

January 2022



USAFA Cyber Competition Team

End-of-Semester Update

Welcome to the Delusions of Grandeur–Delogrand!

After a brief interruption in operations with the COVID-19 pandemic, the USAFA Cyber Competition Team never lost its competitive edge! This semester, the team was able to resume practicing in-person in the Cyber Range (Fairchild room 2D18.) Practice is held Mondays, Wednesdays and Thursdays from 1545-1715, and Tuesdays from 1730-1900. Having an event or competition almost every weekend this semester, there was never a dull moment! Everything that we do here will only help to prepare cadets to become more competent leaders who have Cyber experience. This pertains to every career field, not just Cyber Operations! Graduates from this team have also become Pilots, Operations Researchers, Space Operators, and Intelligence Officers!

The members of Delogrand were also happy to welcome their two new OICs—Captain Josiah Lane ('12) and Captain Zachary Paulson. Capt Lane can be found in office 6G-111, and Capt Paulson in 6G-133. Feel free to stop by to say hello or ask them about their experience with operational Air Force Cyber!



First Semester At-A-Glance

Below is a list of the different events members of the Cyber Team partook in this past semester:

- 10-12 Sept: CSAW Qualifiers
- 18 Sept: President's Cup Round 1 & Royal Thai CTF
- 20 Sept: Stack Talk by Doctor Martin Carlisle
- 24-26 Sept: DownUnderCTF
- 9 Oct: Hivestorm
- 22-24 Oct: President's Cup Round 2
- 4-5 Nov: Cyber 9/12 NYC
- 12-13 Nov: CyberForce
- 3 Dec: UCCS Cybersecurity Summit in the USAFA Planetarium
- 4 Dec: Mountain West Cyber Challenge
- 8 Dec: Talk by Maj Solomon Sonya

Continue to the next page for highlights and more!





President's Cup Round 1

CSAW and DownUnderCTF

The Delusions of Grandeur started the 2021-2022 Academic Year off strong, having 7 teams of 4 competing in the CSAW Qualifier CTF the weekend of 10 September. We packed into the range and catered Raising Cane's that Friday night—overall, this was a great way for teammates to get to know each other and test their abilities in the areas of binary exploitation, reverse engineering, cryptography, forensics, web security, and even problems involving industrial control systems!

We had 2 teams place in the top 14%: Team Delograndest (C2C Taylor Coffey, C3C Massimo Brigola, C3C Kai Bixler, and C3C Fardeen Bhimani) and Team Dolphins (C1C Jim Wang, C1C Grady Phillips, C2C Josiah Stearns, and C3C Matthew Ring.)

On the weekend of 24 September, the Cyber Team again packed 28 people into the Cyber Range to compete in an Australia-based CTF competition.

Out of 1,594 teams worldwide, Team Delograndest (C2C Nico De Ros, C3C Vinny Ceffalo, C4C John Pan, C4C Jason Ly, and C4C Caleb Song) placed in the top 15% and Team Delograndestly (C1C Lauren Humpherys, C2C Daniel Sevilla, C3C Joseph Cates-Beier, and C4C Alon Leshem) placed in the top 18%! Half of our teams managed to place in the top 25%!



Royal Thai CTF competition

Royal Thai CTF and President's Cup

The weekend of 18 September was a “double-whammy” for the team. First, the Royal Thai Armed Forces invited two teams of 3 of our people to compete against two of their teams. We sent them Team DeloGrand (C1C Grady Phillips, C1C Alex Fitzgerald, and C2C Josiah Stearns) and Team Delograndest (C2C Taylor Coffey, C2C Quinn Henry, and C3C John Pan.) To no

surprise to anyone, these cadets took 1st and 2nd place out of the 4 teams competing. This competition was a tremendous opportunity for both countries' Cyber Teams to come together and engage in some friendly competition, and the Royal Thai cadets have expressed great interest in doing this competition with the Cyber Team again next year.

Additionally, we had 5 teams of 5 compete in the team competition for President's Cup, as well as 4 individuals. There was one team that moved on to Round 2, and that would be Team DeloGrand (C1C Jim Wang, C1C Grady Phillips, C2C Josiah Stearns, C2C Colin Seymour, and C3C Matthew Ring.) You read that correctly, Josiah Stearns found a way to represent well in both competitions!

Cyber 9/12—New York City

In November, we sent two teams to represent USAFA in the virtual Cyber 9/12 Cyber Policy competition hosted by Colombia SIPA (School of International and Public Affairs) in NYC. On Team DeloGrandest, we had C1C Jim Wang, C2C Ali Thompson, C3C Matthew Ring, and C4C Enrique Oti. The members of Team DeloGrandest were C1C Lauren Humpherys, C2C Daniel Sevilla, C4C Ben Thompson, as well as a special guest from the MSS department—C1C Jacob Boone. This competition is unlike any

other event the Cyber Team competes in, and required over a month of preparation. The team relied heavily on the experience of Dr. Biller and Lt Col Goines, two professors from the USAFA Dept of Legal Studies; as well as Capt Josiah Lane. Team DeloGrandest was one of 16 teams from the entire competition to advance to the Semifinals, where they went head-on against a team of graduate students in the field of Cyber Policy. Thomas Galligani ('21), a former Cyber D0g lead USAFA's Cyber 9/12 Team in 2020, was a part of

the MIT Team that also made it to the Semifinals. The opportunity to be competing in the same arena as these high-caliber people was a tremendous honor and learning experience for everyone involved. We have another team (C2C Ali Thompson, C4C Enrique Oti, C4C Camden Larsen, C4C Kaleb Young, as well as MSS major C2C James Adams) getting ready to compete IN-PERSON at the next Cyber 9/12 competition in Austin, Texas 22-23 January. Stay tuned for updates!

