

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.1. Composite layup of an MFC. Source: Analytical development of single crystal Macro Fiber Composite actuators for active twist rotor blades. DOI: 10.1088/0964-1726/14/4/033. July 2004, p.746

Report generated on: 05-11-2017 at : 11:29:22

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.2. MFC with host material deflection modes. Source: Smart Material - Home of the MFC. URL: <http://www.smart-material.com/MFC-product-main.html>.

Report generated on: 05-11-2017 at : 11:32:33

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.3. MFC bending bimorph example. Source: Piezoelectric Morphing versus Servo-Actuated MAV Control Surfaces, Part II: Flight Testing. Conference: 51st AIAA Aerospace Sciences Meeting including the New Horizons Forum and Aerospace Exposition. January 2013, p.3

Report generated on: 05-11-2017 at : 11:37:22

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.4. Description of sideslip. Source: Introduction to Aerospace Engineering Lecture 9 Stability and Control. Virginia Tech. October 2008, p.14

Report generated on: 05-11-2017 at : 11:40:22

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.5. Description of adverse yaw. Source: Introduction to Aerospace Engineering Lecture 9 Stability and Control. Virginia Tech. October 2008, p.13

Report generated on: 05-11-2017 at : 11:41:33

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.6. Wing loading for maximum lift (1920) and minimum induced drag (1933). Source: On Wings of the Minimum Induced Drag: Spanload Implications for Aircraft and Birds. Publisher: NASA. March 2016, p.2

Report generated on: 05-11-2017 at : 11:44:00

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.7. Proverse yaw with bell shaped spanloading. Source: On Wings of the Minimum Induced Drag: Spanload Implications for Aircraft and Birds. Publisher: NASA. March 2016, p.4

Report generated on: 05-11-2017 at : 11:45:19

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.8. Left: smart wing, Right: Finite Element Analysis model. Source: Smart flapping wing using Macro-Fiber Composite actuators. Publisher: Smart Structures and Materials 2006: Smart Structures and Integrated Systems. DOI: 10.1117/12.658117. p.4

Report generated on: 05-11-2017 at : 11:50:07

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.9. Flapping wing camber lines based on input voltage. Source: Experimental Investigation on the Aerodynamic Characteristics of a Biomimetic Flapping Wing with Macro-Fiber Composites. Publisher: Journal of intelligent material systems and structures. DOI: 10.1177/1045389X07083618. 2008 p.4

Report generated on: 05-11-2017 at : 11:52:54

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.10. Rotor blade configuration. Source: Analytical development of single crystal Macro Fiber Composite actuators for active twist rotor blades. Publisher: Smart Materials and Structures. DOI: 10.1088/0964-1726/14/4/033. July 2005, p.752

Report generated on: 05-16-2017 at : 23:51:19

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.11. Twist distribution across span for applied 400V. Source: Analytical development of single crystal Macro Fiber Composite actuators for active twist rotor blades. Publisher: Smart Materials and Structures. DOI: 10.1088/0964-1726/14/4/033. July 2005, p.753

Report generated on: 05-16-2017 at : 23:52:42

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 2.12. Wing tip feathers of a Harris' Hawk. Source: A Review on Aerodynamics of Non-flapping Bird Wings. Publisher: J. Aerospace Technology Management. DOI: 10.5028/jatm.v8i1.564. Jan/Mar 2016, p.12

Report generated on: 05-16-2017 at : 23:57:53

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 3.2. Bending tip deflection as a function of host material thickness. Source: Macro Fiber Composite Actuated Unmanned Air Vehicles:

Design, Development, and Testing. Publisher: Virginia Tech Thesis. May 2007, p.26

Report generated on: 05-17-2017 at : 00:01:32

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 4.8. Voltages provided to the MFC bimorph by the Avid board. Source: Dual Channel MFC Bimorph High-Voltage Driver Technical

Datasheet. Publisher: AVID LLC. December 2012, p.5

Report generated on: 05-17-2017 at : 00:03:43

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*

Name: Samuel Rubenking

Description of item under review for fair use: Figure 4.10. The hysteresis effect experienced by MFC actuators sweeping from 0% 100% -100% 100% 0%. Source: Design, Simulation, and Wind Tunnel Verification of a Morphing Airfoil. Publisher: Virginia Tech Thesis. May 2011, p.42

Report generated on: 05-17-2017 at : 00:07:10

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use*