

## **Annex R – Primary FSA Team Description**

### **The Danish Institute of Fire and Security Technology (DBI)**

#### **Anders Viborg Kristensen**

Anders Viborg Kristensen's professional background consists of 10 years sailing as officer and licensed master mariner on board Danish flagged container vessels, responsible for loading and discharge operation, ensuring correct stowage general cargos and in particular dangerous goods. Following Anders' career at sea, he served 10 years as an advisor and special advisor in the Danish Maritime Authority, where he was in charge of negotiating international regulation as Head of the Danish Delegation in several subcommittees within IMO and EU. Anders is currently working as a project manager at the Danish Institute of Fire and Security Technology (DBI) and is heading the CARGOSAFE Safety Study for EMSA, investigating cost efficient measures for reducing the risk from cargo fires on container vessels.

#### **Konrad Wilkens**

Konrad Wilkens, Ph.D., has an educational background in Fire Safety Engineering and product design/mechanical engineering. He is proficient in both experimental fire behavior research both small and large scale, and numerical simulation with experience in own tool development and a number of modeling programs such as CAD, FDS + EVAC (egress modelling software) and Zone Modelling Software (i.e., CFAST and BRANZ Fire). His Masters dissertation concerned Evaluation and Validation of Visibility Parameters within Fire Dynamics Simulator, and PhD on material fire behavior. He was hired by DBI in 2013 as part of the Fire Tools project and in conjunction with his PhD. Following the end of the project in 2016 he was hired as a Project manager and Research Scientist within the Advanced Services division of DBI. His current research focuses on the fire behavior of materials and advanced performance-based fire engineering. Konrad has been involved in a number of research and commercial projects within the maritime industry, working on topics from risks of li-ion batteries, container fire safety, FRP composites and development of detection and suppression technology for specific maritime applications.

#### **Aqqalu Ruge**

Aqqalu Ruge holds a MSc in Tecno-anthropology from the University of Aalborg and a BSc in cultural and social anthropology from the University of Copenhagen. He has worked at DBI since 2018, first as a research consultant and subsequently as a project manager. He is Head of development of Department of Energy and Transport's risk services – with a focus on merging social sciences with engineering methodologies and tools, into transdisciplinary fire risk assessments. He has been the human factors responsible specialist in numerous commercial and research-based risk assessments, both within the maritime-, renewable energy-, P2X-, and offshore-industries. He has worked as the main human factors responsible on the CARGOSAFE study and also works as the safety lead on the Offshore Hydrogen Wind Turbine and scoping and negotiating multi-million-Euro fire safety projects in South East Asia.

#### **Lorena Cifuentes**

Lorena Cifuentes completed her education as a Chemical Engineer (Universidad Industrial de Santander, Colombia) in 2017. Then she joined as a researcher at Texas A&M University, US. First, as part of the Thermodynamics Research group team, and later as an associate of the Mary Kay O'Connor Process Safety Center. She investigated the industrial application of passive fire protection systems on offshore platforms. In addition, she was compiling and analyzing data from metal dust explosion incidents. After graduating from the International Master of Science in Fire Safety Engineering program (Ghent University, Lund University, and the University of Edinburgh) in 2021, she joined the Dansk Brand- og sikringsteknisk Institut as part of the graduate program. Currently, she is part of the Energy and Transport department, performing tasks related to risk assessment.

**Thushadh Wijsekere**

Thushadh Wijsekere has been working at DBI since 2021 as a research consultant in the energy and transport group. He has a bachelor's degree in chemical and process engineering from university of Moratuwa, Sri Lanka and a master's degree in fire safety engineering from Ghent University, Belgium and Lund University, Sweden. He is mostly involved in modelling and simulations of fire for research and commercial projects. He has also been involved in experimental studies related to green fuels such as methanol, hydrogen and ammonia while working at DBI.

**Chunyang Dong**

Chunyang Dong holds a general engineering degree from Henan Polytechnic University (HPU), specializing in process industry risk assessment, and a master's degree in safety engineering from China University of Mining and Technology Beijing. He specializes in hazard identification, risk modeling, risk analysis and risk assessment. He has been working as a research consultant at the Danish Institute of Fire and Safety Technology since 2022 and is currently involved in the Maritime Fire Safety Project and the Electric Vehicle Fire Safety Project.

**Sean Meehan**

Sean Meehan graduated with a bachelor's degree in fire protection & safety engineering technology from Eastern Kentucky University in 2017 when he started working at Janus Fire Systems as an R&D Engineer. There he worked with designing, testing, and manufacturing special hazard active fire protection systems. Sean continued working at Janus until 2020 when he earned an Erasmus+ scholarship to attend the international Master of Science in fire safety engineering program hosted at Ghent University, Lund University, and University of Edinburgh. Currently, Sean has been accepted into the graduate program DBI where his work has contributed to the ELBAS and Cargosafe projects.

