

# Method and Tools for Virtual Product Realization



**Wingquist Laboratory** is an internationally competitive competence centre for multidisciplinary research within the field of efficient product realization. We applies deep knowledge within its defined research areas on new research challenges emerged from effective and efficient development of product families with high level of commonality with respect to components, knowledge and manufacturing.

### Our research is based on four research groups:

- Systems Engineering & PLM
- Geometry Assurance & Robust Design
- Geometry and Motion Planning
- Automation

#### We work in three cross-disciplinary themes:

- Platform-based Development
- Smart Assembly
- Perceived Quality



## **Editorial**



As a striving engineering student from Sweden, opportunities taking you across the Atlantic rarely come along. That is why it was exciting for me to become a trusted member of the Amcip board. Looking back, it was the start of the life-changing experience I am now living. I have had the privilege of making friends with some amazing students that I worked side by side with for a year. They are currently scattered across the North American continent, some just a few miles away in downtown Toronto, while others are enjoying the west coast sunshine. No matter where we live now, I am certain that we will all be returning to Sweden as both better engineers and smarter people.

I have had the exiting job of putting together the different stories from our members to form this catalogue. The stories are all interesting reads and I recommend having cup of coffee while reading about what Amcip is all about, just as I am doing right now. This annual catalogue has been available to students of Chalmers University of Technology for over fifty years under many names. What you are holding in your hands is proof of what students can coordinate together purely out of curiosity and hard work.

In this Internship Report you will also find all of our financial contributors. Together they make adventures like ours possible. Our members are dependent on this kind of support to be prepared for their time abroad. I would like to thank our valued contributors and supporters for giving me and my friends this great opportunity.

Thank you, Adam Liljenberg

#### **AMCIP 2017**

#### **Board members**

Chairman Fredrik Ingelsson Treasurer Amalie Lennartsson Sales Manager Caroline Almkvist Internship Coordinators Anna Skilbred Linus Jonsson **Editor** Adam Liljenberg

#### **Members**

Evelina Hiltunen Kim Pietarila **Emanuel Sanne** Hanna Wegelius Robert Sjövall Pontus Jörgensen Axel Mårtensson Nour Ado Axel Lundh

## **Editorial**



As I sit here, gathering all the travel reports from the members out on their adventures in North America I contemplate on what an amazing experience I soon will be embarking upon. It is hard to comprehend how lucky I am to have this kind of opportunity and it is with great excitement and respect I aim to experience the years of Amcip I have ahead.

My year, as you may have gathered, has only just begun as I was appointed editor and member of the board of Amcip 2018 just a few months ago. Together with 22 other members we will embark upon a journey that hopefully will result in a lot of personal growth, fun moments and bonds with people I have yet to get to know. Judging by the stories I have read included in this report I believe the two years ahead will be years filled with memories I will never forget.

In this Internship Report you hold in your hands you will find pages of inspiring stories from all of the interns across the continent, interesting statements from the President and CEO of Chalmers and the CEO of AstraZeneca as well as many ads from the supporting companies. We hope that the report will inspire you to go out of your comfort zone and search for new adventures and that you will find it an enjoyable read.

We would like to thank all those that have contributed to this report. On behalf of AMCIP 17 and 18 we would like to thank all of the sponsors and the hosting companies for believing in cultural exchange, you are vital for making our program possible.

Thank you, Gabriella Müntzing

#### **MASTER'S PROGRAMME**

#### **BIOTECHNOLOGY**

**CHALMERS** 

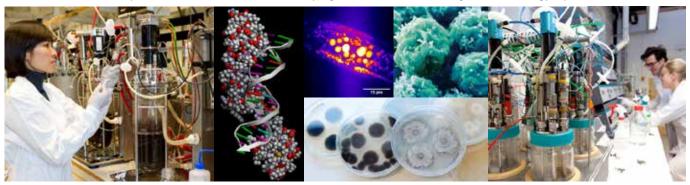
**MSC, 120 CR, 2 YEARS** 

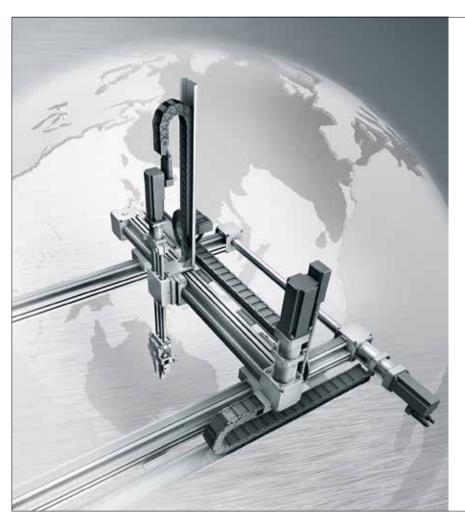
The aim of the Master's program in Biotechnology is to educate skilled people for the biotechnology sector, primarily for research and development within industry and academia dealing with biomedicine, pharmaceuticals, biomaterials, food, and industrial biotechnology. The programme focuses on the interface between chemistry, biology and medicine, with engineering as a common working tool. Students gain competencies in using engineering principles in the analysis and optimisation of biological systems, and in

using integrated approaches for solving complex biotechnological problems.

The courses link to the excellent research in these areas carried out at Chalmers University of Technology and Göteborg University. MSc thesis projects are offered both at these academic institutions and in companies in the Göteborg region as well as internationally. International exchange is possible during the programme.

http://www.chalmers.se/en/education/programmes/masters-info/Pages/Biotechnology.aspx





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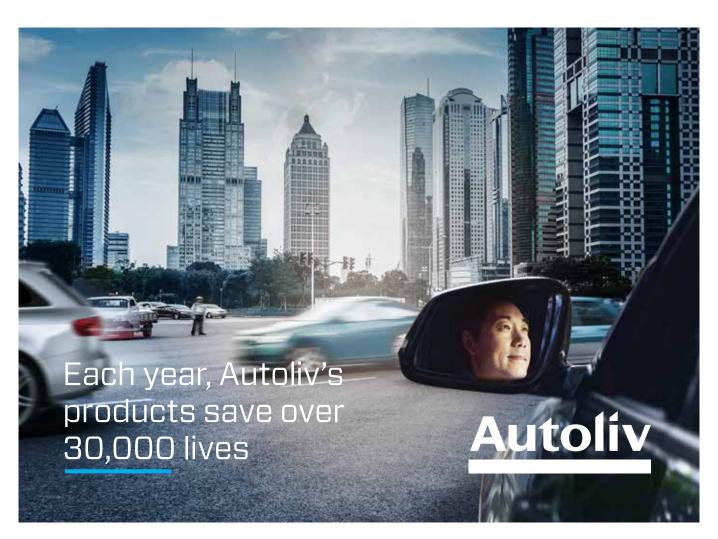
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Greetings from AMCIP 2018

Thank You!

# About the Program AMCIP Internship Program



It is by Chalmers recommended for students to get at least 17 weeks of industrial training before graduation. By working as interns in North America, the students of AMCIP will be able to complete a great portion of that time and many will even extend that time by far. But there is an added value in the experiences gained by working in an international environment. It promotes the opportunity to improve the students ability in communicating in another language while developing professional skills within their field of engineering. Last but certainly not least they also contribute to maintaining important relations between different cultures and countries.

In June of 2017 the members of AMCIP began working for different companies in the US and Canada. The duration of the internships stretch from eight weeks to a year. The hosting companies vary greatly in size and area of business and the work assignments also vary depending on the interns field of study and the current situation at the hosting company. Please

read the students reports contained within these pages for details about their internships and experiences in North America.

This year our organization, which has existed for more than 50 years, consists of 15 students at Chalmers University of technology of which nine are members and six are board members. The board is responsible for the overall management of the organization in addition to the specific tasks for each position.

- <u>The Chairman</u> has the overall responsibility for the program and also handles the Visa application process.
- <u>The Treasurer</u> is responsible for the bookkeeping and finances.
- <u>The Internship Coordinators</u> find and contact host firms in America and arrange interviews between the parties.
- <u>The Sales Manager</u> arranges and organizes the members sales of advertisements.
- <u>The Editor</u> is responsible for creating the website and posters as well as designing and producing this annual Internship Report.



The members are required to contribute by selling advertisements in this Internship Report. Through this the members learn how to establish and maintain professional contact with company representatives and also practice their selling skills.

This summer, the whole experience started with a fantastic weekend in New York City. A perfect way to kick off the year and have some fun with all the members before everyone left for their respective jobs across the continent.

All in all, we, the members and board members of AMCIP 2017, are extremely grateful for having this opportunity and we would like to extend our

gratitude to the companies and organizations that have made this possible. We hope that this Internship Report will inspire and encourage other students to aim for internships abroad and that you also want to become a part of our team and take this once in a life chance for an amazing experience!

Sincerely, AMCIP Internship Program 2017

#### How to apply

Students from AT, Bt, K, Kf, I, M, TD, V and Z at Chalmers University of Technology who will have at least 150 credits before traveling to North America can apply.

Please visit our website www.amcip.se or contact contact@amcip.se for more information.

#### How to support the organization

Do you want your company's name in this magazine or on the website?

Do not hesitate to be a part of our journey and to show your company to the students of Chalmers University of Technology and other Swedish universities.

