

Research and development activity at the ENSAM  
engineering school



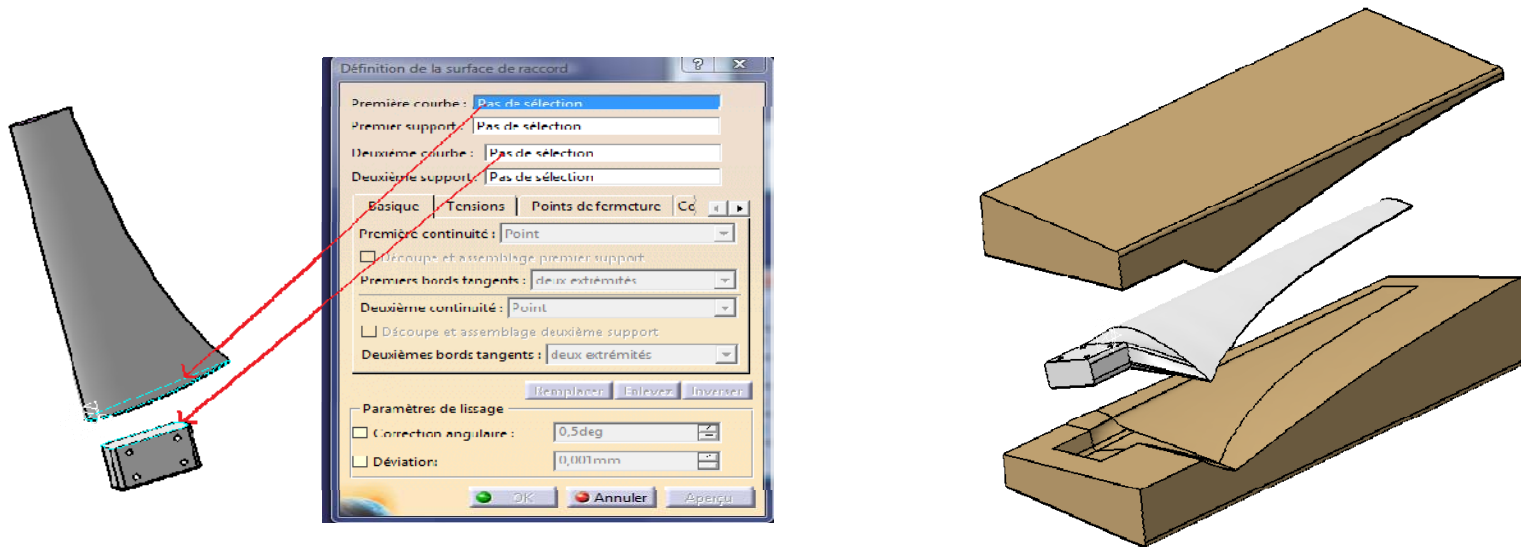
**Abdelaziz ARBAOUI**

**SfP Project Co-Director**

**Département Génie Mécanique et Structures  
Ecole Nationale Supérieure d'Arts et Métiers (ENSAM)**

# Research and development activity at the ENSAM engineering school

## 1- Design of the blade and the associated mold using the software CATIA



## 2- Development of a simple method for manufacturing the mold using wood



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## 3- Make drawing and assembly of all component of the Unitron 650 W wind turbine using the software CATIA

The image displays a technical drawing of a wind turbine assembly, including a 3D perspective view of the turbine and several 2D cross-sectional views. The drawing is annotated with numbered callouts (1-32) corresponding to the parts list. The parts list is as follows:

N°	Désignation	Quantité	Unité
1	Moteur		
2	Boîte		
3	Support		
4	Vue GNC M6x16		
5	Plaque		
6	Support		
7	Vis M 8x16		
8	Vis GNC M6 x 40		
9	Vis M 8x16		
10	Vis M 8x16		
11	Vis M 8x16		
12	Vis M 8x16		
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29	Vis M 8x16		
30	Vis M 8x16		
31	Vis M 8x16		
32	Vis M 8x16		

