

2018 3D Printed Aircraft Competition Design Report

[Maximum 4000 words]

1.0 Team Information

Team Name

University Name

Corresponding Team Member Contact information

Email

Telephone

Address

List all team members and individual contribution from each one

2.0 Aircraft Design

2.1 Configuration

Aircraft 3-view and Iso-view

Sizing/dimensions and geometric parameters

Aircraft design approach and methods

General characteristics

2.2 Aerodynamics

Design, methods, and analysis

2.3 Stability and Control

Design, methods, and analysis

2.4 Propulsion/power [if applicable]

Design, methods, and analysis

2.5 Systems and Electronics [if applicable]

Design, methods, and analysis

2.6 Structures

Materials, weights, c.g., characteristics

Design, methods, and analysis

Lightweight structures techniques

Structural configuration/layout

3D printing considerations

3.0 3D Printing

Process(es) and technology(ies) used

Process constraints

Process capability design advantages

Print challenges due to design

Design challenges due to process constraints

Clear Image(s) of 3D printed aircraft showing successful build

4.0 Innovation, Lessons Learned, and Observations

What is innovative about this design/3D print solution?

What novel design processes were employed?

Where any new/newer manufacturing processes employed?

What lessons did you learn?

What observations can you make about designing 3D printed aircraft?