One of SSPA’s strengths is the ability to function as the bridge between theory and practice, research and implementation, present and future.

Joanne Ellis, Sofia Werner, Johannes Höffmeier and Da-Qing Li are all great examples of SSPA being able to put theoretical knowledge into practice regarding some of today’s most discussed topics in the maritime sector: alternative fuels, design indices, regulations and processes, and ice and new routes.

The International Towing Tank Conference 2011

The Conference adopted a number of important decisions for the world community of Towing Tanks, including new specialist committees on Performance of Ships in Service, Ships in Ice, and Hydrodynamic Noise. Additionally, the Conference confirmed the traditional technical committees on resistance, propulsion, maneuvering, seakeeping and others, which constitute the backbone of this 78 year old organization.

The Specialist Committee on Performance of Ships in Service has been tasked with addressing the performance predictions for service conditions, covering the whole life cycle of the ship. This will take into account the EEDI and EEOI, to help understand the technicalities that still need to be solved before the EEDI comes into force.

The Noise Committee has been tasked with digging into identification of noise sources which impact marine life, and to develop relevant guidelines on model and full scale noise measurements.

These actions testify to the ongoing commitment of the ITTC to environmental issues, which are at the moment on top of the IMO agenda. ITTC members, with their unique knowledge in the hydrodynamics field, will bring a decisive contribution to the maritime community by feeding their findings into the IMO process.

My sincere season’s greetings to all of SSPA’s clients, partners, and colleagues in the maritime society. Thank you all for the opportunities given and confidence shown to us as we worked together during 2011.

Susanne Abrahamsson
Our employees – the bridge between present and future

Hydrodynamics, ice and EEDI

Susanne Abrahamsson, CEO at SSPA, represents Northern Europe and is a member of its Advisory Council that, among other things, recommends topics to be studied. In September, at the 26th ITTC (2008-2011), experts were chosen to co-operate for the market good. From SSPA Project Manager Sofia Werner was appointed to the Performance of Ships in Service (incl. Energy Efficiency Design Index) committee, and Johannes Hüfmeier to the Ice committee. Da-Qing Li will continue on the specialist committee on CFD in Marine Hydrodynamics, which was established previously. The committees will work together during the 27th ITTC, which covers the period from 2011 to 2014. Their tasks include establishing procedures and/or guidelines for techniques applicable to commercial practice.

The purpose of the specialist committee on The Performance of Ships in Service is to improve the performance predictions (especially for large ships) for service conditions covering the whole life cycle of the ship, keeping in mind the Energy Efficiency Design Index and Energy Efficiency Operational Index development within IMO. The committee should work directly with the representatives at the IMO to also be able to identify and describe the practical aspects of the EEDI.

Ice and its behaviour is an area where the Nordic countries and Canada have extensive historic knowledge which now has become more and more sought after. New routes, the future of offshore drilling, environmental impacts and drifting ice are among the issues that are discussed. The purpose of the ITTC committee on Ice is to look further into operational conditions in view of climate change and different routes and to determine whether new ice procedures need to be developed.

Transportation, regulations, and fuel

After defending her thesis, Assessing Safety Risks for the Sea Transport Link of a Multimodal Dangerous Goods Transport Chain, on September 16th, Joanne Ellis, Project Manager at SSPA, was granted her well-earned doctoral degree. Congratulations!

While working on the thesis Joanne conducted risk assessments and gained a good understanding of dangerous goods regulation systems and their effects, as well as an appreciation of the complexities of multimodal transport of containerised goods. There are different regulations and practices for the different modes of transportation, although all are based on the model regulations published by the United Nations. For shipping the regulations are international, as shipping is a global industry, with ships potentially visiting many different countries to load and unload goods. Joanne has had the opportunity to be an observer at the IMO sub-committee on dangerous goods and solid cargoes. She has also produced risk analysis material that has been included in Formal Safety Assessments that were submitted to the IMO’s Maritime Safety Committee.

Joanne’s research into the safety risk of the sea transport of containerised goods, including dangerous goods, found that cargo area fires were a significant contributor to overall operational risk. Undeclared dangerous goods were found to be involved in 25 per cent of serious cargo area fires. Shore side factors were found to be important focus areas for risk reduction. The majority of dangerous goods releases on board ships had contributing factors that originated earlier in the transport chain, such as errors introduced during packaging of the goods or during the stuffing of cargo transport units. Thus, activities at the transport chain origin and at transport nodes are important for onboard safety, and good communication between transport chain participants may improve understanding of the importance of these activities for risk reduction.

Experience gained through her thesis work regarding risk assessment and safety has been applicable in other projects, including EffShip (Efficient shipping with low emissions). One of the goals of the project is to investigate present and future maritime fuels from various perspectives, including risk and safety during use and transport. The project has the vision of safe and sustainable transport where environmental impacts are minimised and energy efficiency is maximised.

Helén Jansson

"We are proud of all our employees – they create the foundation for SSPA’s success. With their knowledge and expertise we are able to offer unbiased discussions and a development platform where customers and other stakeholders can achieve sustainable maritime results, implement the latest research results and share insights on what the future may hold."

Susanne Abrahamsson