

## News from CMSS

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### Welcome to two new senior researchers

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SDU has per 1 November succeeded in attracting two new competent senior researchers, who will contribute to developing the research portfolio within health, safety and risk at CMSS.

#### **Welcome to Senior researcher Sisse Grøn, PhD**

On 1 November, CMSS welcomed Senior researcher Sisse Grøn. Sisse has worked as a researcher since 2008 – of which at least 7 years as a senior researcher. She is a well-known face in CMSS, as she was employed in the unit in the period from 2008-2013.



In most of her research, Sisse has explored topics related to work environment, health and safety, and she has conducted several studies within the maritime domains of shipping and fisheries. She has experience with a variety of qualitative research methods including ethnographic observation studies, which she has performed on board several vessels. She is a prolific and productive researcher and has an excellent record of publications. Her research has appeared in several high-quality peer review journals in the fields of work environment, health and safety.

Sisse has experience with research fund raising both from public and private foundations, including the Work Environment Research Foundation of Denmark, and the European Union. She has performed an impressive amount of dissemination work, in trade press, books and translations, and with numerous presentations at conferences for maritime industry practitioners.

Teaching-wise, Sisse has experience at all levels - from bachelors to master and PhD students. She has taught several courses for different target groups, which have included

both medical and technical students. She also has experience as a censor from several institutions.

### **Welcome to Senior researcher Igor Kozin, PhD**

On 1 November, CMSS also welcomed Senior researcher Igor Kozin. Igor has worked as scientist and associate professor at the Institute of Nuclear Power Engineering, Obninsk, Russia, was a guest researcher at Risø National Laboratory, State University of New York at Binghamton, and senior researcher at the Technical University of Denmark.



In his research Igor has explored a wide range of topics and questions related to safety and risk management. He has modelled and analyzed several safety-critical systems in a very diverse empirical context, which includes infrastructure (railways, maritime shipping, and urban car transportation), buildings, and the energy sector (oil and gas exploration and different types of power plants). He has analyzed and modelled the safety, reliability, resilience and security of such systems, and investigated support mechanism for decision making in relation to such systems.

Igor's publications have appeared in several high-quality journals, mainly in the fields of engineering and safety sciences (including Safety Science, Annual Reviews in Control, Journal of Loss Prevention in the Process Industries, Structural Safety). He has also published some of his work in journals in the maritime domain (Journal of Marine Engineering and Technology, and Maritime Policy and Management).

In the maritime domain, Igor has conducted and co-authored a study on fire in container ship cargoes. Container cargo fires are a rising concern in international container shipping, and in several cases, fires have caused the loss of several lives at sea as well as total losses of container vessels. In their article, Igor and his co-authors investigate the common causes for such fires and make proposals for cost-effective technical solutions to quickly detect cargo fires and mitigate such risks. Igor has also conducted and co-authored a study on safe manning of merchant ships, which is a matter of high importance for maritime safety. In the study, Igor and his co-author have developed a computer software tool to support shipping companies and maritime authorities in their decisions on the staffing of merchant ships.

Igor has long experience with university level teaching as well as supervision of both PhD students and MSc students. He has designed and taught several courses at the Institute of Nuclear Power Engineering in Russia, and at DTU in Denmark. He has taught MSc engineering students on safety and reliability of engineered systems, and risk and decision making. In 2018 and 2019, DTU students nominated him as Teacher of the Year.

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## Male seafarers especially vulnerable to risk of hospitalization for chronic diseases

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### **CMSS has recently published new research that has some concerning results in relation to male seafarers' health risks.**

Senior researcher Kimmo Herttua and two colleagues have studied the risk of hospitalisation for major chronic diseases across different transport, rescue and security industries.

The researchers did a register-based study of 624,571 workers\* from six industries in Denmark between 2000 and 2005. Next, they followed up on hospitalisation for chronic diseases for up to 17 years and compared the result with a 20% representative sample of the economically active population.