Doc's Stack Talk and 39th IOS Commander

Dr. Martin Carlisle (a.k.a. "Doc") was a professor in the USAFA Department of Computer Science from 2006 to 2016, and now teaches in the Computer Science Department at Texas A&M University. He was the original founder and first OIC of our Cyber Team, and is commonly known by cadets as one of the authors of the RAPTOR programming environment. On 20 September, he showed up to practice via Zoom to give the team his legendary Stack Talk,

which always begins with "So there's thing called the stack," and basically summarizes how computer memory works. After he moved to Texas A&M, the 19ers and 20ers continued to recite Doc's Stack Talk to the 21ers and 22ers, who now keep it going for the 23ers, 24ers and 25ers. Members from the team were also able to ask further questions to Doc directly about the stack, as well as hear stories from when he ran the team and taught at USAFA.

Additionally, Major Solomon Sonya came to talk to DFCS major students on 8 December, and took the time to talk to the Cyber Team during practice as well. He provided valuable insight to those considering Offensive or Defensive Cyber Operations for their military careers, two areas that continue to constantly evolve as the demand for officers who are knowledgeable in Cyber (regardless of AFSC) rapidly increases.



Dr. Martin ("Doc") Carlisle

Internet Crisis and a new LLC—DeloGrand to the Rescue!

On 9 October, the 10th Communications Squadron inadvertently distributed a faulty software update that "bricked" the computers of any cadets or permanent party that were connected to the EDU wireless network. For most, all they could do was move their mouse around in a black screen. A few days later, C2C Josiah Stearns sent the Wing a temporary fix so people could at least access their data until a long-term fix was discov-

ered. In the meantime, everyone else was told to remain off of EDU until further notice. A team of ten cadets from the Cyber Team have invested countless hours assisting the 10th CS in conducting recovery and forensic analysis on this situation.

Over the last year, Cadet Stearns has also led an effort to install a cadet owned and run WiFi network throughout the Vandenberg and Sijan dormitories known as

CadetNet. The hardware for this network is now 90% complete, and currently provides service to over 2,400 cadets. Costing only \$5 per month for each cadet to add unlimited devices, this network has already saved cadets nearly \$1,000,000. It operates under CadetNet, LLC, entirely not for profit in order to maximize continual upgrades. More information can be found at: <https://cadetnet.org/public/info>.



CadetNet LLC official logo

CyberForce

During the weekend of 12 November, two teams of cadets competed against 135 teams from around the world (including West Point) in the annual CyberForce CTF competition. Competing on Team DeloGrand were C1C Chris Katz, C2C Taylor Coffey, C2C Quinn Henry, C3C John Pan, C3C Matthew Ring, and C4C Caleb Song.

Team DeloGrand consisted of C1C Lauren Humpherys, C2C Daniel Sevilla, C2C Josiah Stearns, C3C Joseph Cates-Beier, C3C Fardeen Bhimani, and C4C Kaleb Young; and they ended up placing in the top 20! This event required competitors to take on the role of a Blue Team. Requirements included the submission of a full security

documentation of the team's vulnerability assessment and proposed solutions, giving a virtual brief to a panel of judges, defending against Red Team simulated attacks, keeping normal web operations running for the users in the electric company scenario, all the while completing CTF problems along the way.



Wing-Wide Holiday Dinner



Glimpse of Spring 2022 Semester

- ◆ 22-23 Jan: Cyber 9/12 in Austin, TX
- ◆ 21-24 Feb: Rocky Mountain Cyberspace Symposium
- ◆ 26 Feb: CCDC Qualifiers
- ◆ 18-27 Mar: SANS Certification Course
- ◆ 24-25 Mar: Cyber 9/12 Washington D.C. (virtual)
- ◆ 25-26 Mar: CCDC Regionals
- ◆ 2 Apr: Midnight Sun CTF
- ◆ 21-23 Apr: CCDC Nationals
- ◆ Apr TBD: NSA Cyber Exercise (NCX)



Congrats Cyber Firsties!

On November 16th, our 7 Cyber Team firsties went through Job Drops and found out what career fields they will be entering into. We have people preparing to “Fight the Stupid” with the Air Force and Space Force!

C1C Alexander Fitzgerald– Air Force Cyber Operations

C1C Lauren Humpherys—Air Force Cyber Operations

C1C Cooper Kane—Air Force Developmental Engineer

C1C Christopher Katz– Space Force Space Operator

C1C Andrew Lee—Air Force Cyber Operations

C1C Grady Phillips– Space Force Cyber Operations

C1C Zach Rotzal– Space Force Cyber Operations

