




## Interactive Digital Parametric Patterns

*Rhino and Grasshopper 3D*

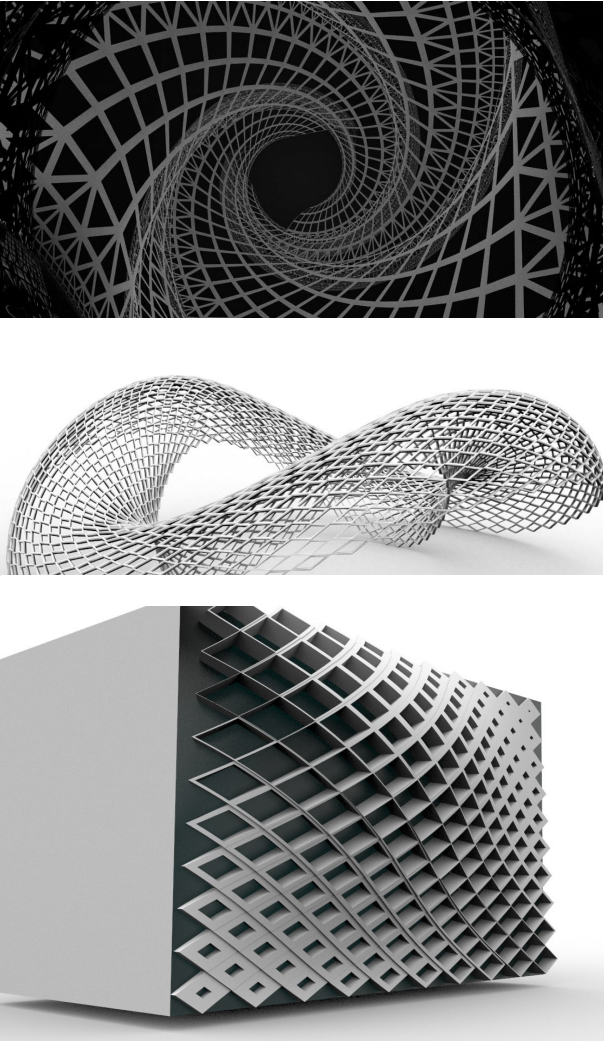
### 1. Workshop Instructor Information

<b>Name</b>	Fatima Yahya Belok
<b>Organization/Affiliation</b>	Beirut Arab University BAU/Assistant professor at faculty of Architecture-Design & Built Environment
<b>Email</b>	F.belok@bau.edu.lb
<b>Short Biography (150 words max.)</b>	Architect, PhD Holder, and assistant professor at Beirut Arab University, faculty of Architecture-Design & Built Environment, Tripoli, Lebanon. Assistant in Parametric workshop at Sapienza University of Rome, in 2016. Organized for now 9 international workshops in cooperation with CCPE at BAU. Workshops 'subject was about parametric architecture using Rhino and Grasshopper 3D. Co-founder of the winning project (Hope in Sand and Pipes) in innovate for refugees' competition (IFR) launched by MIT Enterprise Forum Pan Arab.
<b>Head Shot</b>	



## 2. Workshop Information

<b>Length</b>	4 hours Date: Monday October 10, 2022
<b>Short Abstract</b> (250 words max.)	<p>The workshop main goal is learning how to design interactive digital parametric pattern. It is about designing different patterns on shadings or facades that could interact with sounds as an external factor assigned by the designer.</p> <p>The programs used will be Rhino 6 or 7 and Grasshopper 3D. In this online workshop we will work together and applied some examples on various surfaces, shading and facades for different patterns using Lunchbox, Weaverbird and Firefly.</p> <p>At the end of the workshop’s participants will take a time to design their own interactive patterns on any shape such as building, facades, furniture or shading.</p> <p>Participants will learn how to put a sound using firefly and will discover how the patterns will change based on the sound frequency. Thus, this workshop is important to improve participants skills that have basic knowledge in Rhino, Grasshopper 3D and various plugins.</p>
<b>Handouts and Materials</b>	<p>The workshop will be online, using Zoom platform or MS Teams. The programs used will be Rhino 6 or 7 and Grasshopper 3D. The needed plugins are Kangaroo, Firefly, Weaverbird and Lunchbox. Participants should install the program and plugins before the workshop.</p> <ul style="list-style-type: none"> <li>• Rhino 7 could be installed from this link as a trial for 90 days: <a href="https://www.rhino3d.com/download/">https://www.rhino3d.com/download/</a> Kindly click on “<b>Rhino 7 for Windows - One-Time Evaluation</b>”</li> <li>• Plugins (Lunchbox, Firefly, Kangaroo) should be installed from the following link: <a href="https://www.food4rhino.com/en">https://www.food4rhino.com/en</a> (Note that if you install Rhino 7, you will find automatically Kangaroo plugin in Grasshopper 3D)</li> <li>• Weaverbird plug in should be installed from the following link: <a href="https://www.giuliopiacentino.com/weaverbird/">https://www.giuliopiacentino.com/weaverbird/</a></li> </ul> <p>Note that participants should have basic knowledge in Rhino and Grasshopper 3D</p>
<b>Learning Objectives</b>	<p>The main objectives of this workshop are the following:</p> <ul style="list-style-type: none"> <li>• Designing interactive patterns</li> <li>• Assigning sound into grasshopper 3D, as an external factor</li> <li>• Improving grasshopper 3D skills</li> <li>• Discovering new plugins</li> <li>• Introducing firefly plugin</li> </ul>

<p><b>Sample Outcome</b></p>	
<p><b>Corresponding Conference Theme</b></p>	<p><b>(C) Parametric Design and Digital Fabrication.</b></p>

### 3. Attendees Information

<p><b>Who should attend this workshop?</b></p>	<p>Students in field of architecture or interior design and architects.</p>
<p><b>Prerequisites</b></p>	<p>Participants should have basic knowledge in Rhino and Grasshopper 3D</p>