**DECLARATION OF CO-AUTHORSHIP**

Declaration of co-authorship is to be included when a thesis containing papers written by more than one author must include this signed declaration that describes the contribution of the candidate and the co-authors of each of the papers. It must be possible to identify the candidate's independent contribution in the work.   
*(cf. the PhD regulations section 10 or dr.philos regulations section 3).*

**Name of candidate: Jon Vegard Venås**

**Title of dissertation: Acoustic Scattering in an Isogeometric Framework**

**Publication:**

J.V. Venås, T. Kvamsdal “Isogeometric boundary element method for acoustic scattering by a

submarine”, submitted to *Computer Methods in Applied Mechanics and Engineering* (2019)

**Description of the Candidate’s contribution:**

The article is the original work of the candidate. All the underlying software and the numerical results are generated by the candidate. Kvamsdal has been active in the planning of the general content and discussions related to the development of the numerical methods and the numerical studies. The article is written by Venås and revised by Kvamsdal.

**Statement by the co-author:**

I hereby confirm that the doctoral candidate’s described contribution to this paper is correct, and I consent to including the paper in the named dissertation.

Trondheim, 27.09.2019

Trond Kvamsdal