



Event Details:

Date: Monday, 31st July 2017

Time: 5:30pm

Venue: Auditorium, Ground Floor, [Indian Ocean Marine Research Centre](#), UWA

Parking: P43, [Fairway Entrance 4](#)

Cost: Free of charge

Abstract:

Even though the climate change conference in Paris achieved meaningful results, society still has a long way to go to rid itself of CO₂ emissions. How to accomplish this task? In the long term, problems due to anthropogenic greenhouse gas emissions can only be resolved by restructuring entire social and economic systems to employ closed carbon cycles. Carbon utilization is unavoidable but its net impact on the environment can be minimized through holistic consideration of cyclic processes that offer opportunities to offset emissions. Beyond designing new technologies lies the even broader idea of a closed carbon cycle economy (C3eco). C3eco integrates the technical and social aspects of the long-term transitions from current structures for supplying society with power, fuel, and resources to those based on closed carbon cycles. This leads to a large number of fundamental and application-oriented challenges relating to engineering and natural sciences, whilst raising just as many questions in the fields of humanities and social sciences. C3eco is a vision of an economy that puts only as much carbon into the atmosphere as can be handled naturally.

In 2015 the Closed Carbon Cycle Economy Research Department was founded at Ruhr- University Bochum. Researchers from the fields of engineering, natural sciences, humanities and social sciences collaborate in an interdisciplinary environment. Research networks and collaborations extend throughout Germany including the Max Planck Institute for Chemical Energy Conversion and Coal Research in Mülheim and the Institute of Propulsion Technology at the German Aerospace Center DLR in Cologne,

About Professor Span:



Professor Roland Span studied mechanical engineering at Ruhr- University Bochum (RUB). He completed his PhD in 1992 under the guidance of Professor Wolfgang Wagner with a thesis introducing a new reference equation of state for carbon dioxide. This equation of state has become an internationally accepted thermodynamic property standard for carbon dioxide, which is widely used in process simulations related to air conditioning and refrigeration technology, in natural gas processing and CCS applications. In 2002 he became chair of Thermodynamics and Energy Technologies at University of Paderborn, Germany. In 2006 he moved to RUB, where he is chair of Thermodynamics. Professor Span has published highly cited scientific papers dealing mostly with theoretical and experimental work on thermodynamic properties. In 2014 Professor Span became Dean of the Faculty of Mechanical Engineering at Ruhr-University Bochum. Professor Span is a founding member of C3eco.



The Australian Centre for LNG Futures is an Australian Research Council Industrial Transformation Training Centre. Led by Professor Eric May at UWA the Centre's LNG focused research has funding from the ARC and nine industry partners. The LNG research has a strong industry focus and aims to increase growth, productivity and capabilities in this key Australian industry. lngfutures.edu.au