The study shows considerable differences in disease burden across industries and gender, and the researchers have noted that seafaring and land transport are generally the highest risk industries. The male seafarers have a higher risk for hospitalisation for diabetes, lung cancer, and oral cancer, whereas the male employees in the defense force and the police force in general prove to be healthier than the 20% representative sample that makes up the reference population.

These findings make it paramount that more efforts are done to help seafarers avoid risks of major chronic diseases. The results show that it is essential that seafarers and shipping companies do what they can to ensure a healthy work life. This includes ensuring better access to healthcare and access to a healthy lifestyle in the workplace and providing health promotion initiatives and practical tools.

The newly published research is entitled 'Risk of major chronic diseases in transport, rescue and security industries: a longitudinal register-based study' and was published in Occupational & Environmental Medicine.

You can read the full article and get access to the results [here](#). Further inquiries regarding the study may be put forward to [Senior researcher Kimmo Herttua](#).

\* The cohorts of the transport, rescue and safety industries in the years 2000 - 2005 consisted of 194,656 people, while the 20% representative sample of the economically active population consisted of 429,915 people (reference group).

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A new study places Denmark in a favourable position to develop its ship recycling industry around circular economy principles

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### **The general outlook for the ship recycling industry in Denmark is promising**

Denmark is one of the countries in northern Europe with the largest capacity and expertise in sustainable scrapping and recycling of ships. A new study, which has examined the possibilities of creating a circular economy in the shipping industry, shows that this provides good conditions for becoming a leader in the field.

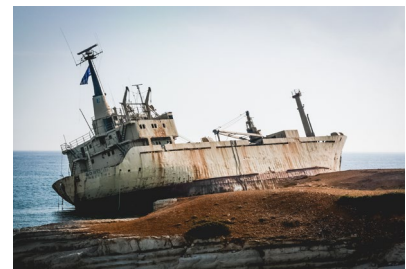


Photo: Milan Seitler on Unsplash

On 21 September, the closing conference for the project 'Creating Circular Economy Clusters for Sustainable Ship Recycling in Denmark' was held at Copenhagen Business School. Here, Eva Roth from the University of Southern Denmark and Henrik Sornn-Friese, head of CBS Maritime, presented the main points of the feasibility study, which they carried out together with Petar Sofev from Copenhagen Business School and the consultants Frank Stuer-Lauridsen from Litehauz and Bent Lange from Marloc - with financial support from the Danish Maritime Fund.

The study found that the structure and capabilities of the ports, yards and maritime industry places Denmark in a favourable position to develop its ship recycling industry around circular economy principles, but that significant barriers must be overcome both in terms of location and

public acceptance as well as market strategies and price formation. In addition, for ship recycling in Denmark to become truly circular, there must be a closer coordination between ports, yards and maritime suppliers where business models are developed around a lifecycle perspective on ships.

[Read more about the project \(only in Danish\)](#)

[Read the final report](#)

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The SEEDS project is coming to an end

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### **A final report and research article are being prepared**

The health promotion and research project [SEEDS](#) is coming to an end. The project began in February 2020 and has been concluded November 2021, delayed due to Covid-19.

The Senior researchers Hanna B. Rasmussen and Lisa L. Froholdt have been the main contributors to this research project, taking part in 4 sea passages in the North Sea. CMSS researchers have delivered onsite and online workshops in relation to health and well-being and given coaching sessions out onboard an ESVAGT ship for the ESVAGT crew and the crew from the Triton Knoll Offshore Wind Farm Limited, a company owned by Innogy Renewables UK.

During the whole study, they have also gathered data for their research, including interviews and questionnaires. They are currently writing their final report and a research article to publish their results.