Contact us at contact@amcip.se



# Attention all future civil engineers

ÅF is moving ahead on its journey of growth and in 2017 we will continue to hire skilled and talented new employees – primarily engineers, geotechnologists and assignment managers.

ÅF is ranked among engineers as Sweden's most popular employer and we are always seeking the market's top expertise.

Contact **Sandra Enhol.**Recruitment Manager ÅF Infrastructure at: **sandra.enhol@afconsult.com** 

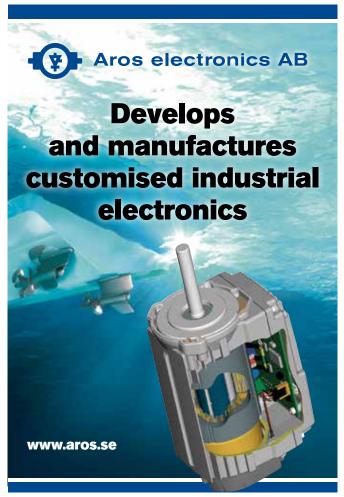
**For more information visit:** afconsult.com/usasip

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When the design project involves large spans, climate smart solutions, or great acoustic precision, a closer relationship between architects and engineers is needed. The Architecture and Engineering Program at Chalmers University of technology unites design with science and technology.

The program is the only one of its kind in Scandinavia. You can be an architect, an engineer, or BOTH.



# Voices of Support From the President of Chalmers

#### STEFAN BENGTSSON

President and CEO of Chalmers University of Technology



Our vision, Chalmers for a sustainable future, permeates all 66-requires us to be our activities. This requires us to be both locally and globally connected and engaged and makes international networking, collaboration and exchange key priorities in education, research and innovation.

both locally and globally connected and engaged. 99

Chalmers alumni have their careers in diverse and internationally connected companies and organizations. Hence, developing and supporting activities providing Chalmers' students with international experience as an integrated part of their education is essential.

AMCIP Internship Program is a student led organization supporting Chalmers' students in their quest to find companies in the US and Canada offering internships and its committee is dependent on your support to ensure the continued success of the program. AMCIP plays an important role in providing opportunities for international experience to Chalmers' students and I fully support the program.

# Voices of Support

From a Current Leader

# JAN-OLOF JACKE CEO of AstraZeneca

### AstraZeneca

is a global, science-led biopharmaceutical company that focuses on the discovery, development and commercialisation of prescription medicines, primarily for the treatment of diseases in three main therapy areas - Respiratory and autoimmunity, Cardiovascular and metabolic diseases, and Oncology. We are also active in inflammation, infection and neuroscience through collaborations. AstraZeneca operates in over 100 countries and its innovative medicines are used by millions of patients worldwide. Research is the key to the success of AstraZeneca and in 2015 the company spent 5.6 billion USD on research and development. AstraZeneca has sales in more than 100 countries, manufactures in 17 countries and employs some 61 500 people worldwide, of which 9 000 work in R&D.

AstraZeneca aspires to become one of the best and most respected pharmaceutical companies in the world. Skilled and enthusiastic employees with international experience are essential to achieve this and therefore we fully support **AMCIP 2017.** 







# The Year of AMCIP 2016-2017

## May 2016

This years organization was started up, members were elected and we celebrated with Pizza!





## September 2016

We traveled to Stockholm to kick off the year! The days were filled with sales meetings and the evenings were spent hanging out and getting to know eachother.

## October 2016

We celebrated Thanksgiving by having a delicious Thanksgiving feast together with all the members.





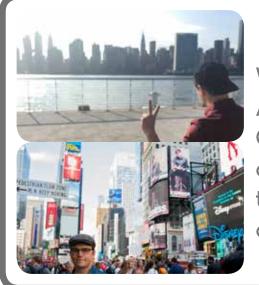
#### November 2016

We hosted an election night watch party for the US election! All students of Chalmers were welcome and it was a long but exciting night in front of a big screen tv.

## February 2017

We hosted a dinner for all AMCIP alumni together with AMCIP 2017 and the new board of AMCIP 2018. A great evening spent exchanging experiences and memories!

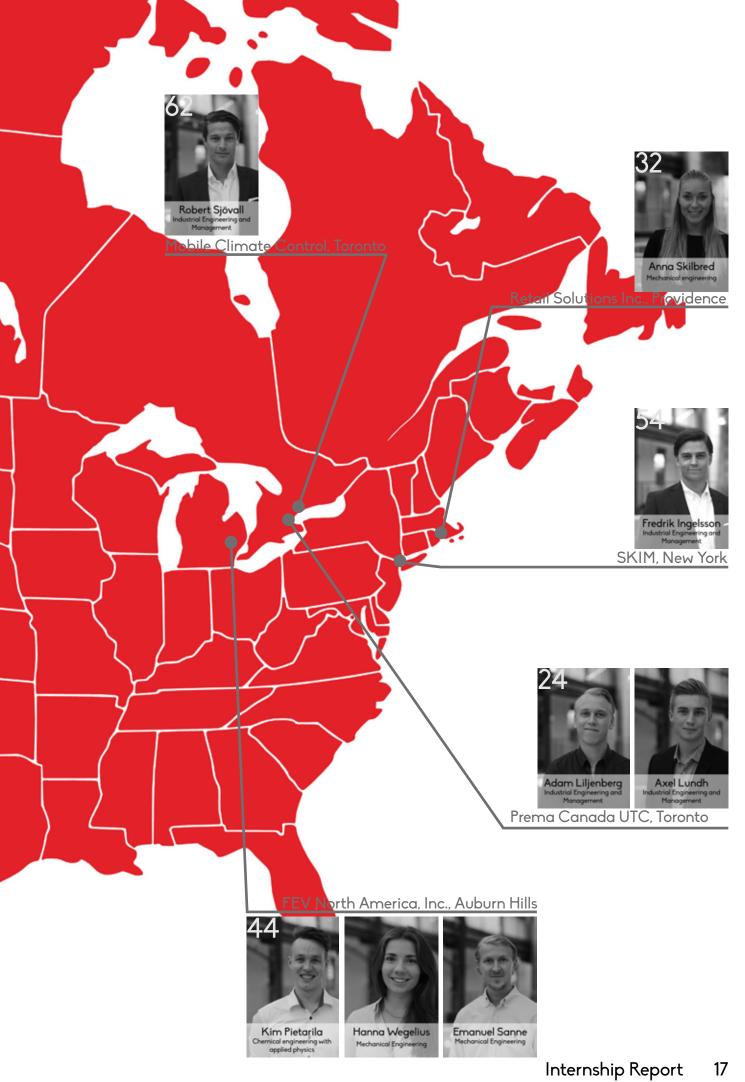


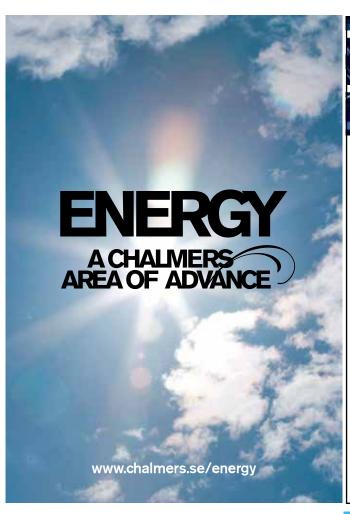


## **June 2017**

We started our experience in North America with a kick-off in New York City! A final chance to hang out with all the members and just have a good time together! A great way to start off the exciting year of internships!

# Internshi Placements Pontus Jörgensen SkyTech/Calgary Caroline Almkvist Avalex Inc., Lake Tahoe Evelina Hiltunen Nour Ado ATUM, Newark Ingram Micro Inc., Orange County, PACE, Orange County Axel Martensson Amalie Lennartssor **AMCIP 2017** 16





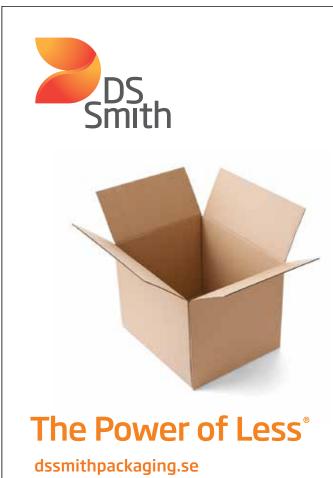


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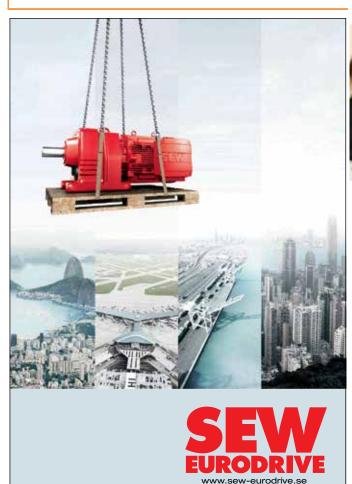


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# Words from the Chairman Fredrik Ingelsson

For me the choice was simple. When I was looking for the next opportunity in my education at the end of my first year of studies, the choice was between studying abroad or chasing the opportunity to get an internship in North America. I am of the opinion that studying for an exam abroad is done the same way as it is done here in Sweden. Something I have never tried however, is to use my newly acquired knowledge from Chalmers in practice. You can probably all relate to writing an exam or performing a group project with a highly hypothetical scenario where the

circumstances are simplified to better fit the format offered by the course. To finally be able to utilize this knowledge in real projects have made my studies feel real for the first time, the thought When will I ever use this? I finally got an answer.