**Bureau Veritas Marine & Offshore (BV)****Antoine Breuillard**

Antoine Breuillard has been working as a risk research engineer in the Marine Research Department from July 2006 to December 2013. He is now Head of Energy & Safety Modelling section in Bureau Veritas Marine & Offshore Energy and Technologies Department. Antoine Breuillard holds an engineering degree from the Ecole des Mines de Nancy and he specializes in Fire Risk Analysis and Numerical Simulations of Fire and Evacuation. Prior to joining BV, he worked in the French building industry (at CTICM) investigating the resistance of steel structures subjected to fire. After having performed several R&D studies on the topic, he is now responsible in BV M&O for Formal Safety Assessment and advanced safety studies including SOLAS Fire Safety. Antoine has been highly involved in the EMSA FIRESAFE I study, in particular in the development of the risk models, and in EMSA FIRESAFE II study.

**Antoine Cassez**

Antoine Cassez has been working as a research engineer in the Marine Research Department, since January 2012. He holds an engineering degree from the ISMANS (Institut Supérieur des Matériaux et Mécaniques Avancés du Mans) in Mechanics and a specialized master's degree in Fire Safety Engineering. He is now involved in many research projects and performs advanced safety studies for fire safety as well as Evacuation studies in BV Energy and Technologies Department, Energy & Safety Modelling section. He also participates to the development of new guidelines for fire safety at IMO, especially on life safety performance criteria and on the use of fiber-reinforced plastic materials on board ships. He has been involved in EMSA FIRESAFE II study and is currently working on EU LASHFIRE project.

**Leon Lewandowski**

Léon Lewandowski holds a general engineering degree from ENSAM (Ecole Nationale Supérieure d'Arts et Métiers) and a master's degree in fluid mechanics from Sorbonne University. He has been working as a research engineer in the Energy & Safety Modelling section of Bureau Veritas Marine & Offshore's Environment & Technologies Department since 2020, where he is currently involved in European project LASH FIRE, aiming to increase fire safety in ships. He also participates to studies on the use of new fuels in the maritime environment, in particular ammonia, as well as fire and gas risk models.

**Blandine Vicard**

Blandine holds an Msc degree from the Ecole Nationale Supérieure des Techniques Avancées and she specialized in naval architecture (2009). She started her career in 2009 as a safety engineer in Bureau Veritas, performing plan approval on new buildings and existing ships. As such, she has been involved into several passenger ship, gas carriers and dangerous cargo ship projects, as well as gas propulsion ship projects. She then worked 4 years in R&D center at Flexifrance flexible pipe manufacturing facility (subsidiary of TechnipFMC). Blandine is currently head of the Ship Systems and Environment Rules section of the Environment & Technologies Department. Her team is in charge of rules development and international rules follow-up on various subjects including fire safety, cargo safety, alternative fuels and carbon capture technologies.

**Research Institutes of Sweden (RISE)****Anna Olofson**

Anna Olofson has a BSc in Fire Protection Engineering and works with ship fire safety in both research projects and customer projects. She has knowledge of SOLAS and other governing regulations regarding fire protection on ships and has in recent years worked extensively with ro-ro vessels and alternative design analyses according to SOLAS II-2/17. She is an action leader of in the RISE-led EU-project LASH FIRE where she studies effects of natural and mechanical ventilation on a fire in ro-ro space. She also coordinates the proposal for a Horizon Europe call on Tackling containership fires. Anna is a project leader in different areas of fire safety, from fire suits to alternative fuel vehicles. Anna also has experience in fire safety on submarines and structural fire protection linked to Swedish Building Regulation Code.

**Roshni Pramanik**

Roshni Pramanik has a Lic. Tech. (Licentiate in Engineering: Teknologie Licentiate Examen) in Risk Management & Societal Safety from the Faculty of Engineering, Lund University (Sweden) and a M.Sc. in Crisis Management from Tata Institute of Social Sciences (Mumbai, India). She is a Risk Research Scientist at RISE Research Institutes of Sweden. She works with holistic risk management and fire safety onboard various types of ships/vessels within the highly interdisciplinary domains of safety, transport, risk, and maritime operations. She is Certified LEAN Six Sigma Black Belt from Chalmers University of Technology (Sweden). She has a multidisciplinary background in Risk Management, Maritime Risk, Quality Assurance in Products & Process and Risk Governance and has published in these scientific domains. In addition to CARGOSAFE, Roshni is currently involved in other EU projects such as the H-2020 EU LASH FIRE as FSA expert, including NFPA's Transport Canada ESS project as a Risk Assessment expert. She has been a core contributor in recently completed EU projects such as STM BALTSAFE, Sea Li-ion and several other client projects with risk focus.

**Stina Andersson**

Stina Andersson has a BSc in Fire Protection Engineering and a MSc in Risk Management and Safety Engineering. She has previous experience with developing fire protection solutions for buildings in accordance with building regulations. Currently working with a risk and cost-effectiveness assessment in line with Formal Safety Assessment procedure within the EU-project LASH FIRE, as well as other projects within the maritime area.

