

## Horizon 2020 Marie Skłodowska-Curie Actions Individual Fellowships Call – Expression of Interest

<b>Organisation Details</b>	<i>Swirl Generators Ltd c/o School of Engineering, TCD, Ireland Website</i>	
<b>Organisation Type</b>	<input type="checkbox"/> Academic <input type="checkbox"/> Large Enterprise <input checked="" type="checkbox"/> SME <input type="checkbox"/> Public Research Organisation	<input type="checkbox"/> Public Body <input type="checkbox"/> NGO <input type="checkbox"/> Non-Profit <input checked="" type="checkbox"/> Other <u>TCD campus company</u>
<b>Research Field(s)</b>	<input type="checkbox"/> Chemistry CHE <input type="checkbox"/> Social and Human Sciences SOC <input type="checkbox"/> Economic Sciences ECO <input checked="" type="checkbox"/> Information Science and Engineering ENG <input type="checkbox"/> Environment and Geosciences ENV <input type="checkbox"/> Life Sciences LIF <input checked="" type="checkbox"/> Mathematics MAT <input checked="" type="checkbox"/> Physics PHY	<b>Keywords:</b>  <b>Wave energy</b>  <b>CFD, SPH</b>  <b>Hydrodynamics</b>
<b>Short Description of the Organisation and the Faculty/Dept./School/Centre</b>	<i>Swirl Generators Ltd is engaged in the R&amp;D of a heaving buoy point absorber (World patents), building on 20 years' experience of wave energy conversion. Numerical models, BEM computations, and simulations have been validated by tank tests at various scales, and complemented by hybrid systems testing of the PTO. The company is linked to the School of Engineering TCD, is based on Campus, and has ties with universities in Aalborg, Nantes, Santander and Lisbon.</i>	
<b>Short Description of the Research Project/Topic</b>	<i>Two possible research topics are suggested:</i> <ul style="list-style-type: none"> <li>– <i>CFD or smoothed particle hydrodynamics modelling of a heaving buoy point absorber.</i></li> <li>– <i>Optimising wave energy absorption using a simulation tool in MATLAB/SIMULINK and open-source solver SimMechanics.</i></li> </ul>	

<b>Expertise required by the applicant</b>	<ul style="list-style-type: none"> <li>– <i>Hydrodynamic modelling.</i></li> <li>– <i>Non-linear aero-thermodynamics.</i></li> <li>– <i>Hydrodynamic performance of oscillating water column wave energy converters.</i></li> </ul>
<b>Career development support offered to fellows</b>	<i>Swirl Generators is a campus company, linked to the <a href="#">School of Engineering, TCD</a>. The researcher would have excellent access to, and be expected to liaise with, parallel R&amp;D in the university. There will be opportunity to attend conferences, and to present papers for peer-reviewed publication.</i>
<b>Application procedure</b>	<i>Email with a summary CV including a list of relevant publications and/or an outline of recent research projects.</i>
<b>Contact Person</b>	<i>William Dick <a href="mailto:dickw@tcd.ie">dickw@tcd.ie</a></i>

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