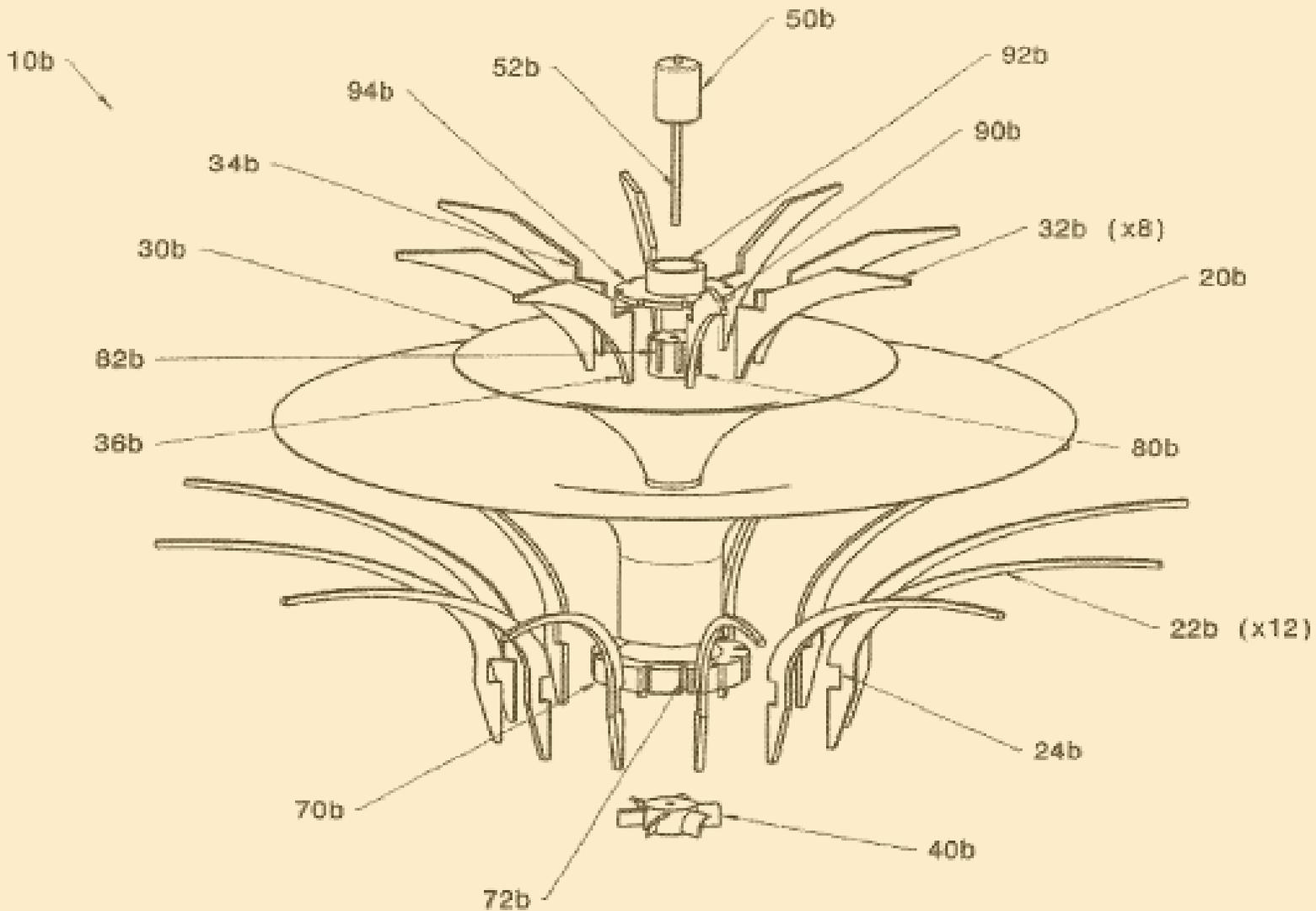


Innovation Activity Report 2015



EMBRY-RIDDLE
Aeronautical University
FLORIDA | ARIZONA | WORLDWIDE

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Stephanie A. Miller, Ph.D.