When I became a member of AMCIP, I was excited, no matter where this would lead me, I was convinced that it would be enormously rewarding. When I'm writing this, 1,5 years after I joined AMCIP, I can honestly say that this experience has given me more than I could ever dream



# \*AMCIP is based on a community, each year a group of students go together to North America to meet their individual challenges.

of. Not only can I use my knowledge in practice, the fact that it takes place abroad adds another layer to this amazing opportunity. On my way home after my first day at work, I reflected over the last time I had difficulty maintaining casual conversation over lunch. This was after I struggled far too long comparing the humid climate in New York with the dry and cool air in northern Sweden. To acclimatize to another culture and to use my second language on a daily basis is a rewarding experience in itself. Internship in North America is an opportunity that AMCIP has offered students at Chalmers for 54 years, and will continue to do so as long as companies in North America welcome us with open arms. And in that regard I don't think we have anything to worry about. Swedes, and students from Chalmers in particular, have a very good reputation on the other side of the Atlantic. Personally, I have gained a new perspective on the level of quality the education offers at Chalmers and I am very grateful to be a student there.

Despite the programs long history and roots at Chalmers, there is always room for improvement. Developing an internship program like AMCIP takes time and requires commitment. The fact that all members go abroad for up to 12 months at the same time as new members join make the transfer of

knowledge a bit more challenging. This however, is mitigated by our strong connection to our dedicated alumni. Which in itself is a testament to the strength of the program. AMCIP is based on a community, each year a group of students go together to North America to meet their individual challenges. During our active years, we have sent more than 1,700 students to North America and it has led to an active alumni culture with annual gatherings. In what direction AMCIP develops over time remains to be seen. Given the programs unique and enticing core offering, I am convinced that the future is bright and I look forward to assisting the coming years with all the help they may need to drive this amazing program further.

A big thank you goes out to the other members of the board for making this year possible, as well as to all our regular members for making this year incredibly fun and rewarding! Thanks to you all and AMCIP! I have gained new energy and look forward to my last two years at Chalmers upon returning home. But until then I think I will enjoy another Bud light and watch the sun slowly set over Manhattans incredible skyline.



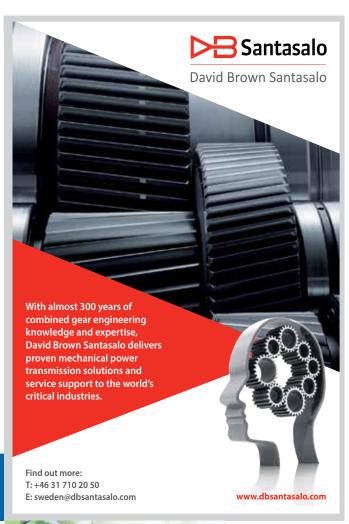
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# ROTATIONSPLAST SIBB HULTSVERKEN





## Enterprise Systems in the True North

A typical day for us starts with a fresh cup of dark roast from the Canadian coffee chain phenomenon Tim Hortons. After trying out all different kinds of morning coffee we soon figured out a plain medium dark roast is the way to go. It was to our surprise we saw the popularity of Tim Hortons amongst our Co-workers and Canadians in general, and yet we had barely recognized its logo. The coffee cools down to the perfect temperature around 8:30 am and that is about the time we get to work in our cubicles.

Prema Canada is one of Canada's largest distributors of tire and wheel service supplies. The company is supplying its products to a network of salesmen and independent distributors throughout the entire country, which is no simple task. The company's headquarters and warehouse are located in Burlington, ON, an idyllic suburb of Toronto and a part of the Greater Toronto Area. The focus of our work so far has been on updating Prema's customer management and product management software. We have made great progress and at the time of reading this, our work has most likely replaced outdated systems and practices.

We spend weekends exploring our new home and its surroundings, including Toronto. From day one we embraced the effortless suburban lifestyle of Burlington. Every few weeks the city hosts a city sponsored event, such as the

#### "From day one we embraced the effortless suburban lifestyle of Burlington."

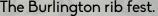
Burlington Rib Fest (the largest festival in Canada solely dedicated to barbeque ribs) or a free week-long music festival. Our adventures to the big city of Toronto provided a stark contrast to the Burlington life. Like any metropolis, Toronto offers a multitude of activities and areas to explore. One of our most memorable days in Toronto was the celebrations of Canada Day and Canada's 150th birthday, complete with fireworks and celebrations with long-time Swedish friends alongside newly found Canadian ones.

For the rest of our stay, we hope to further develop our professional skills by mixing our academic knowledge with ever so important real-life experience and hopefully come back to Sweden



Having a beer in <mark>To</mark>ronto.







Ribs taste better together.

a little wiser and better prepared for the challenges ahead. We also hope to experience more of what Canada offers,

including plans to visit some of the country's vast national parks and even get a chance to practice our French when we order a croissant in the Quebec province or the city of Montreal. Since we got here the maples have turned from green to red and orange, and the winter is approaching fast. The warm summer breeze has turned into a colder northern wind, and we are relying on the warm greetings and hospitality

of the Canadian people to keep us warm. We would also like to use this opportunity to send a big thanks to our colleagues at Prema Canada, for giving us a kind welcome and a stimulating and developing workplace. We have discussed everything from jalapeno farming to the fluctuations of the US dollar. We will also remember the day the computer servers went offline and we got free donuts.

#### Prema Canada UTC

**Hosting Interns since:** 2010 | **Employees:** 25 | **Area of Business:** Nation-wide tire and wheel service supplier | **Website:** www.premacanada.com

#### Adam Liljenberg

Born: 1995 in Gothenburg Sweden | Present Education: B. Sc. In Industrial Engineering and Management | Future Plans: Continue with my Masters degree unless I discover some interesting opportunity. | Best Memory: Finding a free music festival on Burlington waterfront close to our apartment. We followed the sounds of guitars and ended up on a beautiful country concert. | Worst Memory: First time making a right turn on red, less than two months after getting my driver's license.

#### **Axel Lundh**

**Born:** 1994 in Värnamo, Sweden | **Present Education:** B.Sc. in Industrial Engineering and Management | **Future Plans:** Make the most of what is left of my year before going back to Chalmers to pursue my Masters degree. **Best Memory:** Feeling the full power of a F-22 Raptor Fighter Jet during the Toronto Exibit Airshow. **Worst Memory:** My multiple losses to Adam in our fierce battles playing NHL 17.













#AMCIP17









Internship Report



We took a trip to LA and this was the view we experienced.

# A year at the West Coast while working with the Environment

After more than a year of planning, working with Amcip and preparing for moving abroad the day was finally here. It was time to say goodbye to family and friends and catch the plane to New York. After spending a few eventful days on the east coast I headed for the final destination in California.

It was late Friday afternoon and the coming Monday would be my first day at work. It was a hectic weekend. No accommodation was settled so I had the weekend to both look for a place to stay and a car as well. Orange County is not known for its public transportations. I was, to say the least, a bit nervous how to figure everything out. But I did not need to worry for long. OC is special! I don't know if is something in the air or in the water but the people living here are among the nicest people I have ever met. The first Airbnb I stayed at helped me to find a car and the second place offered me to stay as long as I wanted. I felt so welcomed and at home right away. Three months have now passed since I left Sweden. I am pending between feeling like I am on a never ending vacation and like I have lived here forever. It is wonderful waking up every day to a clear blue sky and palm trees outside my window. To live in OC offers a lot of opportunities. It is fairly close to LA, San Diego and Las Vegas if you like to travel. There is wonderful nature if you want to go for a hike and an endless beach, perfect for a

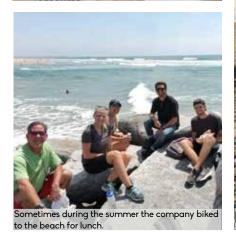
66 I don't know if it's something in the air or in the water but the people living here are among the nicest people I have ever met. 99

swim as well as the best waves if you want to learn how to surf.

Besides from trying out all what OC has to offer most of my time is spent working at PACE. Working there is great! PACE is a civil engineering company dealing with water engineering since 1987. It has developed some of the leading methods in handling wastewater, storm water and also providing documentation so that projects obeys the environmental regulations. The company is divided into three divisions, Environmental Water, Storm Water and Recreational Water.

I can easily say that in these three short months I







have learnt more than I ever could have imagined and hoped for. I am working for the Environmental Department and have been involved in different stages in the projects. All from helping in developing the design and proposal for a new project, making calculations in an existing project and to further expand already finished projects. I have learnt how to use CAD, finding the right equipment for a process, writing proposals and calculating the waste from a process to achieve the right quality for the water.

Environmental Water is mainly how to treat water from contamination to be used for drinking, irrigation and in other processes. The work PACE provides is planning and designing how a process will work, all the details about the equipment that is needed, designing it all in AutoCAD and to help and consult throughout the whole project. PACE is not only offering interesting work assignments it is also takes very good care of its employees. From day one

I felt at home with this company. They are making a great effort in order to create a welcoming atmosphere and arrange frequent activities. Every week there is some kind of common event, for example offering lectures or biking to the beach to eat lunch every other week. They are also making after work arrangements like taking everybody who wants on a boat ride to the Island Catalina or a baseball game. This brings all employees together and enables you to get to know people from all the different departments. We are a great team and I have made some really good friends there as well.

