



Name: Omkar C. Halbe

Hometown: Mumbai, India

Currently lives: Munich, Germany

Education:

B.Tech. Electronics Engineering, VJTI Mumbai University, 2008

M.Eng. Systems Engineering, Cornell University, 2009

Employer: Airbus Helicopters

Job Description: I am a systems engineer specializing in helicopter avionics. I work on the development and certification of pilot assistance and situation awareness functions and associated human factors aspects on all civil helicopter platforms at Airbus. The focus of my work is always centered around enhancing operational safety for helicopter pilots.

As a kid, what did you want to be when you “grew up”?

I have always dreamt of building vehicles that “fly”. Things with “fans” on their “heads” have particularly fascinated me.

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

I envision wide-scale use of large unpiloted drones and autonomous vehicles in transporting passengers within and outside cities, or bring critical patients to hospitals, or rescue people during disasters. Artificial intelligence will replace human piloting skills to make commercial air transport safer, more efficient and reliable.

One insightful fact you want everyone to know:

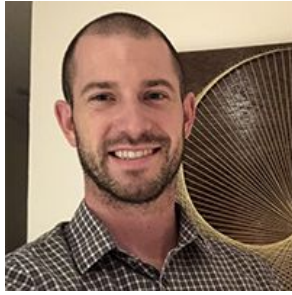
Let not the thought of success, fame or money but a thirst for knowledge, creativity and innovation be your driving factor.

Professional Interests:

To push the boundaries of autonomy and autonomous flight.

Hobbies:

Soccer, Yoga, Building drones



Name: Ethan Erlhoff

Hometown: Escondido, CA

Currently lives: Escondido, CA

Education:

BS Aerospace Engineering, California Polytechnic State University, San Luis Obispo

MS Aerospace Engineering, California Polytechnic State University, San Luis Obispo

Employer: Northrop Grumman Mission Systems

Job Description: I'm currently working as a Hardware Quality Engineer for the CNI architecture on the JSF program.

As a kid, what did you want to be when you "grew up"?

The earliest I can definitively remember was an architect/builder, with my ultimate goal being to design and build the perfect house. Then I realized I could design and build things that move (like.. with kinetic energy.. like planes, trains, and automobiles..) which made the possibilities exponentially more exciting and an order of magnitude more challenging! Sorry architects!

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

The aerospace industry, much like many other current industries, depends on financial investment and financial stability, rather than technical capacity or capability. And while it doesn't take a rocket scientist to apply a best-fit polynomial to the USA Defense and NASA budget spending, it is that trend which allows others to invest in the technology (be it other nations or the private sector).

Overall, I see a rise in the aerospace industry worldwide, with more and more countries establishing national space agencies and administrations, more countries investing in aerospace research and technology, with universities aligning their curriculum. I think the main challenges will consist of working with other companies and countries to best utilize our

combined resources for the betterment of mankind; it will be a question of working with others of different backgrounds and visions in order to succeed.

One insightful fact you want everyone to know:

You are only as effective as how well you can communicate.

Professional Interests:

RF communications - design, production, and testing of RF electronics. Incompressible aerodynamics - experimental active flow control methods.

Hobbies:

Pottery/ceramics, cycling, and guitar (in decreasing order of aptitude)



Name: Hong Hu

Hometown: Shanghai, China

Currently lives: Latham, New York

Education:

PhD in mechanical engineering, University of Florida, 2015

MS in mechanical engineering, University of Florida, 2013

BS in mechanical engineering, Shanghai Jiao Tong University, 2010

Employer: Philips Medical System, MRI

Job Description: In my current role, I work as a lead mechanical engineering for thermal management system design related to superconductor magnets and cryogenics applications. I also lead R&D project in multilayer insulation, CFD, system-level thermal and fluid modeling.

As a kid, what did you want to be when you “grew up”?

When I was a kid, I was always looking up into the sky and wanted to devote my self into the journey of outer space exploration. I wanted to be a aerospace engineer to build powerful rocket and space stations.

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

I see the following trends in the aerospace industry in next few years:

Significant investment and research in hybrid-electric commercial airplanes in the next 5 to 10 years. Both big companies and start-ups are working to develop more ecofriendly and quieter planes. Startups like Zunum Aero Inc. is focusing on regional 10–50 passenger planes. Meanwhile, Airbus, Rolls-Royce, and Siemens have partnered to develop E-Fan X program. With increasing demanding for sensors and electronics to be installed on airplane and space vehicles, requests for high-efficiency thermal management systems and insulation material will be on a strong increase.