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Showcasing ERAU technologies available for licensing

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@EmbryRiddleInnovation on Facebook

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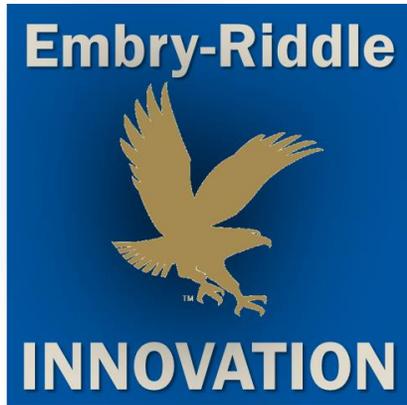
In FY15 and over the last decade

7 Patent Portfolio

A listing of issued patents and published patent applications

ON THE COVER: An exploded view of a “Lift Generating Device” enabling vertical flight. It was invented by former Physical Sciences student Juan A. Alvarado Valverde and was issued to ERAU as U.S Patent No. 8,998,126.

LETTER FROM THE DIRECTOR



I am pleased to issue the second annual innovation activity report, showcasing the accomplishments of the Embry-Riddle Aeronautical University research enterprise. The university's technology transfer efforts continue to evolve and grow. In FY15, Embry-Riddle was issued its first student-invented patent, U.S. 8,998,126, a novel "Lift Generating Device" that is currently available for industry licensing.

This past year we've established a marketing website for industry to find and license our intellectual properties. We are also expanding the scope of our technology transfer Facebook page, which will include not only research, but all forms of innovation happening across the Embry-Riddle campuses. FY15 yielded a total of 9 invention disclosures thanks to the university's talented faculty, staff, and students across multiple departments. We look forward to reporting the progress of those inventions in the coming years.

FY16 is already shaping-up to be another great year in innovation, including a growing international patent portfolio around hybrid gas-electric aircraft. Be sure to check out the next issue of this report for details!

Stephanie A. Miller, Ph.D.
Director, Technology Transfer & Commercialization
Legal Department

MARKETING INNOVATION

Embry-Riddle's Technology Transfer Office, a part of the Legal Department, secures intellectual property protection for the inventions produced as part of the university's research enterprise. But patents and copyrights are only the first step in translating research results into real-world products. Embry-Riddle technologies are now showcased to potential industry partners through a dedicated marketing website. Anyone can search, browse, and view details about Embry-Riddle inventions available for licensing. When licensed, Embry-Riddle technologies generate revenue for the inventors, their research programs, and the university. Check it out by clicking on the screenshot below or visit us at erau.flintbox.com.

The screenshot displays the 'Research @ EMBRY-RIDDLE' website. At the top right, there are navigation links: 'About Us', 'Contact', 'ERNIE', and 'University Home' with a logo. The main header features the 'Research @ EMBRY-RIDDLE' logo. Below this is a dark blue navigation bar with tabs for 'Research Initiatives', 'Industry & Partner Solutions', 'Student Opportunities', and 'Faculty Resources', along with a search box. On the left side, there is a vertical menu with links: 'Research & Graduate Studies', 'Technology & Commercialization', 'Institutional Review Board', 'Office of Sponsored Research', 'Finding Funding', and 'Contact Faculty Resources'. The main content area includes a 'Login to My Flintbox' link, a 'Find Innovation' search box with a 'Go' button, and radio buttons for search scope: 'Search only Embry-Riddle Aeronautical University' (selected) and 'Search all of Flintbox'. Below the search is a 'Latest Innovations' section with a 'Total: 9' indicator. Two innovation entries are visible:

- Electrically Coupled Counter-Rotation for Gas Turbine Compressors**
A system and method for implementing stage-by-stage counter rotation in a multi-stage axial compressor of a gas turbine
... more
Primary: Embry-Riddle Aeronautical University
Date posted: Oct 1, 2014
- Multi-Stage Axial Compressor with Counter-Rotation Using Accessory Drive**
A multi-stage axial compressor for counter rotation.
Primary: Embry-Riddle Aeronautical University
Date posted: Oct 1, 2014