My stay here has been even better than I could ever have hoped for. I can only advise anyone who is interested in spending some time abroad, experiencing a new culture and having a lot of fun doing it to sign up for Amcip.

#### **PACE**

Hosting Interns since: 2015 | Employees: 60 | Area of Business: Civil Engineering with specialization in water engineering | Website: www.pacewater.com

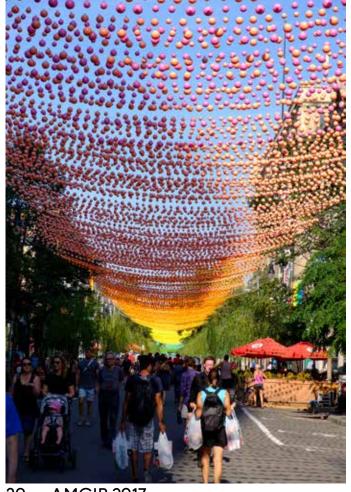
#### **Amalie Lennartsson**

**Born:** 1995 in Malmö, Sweden | **Present Education:** B. Sc. In Civil Engineering | **Future Plans:** Travel before I go back to Sweden to finish my M.Sc. in Civil Engineering.

**Best Memory:** Weekend in Las Vegas with some other interns from AMCIP. | **Worst Memory:** When I got the flue and right after that pneumonia.



# #AMCIP17

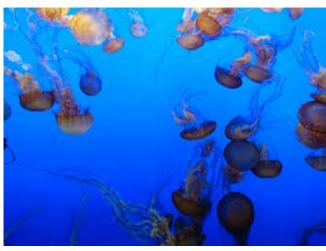






30 AMCIP 2017









Internship Report



## Interning in the Ocean State

Providence is neither too big, nor too small which welcomed me well and made the stay feel as homey it could be. Only a 3 hour drive to New York City, a 1 hour drive to Boston as well as short drives to all the beaches in this Ocean State, weekends were all but boring.

I lived in the "Little Italy" of Providence which offers the best pasta in town and which also is famous for having been run by the Italian mob.

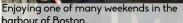
This city is known for all its restaurants in every corner, art all over the place due to Rhode Island School of Design and the Ivy League University Brown. During summer and early autumn the city also offers a visit to the Waterfire Festival where people gather around the canal in the city center to watch bonfires light up after the sunset.

Some of my most beautiful memories includes my visits to Newport, in the South of Rhode Island, where I've walked the Cliff Walk, overlooking the ocean alongside with many mansions. This place reminded me of

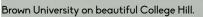
"I am very happy that I ended up working for Retail Solutions Inc., or RSi for short."

places from home in Gothenburg, however more grand and exotic. I am very happy that I ended up working for Retail Solutions Inc., or RSi for short. They have all welcomed me well and been sure to challenge me both with daily tasks as well as cross functional projects with other departments and offices around the World. RSi turns Big Data from retailers into opportunities for vendors. RSi platforms processes billions of records from over 200 major retailers in more than 75 countries around the world, daily. By running the data











Rhode Island State House located in the center of Providence.

through algorithms, RSi is able to help suppliers to minimize out of stock, maximize on shelf availability and further on increase profit and sales.

I work at a department called Customer Experience where I handle customers' requests as well as issues, alongside with projects for the benefit of the company as a whole and the department. I am very thankful to have experienced an internship

at Retail Solutions Inc. and would therefore like to thank all my colleagues at the Providence office that have helped me to develop and grow in my professional role as well as my personal.

#### Retail Solutions Inc.

Hosting Interns since: 2015 | Employees: 350+ | Area of Business: Software Company Website: www.retailsolutions.com

#### **Anna Skilbred**

Born: 1994 in Göteborg, Sweden | Present Education: B. Sc. Mechanical Engineering | Future Plans: Go home to Sweden to proceed with my Master at Chalmers. | Best Memory: Finding a little private gym with a majority of bodybuilders and strongmans who happily included me in their little meet&lift-family. | Worst Memory: Trying to stay away from the freshly baked bagels which were delivered to the office every Wednesday.

















### #AMCIP17



Internship Report



# Experiencing OC as an Intern at a Global Leading Tech-Company

Spending a few days in New York was great, but now it was time to leave for Orange County. Taking the airplane from New York to Denver was fine but the trip from Denver to Orange County would not go as easy as planned. Due to "mechanical issues" in the airplane's engine we had to exit the airplane and wait for a new one which resulted in a 5 hour delay and switch of airport from John Wayne to LAX. Hereinafter it could just get better and experiencing Laguna Beach with a clear blue sky and 85 degrees the day after definitely did so.

When I also finally got my social security number after a couple of days, I could begin working.

As an Intern at Ingram Micro I was warmly welcomed by everybody. Ingram Micro is the leading company in the world of wholesaling IT products and IT services. Ingram Micro has 45 offices around the world and is an extremely important part in the distribution of tech products, it was actually ranked 64th on the fortune 500 in 2016. I became a part of the Global Application Team in Irvine California where Ingram Micro's headquarter is located. The application team is a part of the IS department which is responsible for different kinds of development. I have been given great responsibility working with several different projects with main focus on developing their new warehouse management system, but also

"From a Swedish perspective living in this environment it is like being on retreat everyday even though you are working?"

been given many other parallel tasks.
Furthermore I have had the opportunity to join some out-of-work activates hosted by Ingram for its interns. We were able to participate in events such as different voluntary activities and inspiring speaking sessions. There was also a guided tour in one of Ingram's warehouses in Mira Loma where we got an overlook of the daily processes in the warehouse.

Every day here in Orange County is sunny and the temperature lies around 85 degrees each day. Southern California is probably one of the best



Ingram Micro's office.



Top of the world!



Me inside the office.

places I have ever lived, not only because of the weather (which probably is the main reason) but also because of the surroundings; palm trees and beautiful beaches. From a Swedish perspective living in this environment is like being at a retreat everyday even though you are working. With these nice surroundings there comes plenty of exciting activities, such as hiking, surfing or mountain biking. The food here is another big benefit; there is everything from fast food to high end restaurants. One hamburger chain all visitors must try is In-N-Out due to its popularity. It is the Californians favorite hamburger place but I must say its simplicity did not impress me. Except from gaining weight here there are also many other things you can do as mentioned before. My absolute favorite activity has been

surfing. After catching my first wave I was stuck. Other activities I have spent my time on over here is canoeing in Newport between the multimillion dollar houses, visiting all the different malls and shopping centers, watching US open in surfing (surprise) and going to baseball.

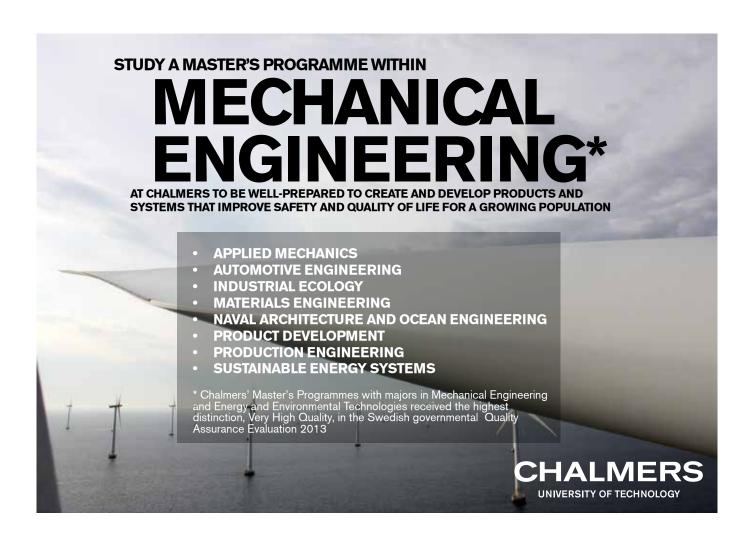
My main objective here in the US has been to absorb as much knowledge as possible, something that definitely was easily achieved. I have been given a lot of time for learning the company, the business and the work culture here in the states something I am really grateful for. My experience in SoCal has exceeded all expectations and I hope to return soon.

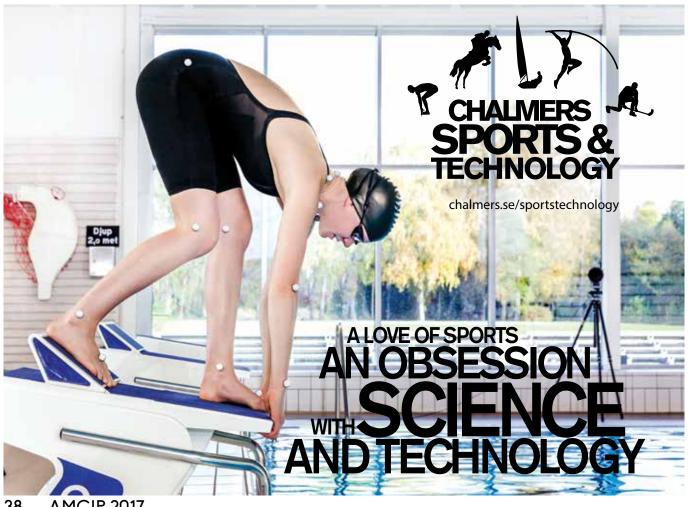
#### Ingram Micro Inc.