The tremendous increase in the use of AI in design and assistant operation in the aircraft industry. AI and deep learning have shown their great advantage on airplane wing structure design, engine failure detection, and general aerodynamic design.

One insightful fact you want everyone to know:

Start design from 1st principal and check the model with 1st principal. This insight helps me to understand the physics better, pinpoint the root cause and make correct decision for design.

Professional Interests:

CFD, Thermal management, Fluid optimization, Multilayer insulation, Heat transfer

Hobbies:

Hiking, travelling



Name: Vanessa Aubuchon

Hometown: St. Martin, Mississippi

Currently lives: Smithfield, Virginia

Education:

Bachelor of Science, Aerospace Engineering
Mississippi State University, 2006

Employer: NASA Langley Research Center

Job Description: Currently, I am the Assistant Branch Head of the Flight Dynamics Branch. I also still find time to support research activities and specialize in atmospheric entry vehicle dynamics, as well as autonomous vehicle systems research. I also have held various project management and systems engineering roles for both the aeronautics and space sides of NASA.

As a kid, what did you want to be when you “grew up”?

As a young child, I was fascinated with sea life and wanted to be a marine biologist. As I got older, my focus turned toward space and airplanes. "How do those things fly?!" I turned space and airplanes into a career, but am still fascinated by marine life and the unexplored depths of our oceans.

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

There is obviously a boom going on now in private small start-up companies getting involved in both the aircraft and spacecraft market. In particular, their influence will push us toward realizing Urban Air Mobility (UAM) as an option for transportation and packages delivered by drones. Implementing these services will require the utilization and acceptance of machine learning (and AI, in general) into these autonomous systems. The desire for these new capabilities is the catalyst for faster transformation of our air traffic management and acceptance of new vehicle configurations, adaptive control systems, and reduced pilot operations (including unmanned). It is indeed an exciting time to be a part of the aerospace industry. In 20 years, we may well be taxiing around in small hybrid electric VTOL aircraft from skyscraper to skyscraper.

One insightful fact you want everyone to know:

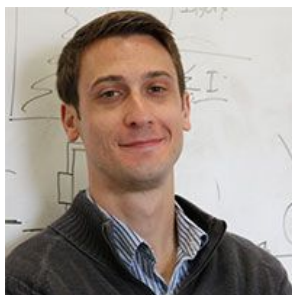
In project reviews, I always ask the project presenters questions that I know they know the answer to. This not only builds their confidence, but encourages others in the room to ask questions — which is the point of the review!

Professional Interests:

Team leadership, flight dynamics, project management, wind tunnel, and flight testing

Hobbies:

Cooking, yoga, volunteering, planning social gatherings, kayaking, hiking, traveling



Name: Nick Parziale

Hometown: Huntington, New York

Currently lives: Weehawken, New Jersey

Education:

Ph.D. California Institute of Technology (2013)

Dissertation: Slender-Body Hypervelocity Boundary-Layer Instability

M.S. California Institute of Technology (2009)

B.S.M.E. SUNY Binghamton (w/ honors 2008)

Employer: Stevens Institute of Technology

Job Description: Assistant Professor of Mechanical Engineering

As a kid, what did you want to be when you “grew up”?

Doc Brown from “Back to the Future”

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

If you read through the literature, it seems as if hypersonic flight has been five years away for decades. I think we are just now beginning to get away from trying to solve issues associated with high-speed flight by brute force (i.e., use of engineering correlations to design vehicles).

That is, as a community, we are treating the wicked problems of high-speed flight as basic and scientific. This approach, coupled with rapid advances in electronics and imaging technology, yields a more tractable path to the design of hypersonic vehicles over the next decade or so.

One insightful fact you want everyone to know:

Sometimes it is what it is.

Professional Interests:

Fundamental fluid-mechanics problems in supersonic and hypersonic flight. Development of optical diagnostics to investigate these problems.

Hobbies:

Running. Avid fan of the Yankees, Giants, and (unfortunately) Knicks.



Name: Matthew Cannella (Young Professionals Committee Chair)

Hometown: Aberdeen, New Jersey

Currently lives: Denver, Colorado

Education:

B.S. Aerospace and Mechanical Engineering, State University of New York at Buffalo

M.S. Aerospace Engineering Sciences, University of Colorado at Boulder

M.E. Engineering Management, University of Colorado at Boulder

Employer: Ball Aerospace & Technologies Corporation

Job Description: Systems Engineer – Responsible mission development initiatives and launch integration of next-generation spacecraft.