GETTING SOCIAL

Our Facebook page ERAUResearch is now EmbryRiddleInnovation! Beyond the inventions disclosed, patent applications filed, and copyrights registered, there are many other innovation activities happening at Embry-Riddle campuses every day. These are highlighted on the EmbryRiddleInnovation Facebook page where you'll find news stories about the university's research accomplishments, posts emphasizing the importance and impact of academic research, innovation-based funding opportunities, and a few #tbt's. Click on the screenshot below or visit us at facebook.com/EmbryRiddleInnovation to see more and don't forget to like, comment, and share.



Embry-Riddle Innovation via Embry-Riddle Aeronautical University - Worldwide
August 28 · 🌐

Amazing innovation from one of our Embry-Riddle Aeronautical University - Worldwide students



Goulbourne's USB cable alternative to frail phone cords hits shelves | The Globe
Goulbourne's USB cable alternative to frail phone cords hits shelves August 28, 2015 If you own a smartphone, odds are you've encountered that moment when...
GLOBE.ERAU.EDU

Like Comment Share

Embry-Riddle Innovation
March 24 · 🌐

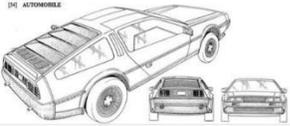
Asad Nawaz from the USPTO speaking to students and faculty as part of their University Outreach Program. One more chance to hear from him this afternoon in the Willie Miller Instructional Center auditorium - students at 3 pm, faculty and staff at 4 pm. Don't miss it!



Like Comment Share

Embry-Riddle Innovation shared United States Patent and Trademark Office's photo
October 21 · 🌐

Happy #BackToTheFuture Day! Which innovations from BTTF do you wish were real?



United States Patent [DE] [IP] Patent Number: **Des. 285,852** [US] Date of Patent: **May 26, 1986**

Class [IP] AUTOMOBILE

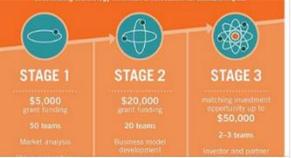
United States Patent and Trademark Office
October 21 · 🌐

If you're going to design a time machine, why not do it with some style? #BTTF2015 #FutureDay

Like Comment Share

Embry-Riddle Innovation
September 4 · 🌐

Did you know that Embry-Riddle Aeronautical University is a member of VentureWell? Check out their e-team program, providing early-stage support and funding of up to \$25,000!



STAGE 1
\$5,000 grant funding
50 teams
Market analysis

STAGE 2
\$20,000 grant funding
20 teams
Business model development

STAGE 3
Matching investment opportunity up to \$50,000
2-3 teams
Investor and partner

student grants - VentureWell
The E-Team Program nurtures opportunities for collegiate technology entrepreneurs by providing early-stage support and funding of up to \$25,000. Our E-Team Program gives college students the chance to move new tech ideas out...
VENTUREWELL.ORG