Hosting Interns since: 2017 | Employees: 30000 | Area of Business: Wholesaler of IT products and IT services | Website: www.ingrammicro.com

#### Axel Mårtensson

**Born:** 1995 | **Present Education:** B. Sc. Industrial Engineering and Managment | **Future Plans:** Continue with my Master's degree. | **Best Memory:** Catching a wave when surfing for the second time. | **Worst Memory:** Driving to and in LA.





























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#### An Internship, not by the Coast, Yet by the Water

The high-altitude city of South Lake Tahoe serves as home for all year around mountain lovers. A unique possibility of an internship, not by the coast, yet by the water. A town with a welcoming and friendly atmosphere that makes people come here, and then come back again.

When heading with a shuttle bus towards South Lake Tahoe, I honestly did not know what to expect. Was I ready to leave friends and family on the other side of the globe for a totally new life? When people ask me where I live, I no longer say Gothenburg, but South Lake The projects that Avalex Inc. manages usually Tahoe. After two months of living and working in South Lake Tahoe I can really say I consider this my home.

Being born and raised in Gothenburg, water and rainy weather was a big issue. In California water causes problem too, but in the opposite way. In fact, the limited access to clean water is one of California's most discussed problems. Avalex Inc. provides their customers with expertise in this area.

A Tahoe local civil engineer, Craig Morgan, founded Avalex Inc. 26 years ago. He handles the company's operations together with Michaela Morgan who has a Master's Degree in Civil Engineering from Chalmers University of Technology. Together, they work as consultants and provide neighbouring counties with expert knowledge within the area of civil engineering and environmental services.

66 With a couple of California's most famous ski resorts situated around the lake, the location of South Lake Tahoe is literally heavenly. 99

run at the same time. As an intern I have been responsible for different tasks such as environmental studies, statistical calculations and finally summarizing our work in reports. Another part of the job consists of doing field work where Avalex Inc. has ongoing projects. My first week included a field trip, a beautiful two hour drive north of Lake Tahoe, where we collected gas samples to analyze for contamination.

Besides the working experience an internship at Avalex Inc. provides, it also brings endless opportunities of outdoor adventures. As an intern at Avalex Inc. I get to regulate my office hours. That gives me the possibility to make the most of every day. To be able to go for a trail run or a yoga session when the sun rises over the lake is truly amazing.

In summertime the lake serves as a playground







Running across the finish line on San Francisco Marathon.

with water sports such as wake surfing, paddle boarding and cayaking. The trails up in the mountains offer astonishing views while hiking, mountain biking and running. When summer is over, the snow lovers of the city get more and more excited as the skiing season is just around the corner. With a couple of California's most famous ski resorts situated around the lake, the location of South Lake Tahoe is literally heavenly. The atmosphere is friendly and welcoming and making friends is easy with all of the activities this town offers. There is always someone like-minded who's up for some outdoor fun stuff!

Even though South Lake Tahoe is a mountain town up in the northeastern parts of California, the coast is not far away. A weekend roadtrip can easily be made down to San Francisco, Berkeley or Los Angels. Heading in another direction, Yosemite National Park, Death Valley and Las Vegas are within driving distance.

To travel the globe and go outside ones comfort zone opens up for endless opportunities. Besides visiting different cities, you make friends from all over the world. I am very grateful for the experiences and lifelong memories Craig Morgan and Michaela Morgan already have given me through this internship. Being able to combine a professional work as an engineering intern with the outdoor life of Tahoe has given me the best of both worlds. As a friend of mine said the other day, you don't visit Tahoe just once...

#### Avalex Inc.

Hosting Interns since: 2009 | Employees: 4 | Area of Business: Civil Engineering & Environmental Services | Website: www.avalex.us

#### Caroline Almkvist

**Born:** 1995 in Gothenburg, Sweden | **Present Education:** B. Sc. Industrial Engineering and Managment | **Future Plans:** Travel the world & continue my Master's degree abroad.

**Best Memory:** Running across the finish line on San Francisco Marathon and making a dream come true by hitting the Elite Qualifier time for New York Marathon 2018! | **Worst Memory:** Being trapped in a trash tornado at a landfill while collecting gas samples.



## Vår tids ingenjörskonst!

Ingenjörskonst sa man förr, lite som ett hedersbegrepp. Vi gillar det ordet fortfarande för det säger ganska mycket om oss. Framför allt för att vi så konsekvent fokuserar vår kompetens på specialiserade, kundunika lösningar inom VVS, kyla och storköksanläggningar. Vi har skärpan att driva de riktigt komplexa projekten och växla ut potentialen i den senaste tekniken.

Företaget har funnits sedan 1968 och grundades av Ingemar Johansson.

Vår huvudsakliga inriktning är VVS med kyla som vår viktigaste spetskunskap. Exempel är större kyl- och värmepumpsanläggningar såsom ishallar, bandybanor, processindustri mm där ammoniak används som köldmedia men även lite specialanläggningar med infrastruktur för fastigheter på vatten. Våra kunder finns inom livsmedelsindustrierna t ex slakterier, charkuterier, mejerier, fisk-, textil-, petrokemiteknisk industri men även fastigheter för landstings-, kommunala- samt privata sektorn.



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### MELLBY GÅRD

#### Hanna Wegelius, Kim Pietarila and Emanuel Sanne



### Making Sustainable Solutions in Mo-Town, Michigan

At the Detroit Metropolitan Wayne Airport, we were met by one of the other interns who was there to give us a ride to our 1 home, "the village". In the intern village, located in Lake Orion and about 45 minutes from Detroit, twenty international interns live in pairs in spacious three room apartments provided by the company. We could not have felt more welcome when we finally arrived. At the volleyball court, next to the pool belonging to the resort community of Indian Lake Village, the other interns were waiting for us. They were greeting us with a human pyramid and told us that the grill was already lit for tonight's BBQ.

One of many perks of having many interns living close to each other is that there is constantly something to do. With twenty interns you can easily make two teams of whatever sport you might want to play. We have therefore brought our big interest for training and physical activity over the Atlantic sea and are spending much of our spare time during the weekdays either on the sports field or reveals all new adventures to be had. in the gym.

The Indian lake, to which the area is named after, is just a stone's throw from the apartments. The surroundings are extremely beautiful with a lot of state parks and running tracks. A run around the nearby lake and having the sun shining is a refreshing start of the morning. Michigan is a four season destination with a spectacular nature. As each seasonal period breaks into the next, Michigan "It is fun to get real hand experience on how it is to work as an engineer abroad."

Wakeboarding, tubing and canoeing during the summer, watching the magnificent transformation of the forest when the leaves turn color during the "Indian summer" in October and snowmobiling, skiing and visiting the beautiful Upper Peninsula during winter.

If you want to travel outside the state or even the county borders you don't have to go far to find yourself in exciting cities like Chicago, New York, Boston or Toronto. And since we are a lot of







Canoeing near Ann Arbor

interns there is always someone up for a road trip during the weekends or holiday. FEV provides each apartment with a car, which makes it easier to organize trips.

FEV, which is a five minute drive from the apartments, is an internationally recognized leader in the design and development of powertrain, energy technology and conventional, electric and alter-native vehicle drive systems.

The company has provided engineering services to the automotive industry since year 1978 when they first cranked in Aachen, Germany. In 1985 FEV expanded their business to North America and in 1987 they settled down in the heart of American car industry, Detroit, or "Mo-Town" as it's also known as. They are a major supplier of advanced testing and services for some of the world's largest powertrain OEMs.

It is primarily the company's emission and engine performance testing which we work with. We have all been assigned projects for important and well-known clients where we have the role of engineering assistants. The tasks vary between collecting and analyzing emissions data to be the contact person for customers as well as holding presentations. It is fun to get real hand experience on how it is to work as an engineer abroad.

Most interns are working at the office in Auburn Hills, but projects can also take you around the U.S. which one of us, Kim, got to experience. He has spent a lot of time in both Denver, Colorado and Henderson, Nevada. This gives a perfect opportunity to experience engineering and at

#### FEV North America, Inc.

**Hosting Interns since:** 2014 | **Employees:** 450 | **Area of Business:** Powertrain and vehicle engineering | **Website:** www.fev.com

#### Hanna Wegelius, Kim Pietarila and Emanuel Sanne







Trying our best to become real Americans,

the same time see more of the American continent. As huge as America is, there's always something new to see, from the beautiful scenery of the Rocky Mountains to the more flat Michigan. The weekends away from Michigan were therefore mostly dedicated to exploring as much as possible of the surrounding sights and one of the coolest destinations so far has been Yellowstone National Park in Wyoming.

Though traveling is amazing, we are always glad to meet up back home in Michigan and hang out with the other interns. Our village is the perfect starting point for our exploration of North America.

P.S. Dont forget to listen to Emanuel and Hanna's podcast: Svenska Interns i USA.

