



# UNIVERSITY OF WESTERN MACEDONIA

Tuesday, March 19, 6:00 p.m.

## **Invited lecture by Prof. Adrian Bejan (Duke University) Title: Freedom and Evolution**

### **Brief presenter bio**

Professor Adrian Bejan is an internationally celebrated academic who has been the recipient of many prestigious international awards, e.g., the Benjamin Franklin Medal 2018 and the Humboldt Research Award 2019. All his degrees are from MIT. His research covers engineering science and applied physics: thermodynamics, heat transfer, convection, design, and evolution in nature. He is ranked among the top 0.01% of the most cited and impactful world scientists (and top 10 in Engineering worldwide). He is the author of 30 books and 700 peer-referred articles. His h-index is 111 with 92,000 citations on Google Scholar. He received 18 honorary doctorates from universities in 11 countries. Professor Bejan has had an indelible impact across multiple academic fields due to his clarifying ideas on a wide range of topics: life and evolution as physics, design in nature, constructal law, entropy generation minimization, scale analysis, heatlines, and many more.

### **Brief summary of the lecture**

Professor Adrian Bejan's lecture will explore familiar designs found all around and inside us (such as the 'trees' of river basins, human lungs, blood and city traffic). All flow systems are driven by power from natural engines everywhere and are endlessly shaped because of freedom. People, like everything else that moves on earth, are driven by power derived from our "engines" that consume fuel, food, and solar heating. Movement dissipates the power completely and changes its configuration constantly for greater access, economies of scale, efficiency, innovation and life. These ideas are captured in Professor Bejan's 2020 book, *Freedom and Evolution: Hierarchy in Nature, Society and Science*. His lecture will provide both reflections and updates on these far-reaching ideas.

### **Further information**

The invited lecture is offered under the auspices of the Masters program "Hydrogen: Science & Technology" and is available for the students of the Engineering School and for the public. The lecture will be broadcasted online through Zoom and will be shown live in the amphitheater ΑΠ3-8 in the Engineering Campus. The interested audience can watch the lecture online through the following link: <https://zoom.us/my/uowm.mpx>

<https://zoom.us/my/uowm.mpx>