Like Comment Share

INNOVATION ACTIVITY

FY15: BY THE NUMBERS

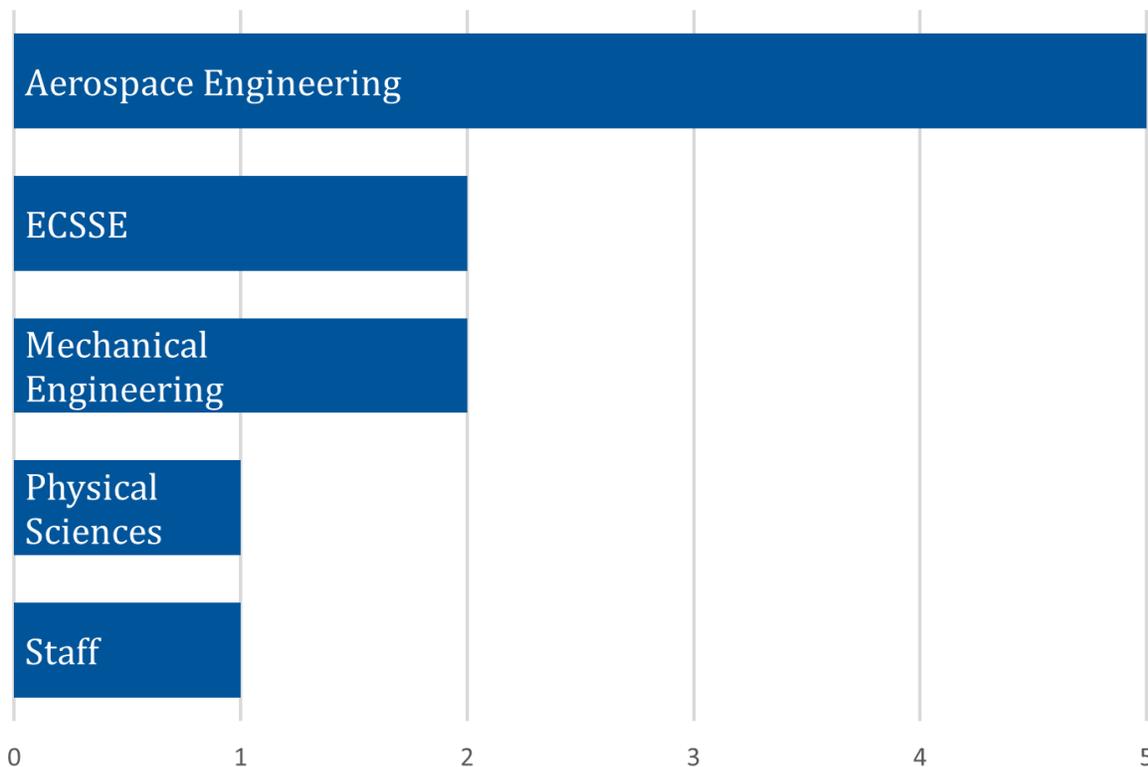
INVENTIONS

- 9 Invention disclosures received
- 2 Disclosures under evaluation
- 5 Departments disclosed inventions
- 14 Inventors submitted invention disclosures

PATENTS

- 6 Provisional patent applications filed
- 3 Non-provisional patent applications filed
- 1 U.S. patent issued

