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Call for Contributions to the Special Session on HVDC Converters and Systems: Modelling, Control, and Stability Analysis

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Thematic: High-Voltage Direct-Current (HVDC) transmission systems, are considered to be the most viable solution for bulk electric power transfer through long distances and offshore wind application. Whether in a point-to-point or multi-terminal configuration, Voltage Source Converter (VSC)-based HVDC systems offer an increased operation flexibility compared to its Line Commutated Converter (LCC) predecessor, as they are able to independently control the active and reactive power, reverse the power flow by changing the current direction, and have lower filtering requirements. Nonetheless, the fast control dynamic and inherently non-linear behavior of HVDC grids introduce complex challenges in terms of ensuring a stable and desired performance. This becomes particularly challenging when the system is based on a multilevel converter topology. To begin to address these issues, efforts are required in terms of adequate modelling of the individual and interconnected elements of the system; i.e., power converters, cables, control structure. Novel control strategy proposals as well as stability and performance analysis can be performed thereafter. The main objective of this special session is to bring the ideas of the worldwide research community into a common platform, to present the latest advances and developments in design, mathematical modeling, control, and stability analysis of HVDC converters and systems. Topics of interest of this session include, but are not limited to:

- HVDC converter modelling for Stability Analysis and Control Design
- Linear and Non-Linear Control Algorithms for HVDC grid converters
- Stability Analysis of HVDC Converters and Systems
- The Modular Multilevel Converters (MMC) Case: modelling, control design and/or stability
- Topology Design and Optimization of HVDC Converters and Systems

Submission: Prospective authors are invited to submit comprehensive abstracts of three A4 pages each, written in English. Abstracts should be sent by e-mail to the special session organizers: gilbert.bergna@ntnu.no , atousa.elahidoost@ntnu.no & elisabetta.tedeschi@ntnu.no

Important Dates:		
	November 25th, 2016	submission of abstracts
	December 23rd, 2016	notification of provisional acceptance
	January 20th, 2017	submission of full papers
	January 31st, 2017	notification of final acceptance