the 38th IMAC, A Conference and Exposition on Structural Dynamics, 2020: Conference Proceedings of the Society for Experimental Mechanics Series*. Kerschen, G., Brake, M. R. W. & Renson, L. (eds.). Springer, Vol. 1. p. 39-41 (Conference Proceedings of the Society for Experimental Mechanics Series).

### Random decrement technique for detection and characterization of nonlinear behavior

Vesterholm, K. K., Brincker, R. & Brandt, A., Sep 2020, In: Mechanical Systems and Signal Processing. 143, 20 p., 106841.

### Localizing nonlinear behavior from response measurement

Vesterholm, K. K. & Brandt, A., 2020, *Proceedings of ISMA2020*. Desmet, W., Pluymers, B., Moens, D. & Vandemaele, S. (eds.). p. 2231-2238

### Localizing nonlinear behavior from response measurements

Vesterholm, K. K. & Brandt, A., 2020.

### Output-Only Estimation of Amplitude Dependent Friction-Induced Damping

Vesterholm, K. K., Friis, T., Katsanos, E., Brincker, R. & Brandt, A., 2020, *Dynamics of Civil Structures*. Pakzad, S. (ed.). Springer, Vol. 2. p. 17-25 (Conference Proceedings of the Society for Experimental Mechanics Series).

**Identification of stick-slip friction in single-degree of freedom system using the random decrement technique**

Vesterholm, K. K., Friis, T., Brincker, R. & Brandt, A., 5. Aug 2019, *Proceedings of the 9th International Conference on Structural Health Monitoring of Intelligent Infrastructure: Transferring Research into Practice, SHMII 2019 - Conference Proceedings*. Chen, G. & Alampalli, S. (eds.). p. 30-35

**Detection of nonlinear behavior using the Random Decrement Technique**

Vesterholm, K. K., Brincker, R. & Brandt, A., 2019, *8th International Operational Modal Analysis Conference (IOMAC 2019)*. Amador, S. D. R., Brincker, R., Katsanos, E. I., Lopez Aenlle, M. & Fernandez, P. (eds.). IOMAC, p. 421-424

**Identification of friction-coupled offshore platforms by output-only method**

Friis, T., Vesterholm, K. K., Katsanos, E. I., Brandt, A. & Brincker, R., 2019, *The 29th International Ocean and Polar Engineering Conference*. Chung, J. S., Akselsen, O. M., Jin, H., Kawai, H., Lee, Y., Matskevitch, D., Ho Van, S., Wan, D., Wang, A. M. & Yamaguchi, S. (eds.). International Society of Offshore & Polar Engineers, p. 1331-1336 6 p. (Proceedings of the International Offshore and Polar Engineering Conference, Vol. 1).

**Linearization of modal parameters in Duffing oscillator using the random decrement technique**

Vesterholm, K. K., Brincker, R. & Brandt, A., 19. Sep 2018, *Proceedings of the International Conference on Noise and Vibration Engineering (ISMA) 2018*. Moens, D., Desmet, W., Pluymers, B. & Rottiers, W. (eds.). ISMA, p. 2673-2686

**Activities****Acoustical Society of America (External organisation)**

Karsten Vesterholm (Member)  
20. Apr 2022 → ...

**DCAMM 18th Internal Symposium**

Karsten Vesterholm (Participant)  
9. Mar 2022 → 11. Mar 2022

**Dansk Akustisk Selskab (External organisation)**

Karsten Krautwald Vesterholm (Member)  
2021 → ...

**Localizing nonlinear behavior from response measurements**

Karsten Krautwald Vesterholm (Speaker)  
7. Sep 2020 → 9. Sep 2020

**Some aspects of using the random decrement technique for nonlinear systems**

Karsten Krautwald Vesterholm (Speaker)  
10. Feb 2020 → 13. Feb 2020

**Identification of stick-slip friction in single-degree of freedom system using the random decrement technique**

Karsten Krautwald Vesterholm (Speaker)  
4. Aug 2019 → 7. Aug 2019

**Massachusetts Institute of Technology**

Karsten Krautwald Vesterholm (Visiting researcher)  
1. Aug 2019 → 30. Nov 2019

**Detection of nonlinear behavior using the random decrement technique**

Karsten Krautwald Vesterholm (Speaker)  
13. May 2019 → 15. May 2019

**DCAMM 17th internal symposium**

Karsten Krautwald Vesterholm (Participant)

11. Mar 2019 → 13. Mar 2019

**Output-Only Estimation of Amplitude Dependent Friction-Induced Damping**

Karsten Krautwald Vesterholm (Speaker)

28. Jan 2019 → 31. Jan 2019

**Linearization of modal parameters in Duffing oscillator using the random decrement technique**

Karsten Krautwald Vesterholm (Speaker)

17. Sep 2018 → 19. Sep 2018

**Society for Experimental Mechanics (External organisation)**

Karsten Krautwald Vesterholm (Member)

9. May 2018 → 20. Aug 2020

**Selskabet for Naturlærens Udbredelse (External organisation)**

Karsten Krautwald Vesterholm (Member)

2013 → ...

**Projects****Random Decrement Based Vibration Analysis of Nonlinear Systems**

Vesterholm, K. & Brandt, A.

01/04/2018 → 31/03/2021

**Teaching and supervision****Akustik for audiologer**

Karsten Vesterholm

01/09/2017 → 31/01/2018

**Grundlæggende Teoretisk og Eksperimentel Akustik**

Peter Møller Juhl & Karsten Vesterholm

01/09/2021 → 31/01/2022

**Programming and Numerical Analysis**

Karsten Vesterholm

01/02/2019 → 31/05/2020

**Structural Dynamics**

Luis David Avendaño-Valencia, Karsten Vesterholm & Vikas Arora

01/09/2021 → 31/01/2022