As a kid, what did you want to be when you “grew up”?

I didn't exactly know what I wanted to be, but I knew I wanted to work in the field of space exploration

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

I see the beginnings of a more permanent foothold for humanity in space; an increasing access to space opening up human activities and scientific exploration, multiple and more-permanent in-space laboratories, increased manufacturing, etc.

One insightful fact you want everyone to know:

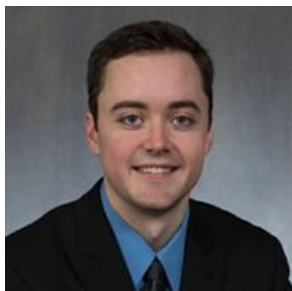
The power of a Network: Having your ear to the ground in this industry is a huge help to knowing what's going on, finding a new job, etc. Don't be shy! Go talk to people.

Professional Interests:

Cubesat and Small satellite enabling technologies, Propulsion, RCS Thrusters, International Collaboration, Current Chair of the AIAA Young Professionals Committee

Hobbies:

Hiking/Backpacking, Brewing Beer, Skiing, and Traveling.



Name: Kevin Eliason

Hometown
Cleveland, Ohio

Currently lives in
Cleveland, Ohio

Education

B.S. Aerospace Engineering - University of Cincinnati
M. Eng. Systems Engineering - Penn State University

Employer
HX5 Sierra

Job Description

I currently am a test engineer focusing on measurement uncertainty analysis and supersonic wind tunnel characterization at the NASA Glenn Research Center.

As a kid, what did you want to be when you “grew up”?
Either an astronaut or a professional skateboarder, depending on the day you asked.

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?
I am very optimistic about the future of the aerospace industry. It is exploding in a lot of different areas including, private space exploration, micro- and nano-satellites, UAV technology and green innovation. It is a really exciting time and I cannot wait to watch it unfold.

One insightful fact you want everyone to know:
It is never too late, nor too early, to learn something new.

"Life's a garden, dig it" - Joe Dirt

Professional Interests:
Systems engineering, test engineering, measurement uncertainty, rapid prototyping and rocket propulsion

Hobbies:
Skateboarding, hiking, basketball, 3D printing, rocketry, and making music.



Name: Christopher Ross Simpson

Hometown

Port Charlotte, FL

Currently lives in

Tuscaloosa, AL/Ridgecrest, CA

Education

B.S. Aerospace Engineering and Mechanics, May 2016

Ph.D. Aerospace Engineering and Mechanics, May 2020

University of Alabama

Employer

Naval Air Warfare Center - Weapons Development (NAWCWD), China Lake

Job Description

Recruited by China Lake on a SMART Scholarship

As a kid, what did you want to be when you “grew up”?

I wanted to build rockets. You could see the Space Shuttle going up even on the Gulf Coast of Florida.

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

10 years: The international community has begun flights to the moon. Sonic flight over-land is commonplace. 20 years: SpaceX has placed the first humans on Mars. Machine learning has produced true artificial intelligence.

One insightful fact you want everyone to know:

Dreams of success are never realized unless worked toward every day.

Professional Interests:

My professional interests lie in orbit determination (state estimation). As secretary of AIAA Space Operations and Support TC, this means I take a special interest in Collision on Launch

Assessment (COLA), ground station operations, and new tools for calculating probability of collision (P_c).

Hobbies

I currently have a L1 from NAR in High-Power Rocketry; working toward my L2. I also referee NCAA Division 2 basketball.



Name: Lauren Badia

Hometown

Humacao, Puerto Rico

Currently lives in

Huntsville, Alabama

Education

B.S. in Mechanical Engineering from the University of Puerto Rico at Mayaguez

Employer

NASA Marshall Space Flight Center

Job Description

Vehicle Structures and Mechanisms Designer. Working primarily on the Space Launch System (SLS) and Mars Ascent Vehicle.

As a kid, what did you want to be when you “grew up”?

I wanted to be a teacher, but when I was 10 my mom purchased a set of VHS movies about the International Space Station (ISS) and when I watched it I immediately pointed at the ISS and said, "I want to build something like that." I never imagined that I would actually end up designing and developing spacecraft structures.

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

I see humans leveraging the moon to continue to develop technologies and processes that are essential to setting foot on Mars one day. I see the aerospace industry growing and touching every single aspect of our lives, even more than it currently does.

One insightful fact you want everyone to know:
Don't underestimate the power of communication and networking.