#### **Emanuel Sanne**

**Born:** 1994 | **Present Education:** B. Sc. In Mechanical Engineering **Future Plans:** Creating a billion-dollar company. | **Best Memory:** Visiting
New York during Labor Day weekend | **Worst Memory:** Realizing that Winter is coming.

#### Hanna Wegelius

Born: 1994 | Present Education: B.Sc in Mechanical Engineering
Future Plans: To explore as many parts of the world as possible.
Best Memory: A visit to Toronto during Canada's 150th anniversary. The city is beautiful, the people are wonderful and the atmosphere was on top.
Worst Memory: Losing my mobile during the first stay in New York.
Moving to a new country with limited communication ability was a challenge.

#### Kim Pietarila

**Born:** 1993 | **Present Education:** B.Sc in Chemical Engineering with Engineering Physics | **Future Plans:** Starting my masters at Chalmers. **Best Memory:** Driving around New York and New Jersey in a convertible Mustang with my boy. | **Worst Memory:** Saying goodbye in Sweden.

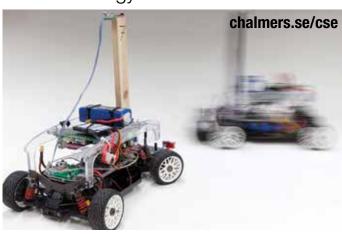




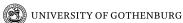
### What's in **IT** for me?

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### Med Norden som bas och världen som marknad



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# #AMCIP17



Internship Report



The famous Lombard Street in San Francisco.

# Living the California Dream with Prosperous Silicon Valley as our Working Place

Our internship was designed so that half our time was spent in the company's large scale preparation department and the other half in their oligo and gene synthesis department, enabling us to gain knowledge in both the initial stage of the process being to synthesize the genes and one of the final steps of the process being to amplify the successful DNA into larger scale. We were taught how bioengineering can be applied in the industry and how the work flow and dependency of each station was built.

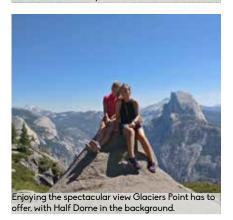
After a couple of days of sightseeing and hanging out with friends in New York it was with eagerness and anticipation we boarded the airplane that was going to take us to the west coast and San Francisco from Newark airport. As we stepped out of the plane and the California heat hits us we were even more convinced that this was the right place for us and that we were going to have the summer of our lives. Tired and exhausted after a long flight we arrived to the house in Newark that would be our home for the coming three months. Here we were going to share a room and at first we were a little bit surprised of how small the room actually was, but at the same time we told ourselves that we were going to make the most of it. The house was owned by a couple and one of them was already an employee of ATUM, the company we were going to have our internships at.

We have found a true friend in each other with loads of adventures experienced together and we have grown as individuals.

Monday the 19th of June we began our first day at ATUM, located in the same suburban area as our home, namely Newark. The whole Bay Area consist of thousands of tech companies as it is also here the Silicon Valley is located. As we enter the facility we are welcomed by the HR management where we initially start our day by signing a lot of new documents and guidelines followed by an introduction to the lab. The layout of the lab is a complete open landscape with working stations distributed over the entire area. The building is designed like a Swedish roundabout where one can get to any location of the facility by walking in a circular



The two of us and Linn, another Swedish intern at ATUM, in front of City Hall in San Francisco.





In front of the world's largest tree, General Sherman which we saw during our trip to see Sequoia trees,

manner. A major advantage for us interns was that the working hours were made flexible, meaning we could work extra one day and have the other day off. This made it possible for us to travel around California and experience the broad variety in nature, culture and climate the state has to offer. During our weekends we went on road trips to selected destinations, and at the end of the internship the number of road trips made rose to 13. San Diego, San Jose, San Francisco, Los Angeles, Las Vegas, Yosemite National Park, South Lake Tahoe, Santa Cruz, Big Basin National Park and Half Moon Bay were some of the highlights during our journey.

It was with mixed feelings we left California, blissful for all the people we had the opportunity to befriend and all the spectacular nature California offered us, but equally sad that our adventures had come to an end. Ending our internship at amazing ATUM we have come to realize two things; we have found a true friend in each other with loads of adventures experienced together and we have grown as individuals. This summer internship will be remembered as one of the best journeys we have done and we are truly grateful for this life-enriching experience.

#### **ATUM**

**Hosting Interns since:** 2012 | **Employees:** 80 | **Area of Business:** Gene synthesis and bioengineering solutions | **Website:** www.atum.bio

#### **Eveliina Hiltunen**

**Born:** 1995 in Gothenburg Sweden | **Present Education:** B.Sc. in Chemical Engineering **Future Plans:** Continue my Master at Chalmers University of Technology. | **Best Memory:** All the roadtrips we did during the weekends. | **Worst Memory:** Waiting at the DMV for four hours when we bought our car.

#### **Nour Adilien**

**Born:** 1992 | **Present Education:** B. Sc. in Bioengineering, M. Sc. in Materials Chemistry | **Future Plans:** To do a PhD in Polymer physics. | **Best Memory:** Celebrating my 25th birthday in Las Vegas. | **Worst Memory:** Sleeping for no more than 4 hours due to our road trips.



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### Excelling in the Big Apple

How did an electrician from northern Sweden end up in New York City, the mythical city that never sleeps? If I were to tell you the whole story I would need a lot more than 3000 characters. What I can tell you however, is the last step of this journey, the taxi ride from the airport. A tough negotiation outside JFK with a handful of sketchy individuals culminated with an old football pro from Eastern Europe (the truth of this statement can be questioned, I chose not to) ultimately winning the bid. After getting a taste of the most aggressive driving in my life I was finally home.

In order to avoid being taken for a tourist, I learned early on to avoid looking upwards in awe at all the tall buildings. Instead I focused on looking busy and slightly annoyed, my tactic gave fruit within a few days and two tourists, who had gotten lost, asked me for advice. I pointed them in an arbitrary direction and immediately felt at home in my new city. However, I must admit that it was not the city itself that intrigued me, wherever I would have ended up in this fascinating country I was convinced that I would have a good experience. If you look past the flaws of Americans they are incredibly nice and friendly people. And when I say flaws, I mainly refer to them having a hard with a fork and knife, or the fact that they have still to convert to the metric system. As a somewhat reserved Swede you probably can understand my surprise when a man approach me only to compliment me on my excellent umbrella. During my first few months in the city, I did my best to cross off all the biggest tourist

"Something I appreciate very much is how I was given responsibility from day one."

attractions from my bucket list, however the most interesting part about this city is not Times Square or the Statue of Liberty. The most interesting part is how vast and unpredictable this city can be, how every corner can hide something interesting and worth exploring. My ultimate goal before the end of the year is to find a genuine pub off the beaten path where they time understanding why you would eat a burger know my name and lets me order "the usual". New York in all its glory but what appealed me the most in all of this was my internship. To gain experience in a field where I got to utilize my skills from school was something I valued immensely, and after being here a few months I am even more convinced of how rewarding this



Team-building at the office includes marshmallows





The building to the right on this image is the building where i live. The boardwalk offers a spectacular view on my way to work.

Industrial Engineering and Management is a broad education with many career paths and I felt I wanted to narrow it down before I made the choice for my master's program. Before I went on this trip, I had not yet decided where I wanted my education to lead me, after a few months here I already have a better idea of where I am headed.

SKIM is a consulting company that, through market research, answers clients' business questions. An example of this may be a company that is launching a new product and wants to know the best way to position it in the market and how consumers will react to this. The work is project-based, which involves a lot of teamwork, something that has been incredibly rewarding, especially when all work is

done in English.

Something I appreciate very much is how I was given responsibility from day one, SKIM believes in their employees and invests a lot in their interns even though we have fixed-term employment. Another thing I really appreciate is SKIM's responsiveness, they listen carefully to what I want to get out of my time at the company and do their utmost to match that with the company's own needs. I already notice how much I have developed since I started at SKIM and look forward to all the experiences I will have in my luggage when I'm, in a gloomy day in June next year, will leave this amazing city.

#### **SKIM**

**Hosting Interns since:** 2013 | **Employees:** 160 | **Area of Business:** Market Research **Website:** www.skimgroup.com

#### Fredrik Ingelsson

**Born:** Östersund Sweden | **Present Education:** B. Sc. Industrial Engineering and Managment **Future Plans:** Finish my M.Sc and pursue a career in management consulting. | **Best Memory:** On my way home from work, walking along the Hudson looking out over the Manhattan skyline and feeling at home for the first time. | **Worst Memory:** The anticlimactic, "once in a lifetime", solar eclipse.











56 AMCIP 2017

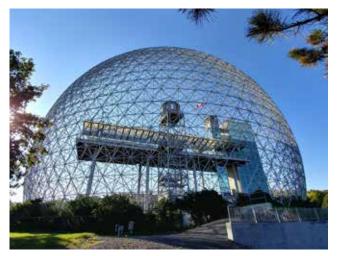






# #AMCIP17









Internship Report



# Surrounded by Billions of Points in the Fascinating Technology of Remote Sensing

The city of Calgary is a Midland city with a population of more than one million. I quickly noticed why I am one of the few taking the bike. Everything is so far away. Everyone here takes the car to anywhere they go, even if they are simply going for an ice cream, 100 meters from home.