The Seeds project has gained publicity in various Danish media:

Esbjerg Ugeavisen: [De samarbejder om sundhed og trivsel til søs](#)

KomEsbjerg.dk: [Samarbejde om sundhed og velfærd offshore!](#)

ESVAGT: [ESVAGT, Triton Knoll og SDU samarbejder om sundhed og velfærd i offshore vindpark](#)

## Seminar on training of young people in basic maritime safety

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### **The second seminar in International Network about the Polar Code and Maritime Safety**

On 9 November, a seminar entitled 'Train young people in basic maritime safety securing survival of persons in distress at the Arctic Ocean' was held. Pipaluk Lykke, project manager for the Greenlandic project NorSafe, was the main speaker at the seminar, and she spoke about the NorSafe project's vision, mission and key tasks, which are to train young people in basic maritime safety and thus securing the survival of people in distress at sea in Greenland. The seminar was held as a hybrid meeting, where the physical participation in Nuuk was combined with online participation.

The seminar was organized by partners from the network project 'The Polar Code and Maritime Safety: International Network on Emergency Preparedness and Occupational Health and Safety in Arctic Shipping' (the Polar Code Network Project) in collaboration with Science Week in Greenland. The network project is funded by the Danish Agency for Higher Education and Science, and it is coordinated by Dewan Ahsan from the Department of Sociology, Environmental and Business Economics (SEBE) and Hanna B. Rasmussen from the Centre of Maritime Health and Society (CMSS), both from the University of Southern Denmark. The other partners are from Aalborg University (CIRCLA), the Finnish Institute of Occupational Health, University of Greenland, the Norwegian University of Science and Technology (NTNU) and Tyumen State University, Russia.

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## Advisory Board meeting

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The annual advisory board meeting took place in the new SDU premises on Degnevej in September. Some of the latest research results were disseminated and ongoing activities at the Centre were presented. There were good discussions during the meeting, and the Board was positive about the many new activities and accomplishments made at CMSS.

CMSS' advisory board consists of six members from the private and public part of the maritime industry. The group also includes the Head of Research at CMSS and the Head of Department at IST. The aim of the advisory board is to interact with and guide the management of CMSS in relation to the Centre's vision and strategy as well as contribute with good advice to the development of its research and collaboration with both the Blue Denmark and the international maritime industry in relation to health and safety.

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## Publications

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### **A selection of recently published scientific articles, books/book chapters/book contributions, reports and policy papers from CMSS (sorted according to title)**

- Acute occupational phosphine intoxications in the maritime shipping sector: a scoping review. / Van de Sijpe, Petra; Canals, Maria Luisa; Jensen, Olaf; Lucas, David.  
In: Archives of Environmental and Occupational Health, 16.10.2021.
- Allocation of research resources for commercially valuable invasions: Norway's red king crab fishery. / Kourantidou, Melina; Kaiser, Brooks A.  
In: Fisheries Research, Vol. 237, 105871, 05.2021.
- Analysis of the implementation of the International Safety Management Code using motivation theory: the seafarer's views. / Mbong, Tem Suzie Solange; Bygvraa, Despena Andrioti.  
In: international Maritime Health, Vol. 72, No. 3, 29.09.2021, p. 172-178.
- Associations of age, occupation and nationality of seafarers with risk of evacuations at sea: A register-based study on Danish-flagged merchant ships. / Herttua, Kimmo; Vork, Jan; Nielsen, Jesper Bo.  
In: Marine Policy, Vol. 130, 103989, 08.2021.
- Beyond Wind: New Challenges to the Expansion of Renewables in Denmark. / Boscán, Luis; Kaiser, Brooks A.; Ravn-Jonsen, Lars.

New Challenges and Solutions for Renewable Energy: Japan, East Asia and Northern Europe. ed. / Paul Midford; Espen Moe. Palgrave Macmillan, 2021. p. 319-348 (International Political Economy Series).