Professional Interests:

Design, CAD, Structures, Systems Engineering, Composites, Space Policy, STEM Outreach, and AIAA.

Hobbies

Cooking, Yoga, Reading, Volunteering, Hiking, Painting, and Traveling.



Name: Nathan Wasserman

Hometown

Silver Spring, MD

Currently lives in

Seattle, WA

Education

Bachelor of Science, Aerospace Engineering, University of Maryland, 2015

Employer

Boeing Commercial Airplanes

Job Description

Product Review Engineer. In this role I evaluate engineering issues on the 737 production line.

As a kid, what did you want to be when you “grew up”?

Fighter Pilot

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

I imagine more types of airplanes that will take passengers from one location to another. I can even foresee airplanes that fly passengers autonomously for shorter routes.

One insightful fact you want everyone to know:

If you lift up the aluminum “lavatory” sign on an airplane bathroom door you can unlock the door from the outside.

Professional Interests:

Operations and Product Management.

Hobbies

I love to be active, especially hiking and biking.



Name: Priyanka Cholleti

Hometown

Norwalk, CT

Currently lives in

NY, NY

Education

Masters in Aerospace Engineering (2013) - University of Houston

Employer

Siemens

Job Description

At Siemens I have the privilege to work with a number of industry leaders in the aerospace field. My job is to counsel and guide them on their current and new products from the design phase itself. Working with a variety of aerospace customers has helped me realize that aerospace is so much more than just rockets and spacecraft. I work on cutting-edge technology that analyzes flow fields and predicts the structural and aerodynamic behavior of moving objects in their environment. This saves my clients millions of dollars and months of time by avoiding experimental or wind tunnel testing for their products.

As a kid, what did you want to be when you “grew up”?

An astronaut! I was fortunate enough to be a part of a Young Astronauts program in the fifth grade, that's when I knew I wanted to be an astronaut when I grew up. I did everything I could to achieve my goal, which was to work at NASA. After graduating with my masters in Aerospace Engineering I got a full-time position working at NASA JSC.

How far can YOU see? Where do you see the aerospace industry 10–20 years from now? With the help of private organizations pushing technology to the limits I feel in the next 10 to 20 years the aerospace industry is going to be playing the biggest role ever. By then the U.S. will have their own crew capsule to get to space, and the likes of Elon Musk and Richard Branson will be sure to get fuel efficient ways of travel to space and beyond. I truly can't wait to see what the future holds when I can we can all travel to space!

One insightful fact you want everyone to know:

Never give up on your dreams. You never know what can be possible until you try and put yourself out there, you have nothing to lose and only so much to gain. My favorite quote is "Shoot for the moon. Even if you miss, you'll land among the stars." by Norman Peale.

Professional Interests:

I am a part of the AIAA community here in NY and that allows me to be very active in my professional space. I enjoy everything computational fluid dynamics related as well as all things space.

Hobbies

I love to coach gymnastics, I also enjoy travelling the world and trying all sorts of new foods.



Name: Nishanth Goli

Hometown
Hyderabad, India

Currently lives in
Huntsville, AL

Education

Master of Science in Aerospace Systems Engineering from the University of Alabama in Huntsville (UAH)

Employer

University of Alabama in Huntsville (UAH)

Job Description

I am a Research Engineer at UAH working on Design, Development, Integration and Testing of small Unmanned Aerial Vehicles. I specialize in Modeling & Simulation of UAVs and UAV GNC.

As a kid, what did you want to be when you “grew up”?

My childhood home was right next to an international airport and I always wanted to be a pilot. Later, engineering seemed a more interesting career since I liked Math. While, I am not an airplane pilot today, I still get to be a UAV pilot now.

How far can YOU see? Where do you see the aerospace industry 10–20 years from now?

The UAV industry has grabbed eyeballs in the last decade. In the next decade, I see commercial personal flying cars and autonomous commercial airliners a reality. In two decades, Intelligent autonomous systems will be around us everywhere and all people irrespective of their career will embrace AI. The Aerospace Industry in two decades will be all about mobility, AI, cybersecurity, energy (propulsion & batteries), and space travel.

One insightful fact you want everyone to know:

Technology is changing faster than ever, but human relations have mostly remained the same. Value personal life and soft skills more than technical skills. Everyone wants to travel in space, but no one wants to go alone!.

Professional Interests:

I actively engage in AIAA and am the Greater Huntsville Section YP chair. I am actively seeking amenities for YP members (millennials) whose needs are changing.

Hobbies

Traveling, Hiking, Watching documentaries