**Joanne Ellis**

Dr. Joanne Ellis has worked in the fields of transport and environmental engineering for over thirty years. Her current focus is on projects in the areas of risk, safety, and environmental assessment of maritime transport, including the use of alternative fuels and dangerous goods transport. She has coordinated several multipartner research projects. Experience with hazard identification and safety assessment includes conducting risk analysis of the fire/explosion cause for the formal safety assessment of container ships submitted to IMO as MSC 83/Inf. 8, carrying out risk analysis for the FSA of dangerous goods transport on opentop container ships (submitted as MSC 87/Inf.2), hazard identification work for methanol and LNG on ships, and a PhD dissertation on safety risks with dangerous goods transportation by sea. In 2020/2021 she participated in a pre-study on reducing undeclared and mis-declared dangerous goods to improve maritime safety.

**Björn E. Forsman**

Björn E. Forsman has more than 30 years of consultancy experience in the field of maritime safety assessment and risk analysis, alternative ship fuels, ship-generated environmental impacts, marine environmental pollution prevention, oil spill preparedness, response, and clean-up. Björn's competences include environmental and safety analyses of alternative ship fuels for ECA and IMO 2020 compliance including hybrid oil, lowflashpoint fuels, and non-fossil fuels. LNG terminal and bunkering safety, waste handling in ports and EIA for port and fairway projects. Björn has expert experience from several QRA and FSA risk assessment projects on alternative ship fuels and wind propulsion, as well as project management and training in alternative marine fuels, pollution prevention and maritime safety management. Björn has conducted many projects for national and international authorities addressing technical, policy and regulative issues. Course manager and lecturer in more than 15 international training programs addressing oil spill management, maritime safety management and waste management in ports. International experience from assignments in Argentina, Singapore, Trinidad and Tobago, Peru, the Philippines, China, Vietnam, Indonesia, Timor-Leste, Cambodia, Mozambique, Namibia, Russian federation, Poland, Latvia and Estonia. Board member of PIANC's Swedish section.

**Franz Evegren**

Franz Evegren has a B.Sc. in Fire Safety Engineering and a M.Sc. in Risk Management and Safety Engineering. He is the Director of the unit Fire Safe Transport at RISE Research Institutes of Sweden, where he also has previous experience as Business Developing Project Leader and as Research Scientist.

In research he has primarily worked with development of risk assessment methods to evaluate maritime fire safety of alternative solutions and new designs, including new materials, fuels and energy carriers. Franz has managed many significant fire-risk assessments (>€150) where the design deviates from prescriptive requirements or to evaluate the risk reduction potential of new safety measures. He is an experienced fire hazard identification workshop moderator and has held several international multi-day courses in risk assessment.

Since the start at RISE in 2010, Franz Evegren has participated in and coordinated several EU and EMSA projects. In the M€30 EU project BESST he carried out engineering analysis in line with SOLAS II-2/17 for a composite design of five decks of a Panamax cruise ship. He also partook in the EMSA projects FIRESAFE (led by RISE) and FIRESAFE II, particularly in moderation of HazId workshops, development

of a risk quantification model and in dissemination of the project results to IMO Flag States. Currently, Franz is the coordinator of the M€15 project LASH FIRE, attempting to develop cost-effective solutions to reduce the fire risk of ro-ro ships, and to transform the project results into SOLAS amendments. He has also participated in several military research projects (e.g., FiST and Convince) and in commercial projects on fire safety assessment of e.g., lightweight structures at sea, evaluation of fire behavior in reduced oxygen environment, and adaptation of extinguishing and detection systems to new materials and fuel sources, such as batteries, methanol, and hydrogen.

### **University of Southern Denmark (SDU)**

#### **Niels Gorm Maly Rytter**

Niels Gorm Maly Rytter is Ph.D., Head of Section for Engineering Operations Management, University of Southern Denmark. He has 13 years of experience working within / with +20 shipping operators, ports, vendors, associations in the DK / European maritime industry. He has over the last decade, been acting as a project leader of several national and EU funded research and innovation projects contributing to the digital and sustainable transformation of the maritime industry. He is experienced in leading cross-disciplinary projects with both industrial innovation and academic deliverables. He is a part time partner in the company LinerGame and works as an advisor and trainer to the industry, particularly the global liner shipping industry.

#### **Nicolai Hinge**

Nicolai Emil Hinge holds a BSc. degree in Manufacturing and Operations Engineering at Aalborg University and a master's degree in Industrial Engineering and Management from the Technical University of Denmark. He has been working as a student assistant and later research assistant at Aalborg University and Southern University of Denmark, on maritime EU projects such as RoRoGreen and Ecoprodigi since 2018. He also co-developed a simulation-based learning game for the RoRo industry, which was presented at the IAME 2022 conference.

### **Odense Maritime Technology (OMT)**

#### **Claus-Bo H. Henriksen**

Claus-Bo Henriksen Holds a degree in mechanical engineering, Energy systems & plants from Helsingør Technical University (now DTU) in 1989. He has + 25 years' experience in the maritime sector having worked in shipyards and ship design and consultancy companies in designing container ships, bulk carriers, off shore vessels and navy ships. He has held various positions as technical manager, project manager and specialist engineer. Since 2013 working with leading ship design company Odense Maritime Technology A/S developing various ship types with main focus on efficient propulsion plants and systems supporting the green transition in the marine industry. In recent years also deeply involved in development of offshore patrol ships and navy ships.