- Capacity-building and training programme on combating maritime corruption. 2021. / Froholdt, Lisa Loloma; Fakhry, Aref. 20/09/2021 | Conference paper, SOURCE-WORK-ID: bba0c894-6d03-4729-ba18-6d0f5bffa177
- Community-based fisheries organisations and sustainable development: Lessons learned from a comparison between European and Asian countries. / García-Lorenzo, Iria, Ahsan, Dewan, & Varela-Lafuente, Manuel.  
In: Marine Policy, Vol. 132, 104672, 10.2021.
- Creating circular economy clusters for sustainable ship recycling in Denmark. / Sornn-Friese, H., Roth, E., Sofev, P., Kaiser, B., Sinding, K., Vagsheyg, H., Eikås, A., Høivik, H., Langhorst, K., Larsen, F. T., Olsen, T., Paulsen, M. D., Lange, B., Lauridsen, F. S. (2021).
- Energy Efficiency in Ship Operations: Exploring Voyage Decisions and Decision-makers. / Poulsen, RenéTaudal; Viktorelius, Martin; Varvne Hanna; Rasmussen, Hanna Barbara; von Knorring, Hannes.  
In: Transportation Research Part D: Transport and Environment, Vol. 102, 103120, 01.2022.
- Facilitators and barriers to implementing occupational safety interventions in the fishing industry: A scoping review. / Siame, Sheila; Andrioti Bygvraa, Despena; Jensen, Olaf Chresten.  
In: Safety Science, Vol. 145, 105512, 01.2022.
- Global ecological and economic connections in Arctic and sub-Arctic crab markets. / Kaiser, Brooks A.; Kourantidou, Melina; Ahsan, Dewan; Bakanev, S.; Burmeister, A.; Eckert, G.; Fernandez, L.M.; Hong, H.P.; Monsalve, A.A.; MULLOWNEY, D.; Nøstvold, B.H.; Park, H.; Poulsen, E.; Ravn-Jonsen, L.; Siddon, C.; Sundet, J.H.; Tokunaga, Kanae; Yamamoto, Masashi.  
In: Marine Policy, Vol. 127, 104442, 05.2021.
- Global overview of dietary outcomes and dietary intake assessment methods in maritime settings: a systematic review. / Baygi, Fereshteh; Mohammadi-Nasrabadi, Fatemeh; Zyriax,



Birgit-Christiane; Jensen, Olaf Chresten; Bygvraa, Despina Andrioti; Oldenburg, Marcus; Nielsen, Jesper Bo.

In: BMC Public Health, Vol. 21, 1579, 21.08.2021.

- Norwegian textbook 8.6.6 Maritime Occupational Health (OH) practitioners: Purpose and tasks, Skills and competency. / Jensen, Olaf Chresten.  
Norwegian Textbook of Maritime Medicine. 2021.
- Recruiting and Managing Labour for the Global Shipping Industry in China. / Zhao, Zhiwei.  
The World of the Seafarer: Qualitative Accounts of Working in the Global Shipping Industry.  
red. / Victor Oyaro Gekara; Helen Sampson. Springer, 2021. p. 23-35 (WMU Studies in  
Maritime Affairs, Vol. 9).
- Risk of major chronic diseases in transport, rescue and security industries: a longitudinal  
register-based study. / Herttua, Kimmo; Juel Ahrenfeldt, Linda; Paljarvi, Tapio.  
In: Journal of Occupational and Environmental Medicine, 30.08.2021.
- The safety programme as a tool of improvement for safety culture in the workplace: An  
exploratory follow-up study from the Danish offshore oil and gas sector. / Rasmussen, Hanna  
Barbara; Ahsan, Dewan.  
In: International Journal of Occupational Safety and Ergonomics, 03.11.2021.
- Work-related musculoskeletal disorders among occupational fishermen: a systematic  
literature review. / Nørgaard Remmen, Line; Fromsejer Heiberg, Regina; Høytrup Christiansen,  
David; Herttua, Kimmo; Berg-Beckhoff, Gabriele.  
In: Occupational and Environmental Medicine, Vol. 78, No. 7, 14.06.2021, p. 522-529.

You can find more CMSS publications and bibliographic details by clicking [here](#).