FY15 Invention Disclosure Activity by Department



HISTORICAL PERSPECTIVE

FY06-FY15

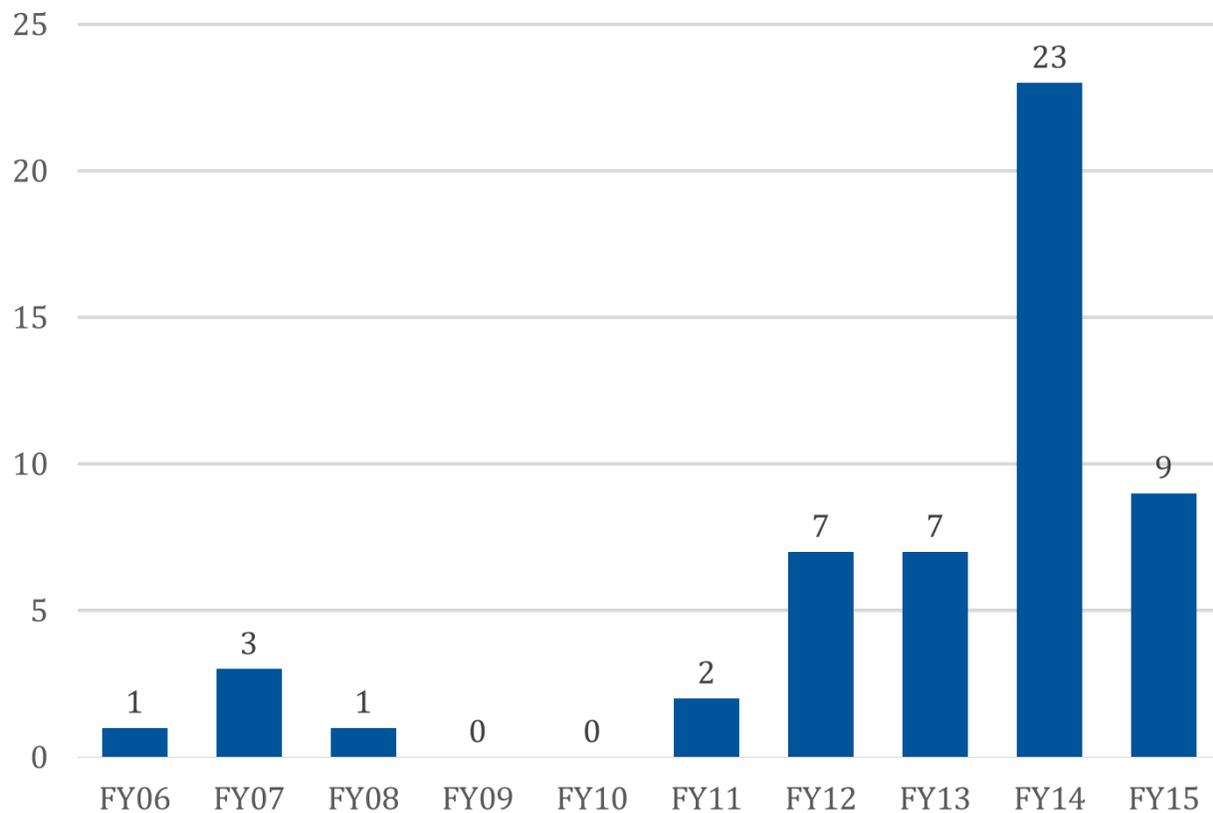
INVENTIONS

53 Invention disclosures received
11 Departments disclosed inventions
69 Inventors submitted invention disclosures

PATENTS

29 Provisional patent applications filed
9 Patent applications in prosecution
3 U.S. patents issued

Invention Disclosure Volume: Last 10 Years



PATENT PORTFOLIO

ISSUED PATENTS AND PUBLISHED PATENT APPLICATIONS*

[U.S. 7,184,883](#) “GPS-based steering needle instrument” Carl Edward Wischmeyer.

[U.S. 8,095,314](#) “Generation of four dimensional grid of probabilistic hazards for use by decision support tools” Ian A. Wilson

[U.S. 8,998,126](#) “Lift generating device” Juan A. Alvarado Valverde.

[U.S. 2013/0000247](#) “Highly vented truss wall honeycomb structures and methods of fabrication” David J. Sypeck.

[U.S. 2013/0050024](#) “Bistatic radar system using satellite-based transmitters with ionospheric compensation” William C. Barott, Brian K. Butka, Justin D. Engle, Albert Helfrick.

[U.S. 2013/0223984](#) “Multi-Stage axial compressor with counter-rotation” Vinod Gehlot, Magdy S. Attia, Divyam Garg.

[U.S. 2013/0227950](#) “Hybrid assembly for an aircraft” Richard Anderson, Lori Costello, Charles Eastlake, Glenn P. Greiner.

[U.S. 2014/0060995](#) “Hybrid clutch assembly for an aircraft” Richard Anderson, Charles N. Eastlake, Matt Gonitzke, Glen P. Greiner.

[U.S. 2014/0286749](#) “Multi-stage axial compressor with counter-rotation using an accessory drive” Vinod Gehlot, Magdy S. Attia.

[WO 2014/150377](#) “Electrically-coupled counter-rotation for gas turbine compressors” Vinod Gehlot.

[WO 2015/106233](#) “Portable water purification system” Marc D. Compere, Yan Tang, Shavin Pinto, Yung Wong.

*Patent applications that have not yet published for public inspection are not listed here