This does not make the biking trails any better for Calgary's almost only biker. I really enjoy Calgary and Canada though. Despite the fact that it's a major city and lots of people live here, the city still seems like a small city. A small metropolis so to say. Residents here are very friendly and helpful and the hospitality has been fantastic since I arrived. First by the Homestay agency, followed by my Homestay family and lastly the staff at Skytech. I live in a Homestay with "mom" and "dad" (as we all call them) and my four Korean "siblings". I really have a great time here and we do loads of fun adventures together. It is a fantastic experience to have the opportunity to live in a Canadian family (even though it's mostly Korean people in it) and learn about the culture of both Canada and South Korea. Sometimes I even believe that I have learned more Korean than English since I got here.

"I have learned so much during my first months here and it has been a valuable experience."

Skytech Solutions is the company where I am conducting my internship. It is a relatively new company, with only a handful employees. The company specializes in innovative remote sensing and collecting data with UAV's as well as other vehicles. The high-density LiDAR data we collect are billions of points including GPS information that gives an accurately 3D image of the area we scanned.

LiDAR is still a relatively new service that many companies do not even know exists and even less they they might have a use for. Because of this and us providing services for very different







Me out on fieldwork with the drone I named "Kevin".

purposes, we have to provide custom solutions for our customers as every project is different from the other. At the office where I spend most of my time, I process data of LiDAR that we have collected for our customers. When I do not have any processing tasks, I do work on projects where I am developing programs which automatically process things in the data we want. Occasionally I get the opportunity to leave the office and go out to the field and collect data. This can be done in numerous ways, however we mainly use a drone for this process. When we are in the field, my task is to operate and monitor the drone. This is, without exaggerating, one of the coolest, most exciting

but also toughest part of my internship. I have learned so much during my first months here and it has been a valuable experience. However, I still have a long time left of my internship at Skytech. I am really looking forward to all the experiences that are to come, both work related, but also having the chance living abroad with many future events and travels. I hope the summer will stay as long as possible, because one of the few things I am not looking forward to is the cold Canadian winter.

#### SkyTech Solutions Ltd.

Hosting Interns since: 2016 | Employees: 5 | Area of Business: Remote Sensing Website: www.skytechsolutions.ca

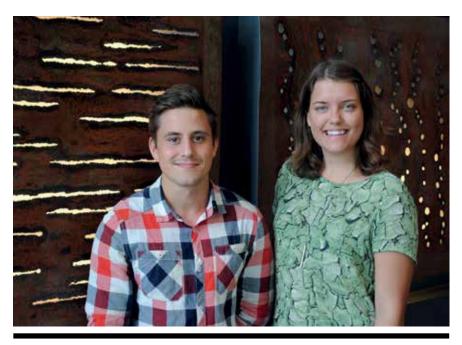
#### Pontus Jörgensen

**Born:** 1994 in Ängelholm, Sweden | **Present Education:** B. Sc. Civil Engineering Future Plans: Try to get an internship at a company in Sweden before starting my master.

**Best Memory:** The amazing hiking days in the Rocky Mountains. | **Worst Memory:** When I hit a deer with my rental car and thought it would cost me a crazy lot of money for the repairs.







Civilingenjörsstudenterna Ingrid Sjöberg och Isac Törnberg.

### VÅRT SUMMER INTERNSHIP

### – INTERNATIONELLA KONTAKTER OCH PROBLEMLÖSNING

Isac och Ingrid fick arbeta självständigt i projektform via Xylem Summer Internship. För civilingenjörsstudenterna Ingrid Sjöberg och Isac Törnberg var Xylems Summer Internship en möjlighet att utmana sig själva med ett tekniskt komplext projekt som satte deras problemlösningsförmåga på prov och samtidigt innehöll mycket frihet under ansvar. Ingrid och Isacs sommaruppgift var att energioptimera en grupp blåsmaskiner genom att arbeta fram en specifikation och en styralgoritm.

**SOMMAREN 2016** arrangerade Xylem Sverige, som fokuserar på att skapa innovativa lösningar för världens vattenbehov, tre Summer Internship program som alla befinner sig i teknikens framkant. Alla tre programmen berör nya produktområden och innovationer i pumpindustrin och varje program svarade upp till ett konkret behov från någon av Xylems affärsenheter.

 Vi hade även en del internationella kontakter i samband med projektet, bland annat med tillverkare i Korea och med Sanitaire i USA, säger Ingrid Sjöberg.

Ingrid och Isacs Summer Internship uppdrag gick ut på att energioptimera en grupp blåsmaskiner som ingår i Xylems produktsortiment och samtidigt tillgodose den biologiska processens behov. De tog fram en specifikation samt en styralgoritm för energioptimering som kan användas som underlag for programmering av ett fullt koncept för styrning och energioptimering av blåsmaskiner.

– I höst inleder jag mitt fjärde år på civilingenjörsprogrammet med inriktning mot maskinteknik på KTH. Jag gillar att konstruera grejer och sökte direkt när jag läste om Xylems Summer Internship. Jag gillade upplägget, som skiljer sig från andra sommarjobb eftersom vi fokuserar på att arbeta självständigt med problemlösning snarare än att kastas direkt in i den ordinarie verksamheten, säger Isac Törnberg.

#### Blev intresserad av Xylem Watermark

Ingrid Sjöberg, som i höst påbörjar sitt femte år på civilingenjörsutbildningen med inriktning mot teknisk fysik, med fokus på elektroteknik med internationell inriktning på tekniska högskolan vid Linköpings universitet, attraherades av Xylems Summer Internship eftersom det gav henne en möjlighet att arbeta med vattenreningsteknik på ett innovativt sätt.

-En kompis hade gjort praktik på Xylem och rekommenderade mig att söka mig hit. När jag läste på lite om verksamheten och det visade sig att Xylem är ett globalt teknikledande företag i sin nisch, att de har ett aktivt miljöarbete och dessutom driver den ideella satsningen Xylem Watermark så blev jag ännu mer intresserad, säger Ingrid Sjöberg.

De tyckte båda att det kändes roligt med ett uppdrag som verkligen fyller ett behov, ett projekt som Xylem kan ha stor nytta av framöver. Ingrid och Isacs tekniska kompetenser kompletterande varandra i projektet, Isac fick mycket användning för sin maskinkompetens medan Ingrid hade nytta av sin kompetens kring reglerteknik.

#### Testade olika optimeringsalgoritmer

– Vi började med att sätta oss in i hur reningsverk fungerar och därefter identifiera exakt vilken process vi skulle optimera. Vi var bland annat ute på studiebesök på ett reningsverk och på Xylems fabrik i Emmaboda. Vi hade regelbundna avstämningsmöten med kollegor från Xylem för att säkerställa att vi var på rätt spår med projektet. I nästa steg började vi testa olika optimeringsalgoritmer, säger Ingrid Sjöberg.

- Jag kan definitivt rekommendera andra studenter att söka sig till Xylems Summer Internship program. Hela ansökningsprocessen och mottagandet på företaget kändes genomtänkt och vi har verkligen blivit väl omhändertagna hela sommaren. Den uppgift vi fick påminner till stor del om de praktiska uppgifter vi arbetat med i skolan, med den skillnaden att det här var ett verkligt case och att vi själva fick samla in all data och övrig information som vi behövde för att lösa uppgiften. Det påminner mer om hur projektarbete fungerar i arbetslivet, det känns bra att vi fått träna oss på det arbetssättet den här sommaren, säger Isac Törnberg.



I visited Ottawa and Montreal with Adam and Axel over a weekend. This picture was taken on the top of Mount Royal,

### A Cold Welcome to a Warm City

Experiencing temperatures from -20° C to 35° C in just one week's time, this is my story about the first three months in one of the most multicultural cities in the world, Toronto in Canada.

With the New York kick-off in my rearview mirror I now found myself stuck, stuck in the middle of rush hour traffic leaving one of Toronto's airports in a rental car. A bright yellow Ford Mustang Cabriolet that barely had enough room for just my luggage. With my new home address in the downtown core of Toronto set on my GPS I slowly moved through traffic with an over-whelming view of the skyline in front of me. Using Airbnb, I'd found a place to live and I now had a few days to explore my new surroundings before the internship at Mobile Climate Control(MCC) started.

With its 42 year old Swedish roots MCC is a company that today has grown to all parts of the globe. The company develops, designs and manufactures custom engineered HVAC systems (Heating, Ventilation and Air Conditioning) for most types of commercial vehicles. A big advantage for MCC is that the company possesses the ability to test their own designs, both before and after it goes into a customer's vehicle. Doing this ensures the high quality and precision that MCC are known for

"My spare time would best be described as busy, very busy."

in combination with a closer collaboration with the customers.

As an Engineering Intern in the test facility my time is mostly spent with preparing and performing a wide variety of tests followed by the summarizing of the recorded test data into reports. The first test I've got to partake in during my very first days was a "Defroster Test" on a fire truck, which is performed inside a climate chamber with the temperature set to -20° C. It's a very impressive system which enables us to control the climate inside to any temperatures between -40° C to +60° C. This enormous chamber is long enough to fit vehicles up to almost 65ft (20m). My spare time would best be described as busy, very busy. In company with Anton, another Swedish intern at MCC, we've spent a lot of time with Adam and Axel from AMCIP trying to maximize our experiences in the Canadian culture. Together we've been to







Downtown Toronto was (almost) abandoned during Labour Day.

