


## INTERNSHIP OFFER

Ref : 2021-RI-IML-MRWorlds-1

Please apply via email to [matthieu.fradet@interdigital.com](mailto:matthieu.fradet@interdigital.com) by sending resume and cover letter.

 <p style="font-size: small; margin-top: 5px;">Image by Alice L via Unsplash Copyright-free</p>	<p><b>Use of LiDAR to help light source estimation for better AR experiences</b></p> <p>With Apple integrating a new LiDAR sensor to the rear camera assembly of the iPad Pro first, then of the iPhone 12 Pro line, a new step towards revolutionary augmented reality applications is possible. The combination of the depth information provided from the LiDAR scanner with RGB camera and motion sensor data, processed with deep learning and computer vision algorithms, helps your apps to scan and analyze your surroundings to better understand your physical environment.</p> <p>The objective of this internship will be to explore how we can take advantage of this new miniaturized AR hardware to implement the next version of an existing in-house light source estimation solution. We will study relevant LiDAR-based scanning and modelling solutions and see how some surfaces of particular interest to our problem can be detected and extracted to better serve our solution.</p> <p>You will be working with a team of Mixed Reality experts, in the Immersive Lab located in Rennes, FRANCE.</p> <p><u>Qualifications:</u> Graduate student (M.Sc. or Ph.D.) in Computer Engineering, Computer Science, Software Engineering, or related fields.</p> <p><u>Knowledge in one or more of the following:</u> 3D geometry, deep learning, computer vision, image/video processing. Unity, iOS, ARKit, C#, C/C++, python. Fluent English. Excellent written and verbal communication skills. Strong team player.</p> <p><u>Keywords:</u> LiDAR, 3D modelling, scene analysis, light source estimation, Augmented and Mixed Reality.</p>
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**About InterDigital**

InterDigital develops mobile and video technologies that are at the core of devices, networks, and services worldwide. We solve many of the industry's most critical and complex technical challenges, inventing solutions for more efficient broadband networks, better video delivery, and richer multimedia experiences years ahead of market deployment. InterDigital has licenses and strategic relationships with many of the world's leading technology companies. Founded in 1972, InterDigital is listed on NASDAQ and is included in the S&P MidCap 400® index.