Section A-A  
Sch : 1:2  
Sans la pièce 1 et 2

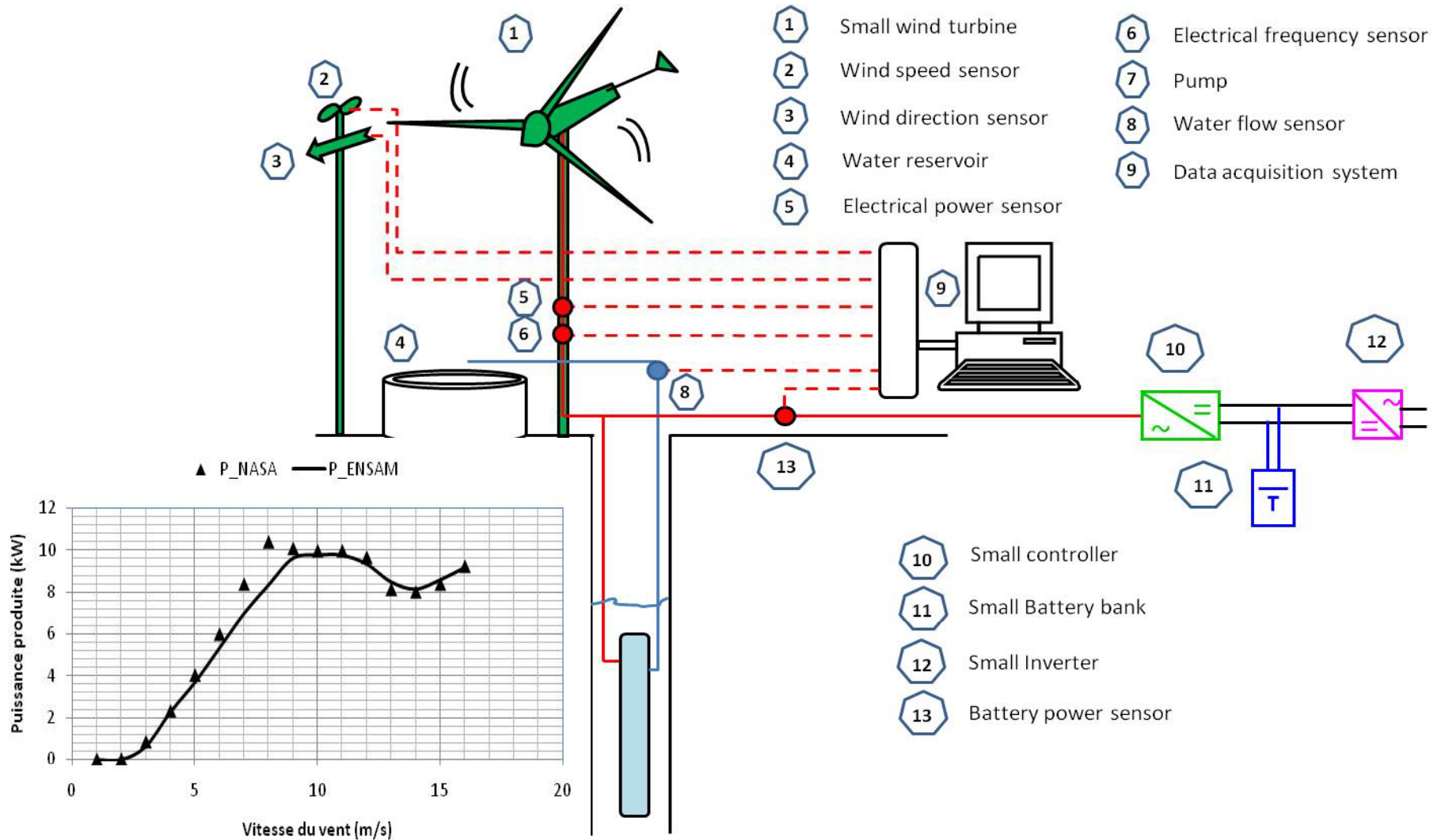
Coupe B-B  
Sch: 1:2

Détail C  
Sch : 1:1

Eolienne  
LP-30MAD-2011  
1:4 KEX 001 1/1

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## 4- Define and molding the test bench using the software GAMS





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5- Define the installation site ★



6- We are now working on the foundation in order to install the test bench