Canadian football, baseball and the Canadian air guitar championships, where some of us actually participated without any success. We've really done it all this summer - Canada's 150th birthday, Canada's biggest ribfest, local town music festivals, Niagara falls, lost money at a casino and telling guards we're Swedish NHL players so we could cut the lines at clubs.

To summarize, my trip was planned to the extent of that for the first month I had a car and a place to live, and after that I didn't really have a plan. I often referred to this low level of planning as putting myself outside of my own

comfort zone with the goal of experiencing some personal growth which I hope worked!

I would like to end with a big thank you to all my colleagues at MCC and a special thanks to my supervisor Chadwick Currier for giving me the opportunity to come here and work at MCC. So far it's been an amazing experience and I'm very excited for the time I have left here.

#### Mobile Climate Control

Hosting Interns since: 2009 | Employees: 360 | Area of Business: Vehicle HVAC Website: www.mcc-hvac.com

#### Robert Sjövall

**Born:** 1992 in Stenungsund | **Present Education:** B. Sc. Industrial Engineering and Management **Future Plans:** Heading back to Sweden after New Year's to work before starting my masters this fall. | **Best Memory:** A weekend up in the country at a colleague's cottage. **Worst Memory:** Finished 2nd in a Pie-Eating contest. The winner cheated.





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### I ALLT FRÅN FORMEL-1 TILL **BLÖJTILLVERKNING FINNS** TILLÄMPAD MEKANIK

Det mesta du ser på vägen till skolan, från fönstret på en skyskrapa eller under motorhuven på en bil kan klassas som mekaniska tillämpningar. Samhället kommer kräva nya effektiva och uthålliga system och du som väljer att utbilda dig till civilingenjör kommer bidra med lösningama. Oavsett var och vad du vill arbeta med är studier vid institutionen för tillämpad mekanik en perfekt start på en rolig, viktig och hållbar karriär.

Läs om våra verksamheter, mastersprogram och forskarskolor på www.chalmers.se/am

















### Automotive Engineering in the Motor City

It was in the middle of January when we landed at Detroit Metropolitan Wayne Airport. Even though it was late and cold we were warmly welcomed by some interns from FEV who were there to pick us up. As Michigan and Detroit are known as the automotive center of America, it didn't take long until the highways were filled with big typical American signs with car commercials along with fast food chains at every street corner and of course, pick up trucks.

Our home destination was called Indian Lake Village or "the village" as we called it which is where all the interns were living. Located in a small town outside Detroit called Lake Orion, but before getting home we had to fulfill the long living tradition of eating at Five Guys as the first thing we do when entering the States.

When arriving in the village which is a small community just beside the road we passed a volleyball court, tennis court and a pool. First comment that our fellow interns said that summer here isn't bad at all and we should look forward to have that everyday after work when the season is arriving. We got dropped off at our apartments and were positively surprised by the spacious and clean two bedroom apartments with private bathrooms that two interns were sharing together. Filled with all necessities such as cleaning supplies, kitchen supplies, washing machine and dishwasher. We were barely able to bring our bags into our bedrooms before our fellow interns dragged us over the street to another intern apartment

66 Having this big community of interns, maybe around 20 interns, was definitely a big contribution to our experience here. 99

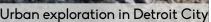
where they already arranged a welcome party for us. Feeling welcomed was inevitable! Having this big community of interns, maybe around 20 interns, was definitely a big contribution to our experience here. Activities, hang outs or trips were never a problem when planning. There was always someone there who would join, even for your craziest ideas. So we did everything from sports after work with two full soccer/basketball teams, going out eating, heading down to Detroit or around Michigan or flying/driving over the country over a weekend.

Michigan itself is an interesting state with plenty of beautiful nature destinations. Trips around Michigan were never a problem since we got a company car. Summer activities filled with driving the coast of Lake Michigan, visiting Upper Peninsula, Sleeping Bear Dunes, tubing,



Watching the sunset in Miami!







Hiking in Grand Canyon, Arizona.

canoeing and a lot more. Winter activities filled with northern lights and snowmobiling. Traveling outside Michigan was never a problem. You have your neighbouring states as Illinois which has Chicago just four to five hours away. Canada with the Niagara falls and Toronto are even closer and if a road trip was not an option, then the longest flight across the country was never longer than three to fours hours.

FEV is just a five to ten minutes drive from the village. FEV is an internationally recognized leader in the design and development of powertrain, energy technology and conventional, electric and alternative vehicle drive systems. They are a major supplier of advanced testing and services for some of the

world's largest powertrain OEMs. The company is originated from Aachen, Germany and has since 1978 been providing engineering services. Their expansion to FEV North America was in 1985 and they settled in Michigan 1987.

We work in the department "Light-Duty Diesel Engines" and most of the work tasks involves some kind of emission testing towards other big and well-known companies within the automotive industry.

Most of the work, for us interns, is being held at FEV North America in Auburn Hills of around Michigan. Some of us were able to work in cities close to FEV and even further away such as Colorado, Nevada and California.

#### **FEV North America**

Hosting Interns since: 2014 | Employees: 450 | Area of Business: Powertrain and vehicle engineering | Website: www.fev.com

#### Johnny Nguyen

Born: 1993 | Present Education: M.Sc. in System, Controls and Mechatronics Future Plans: Travel, travel and travel! | Best Memory: Hiking trip in Nevada, Arizona and Utah. | Worst Memory: Cold winter mornings in Michigan.

#### Viktor Holm

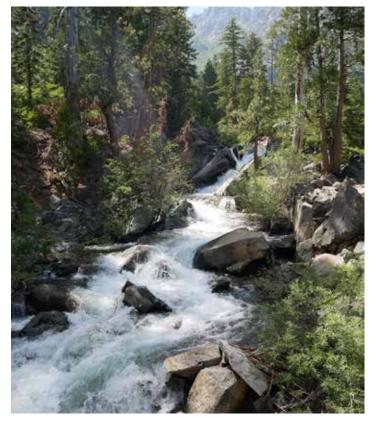
**Born:** 1994 | **Present Education:** M. Sc. in Automotive Engineering | **Future Plans:** Continue my studies. | **Best Memory:** Working on a customer project in Denver, Los Angeles and Las Vegas. | **Worst Memory:** A bad motel in Vegas.















# #AMCIP17











Internship Report



# Greetings From AMCIP 2018





After a summer full of expectations and a hunger to get started, AMCIP 2018s work towards internships in North America has finally begun. Ahead of us is a year full of hard work, but also a year full of opportunities, new experiences and memories. At last, our common, final goal will be reached – the challenge that is an internship abroad. With a bachelor from Chalmers, these students are well prepared and eager to apply their knowledge to a North American company, experience a new culture and build new relations.

An aspect that we, the board of 2018, find extremely important is the team spirit of AMCIP. Slowly but surely, this association that contains members and board members, is becoming a group that works together and supports one another. This is a group of ambitious, motivated and extremely competent students who all aim to overcome the challenges this year brings.

Regarding next year, we are going to celebrate the 55th year of AMCIP! An exciting milestone that will be commemorated by a banquet for all members and alumni. It is an honor for the board of 2018 to host this event and we are truly looking forward

to meeting and exchanging experiences with our alumni. We are determined to make the anniversary, as well as AMCIP 2018 the best it can be, and we are very grateful for the work that our predecessors have done. Without their dedication and enthusiasm, our organization would not be as reputable as it is today.

We want to thank the board of 2017 for their hard work last year. We are excited to work under the new name that now better fits our mission and we are eager to continue to develop AMCIP and contribute to its great reputation. We hope all of the members of 2017 are having a fantastic year abroad and we look forward to reading about all of their exciting stories contained within this internship report!

Finally, we would like to extend a sincere thank you to the hosting companies in North America for their hospitality and we would also like to thank all the companies in Sweden who have supported us throughout the years. Without you, none of this would be possible. We are looking forward to another great year of cooperation.

**AMCIP 2018** 

#### **Board Members AMCIP 2018**

Chairman: Johannes Henriksson | Treasurer: Olle Hansson | Sales Manager: Christian Ellsén Internship Coordinators: Josefine Ohlsson and Linnea Lindberg | Editor: Gabriella Müntzing

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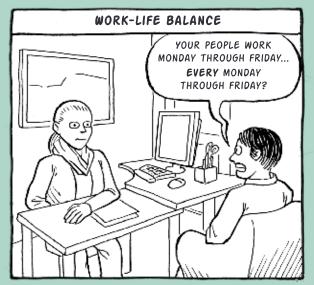




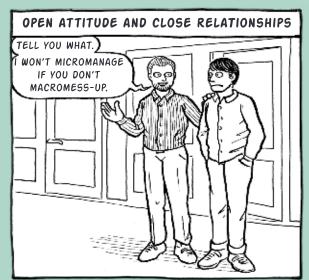


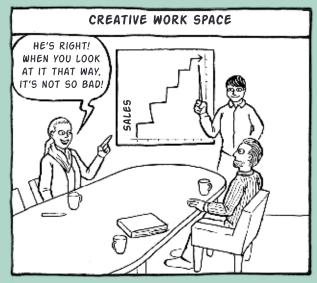
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