NL AI Coalitie

SMART INDUSTRY HUB
Noord-Nederland

MINI SYMPOSIUM PREDICTIVE MAINTENANCE

27 OKTOBER 2022

LOCATION: SKILL, IDZERDAZAAL

PROGRAMME

13.00 uur Welcome

13.15 uur Presentation Schaeffler, Dennis Fischer
13.45 uur Presentation KxA, Kjeld vd Schaaf
14.15 uur Introduction Professors RUG related to PM
14.45 uur Break including networking opportunities
15.15 uur Presentation KLM, Sidney Stokkers
15.45 uur Presentation Dutch AI coalition, Bart Beima
16.15 uur Closure with Dutch borrel(happen)

* Life extention bearings (From manufacturer towards services)
* Calculating predictive maintenance, methods and results
* Various Introductions

Predictive maintenance in practice: a journey at KLM Engineering & Maintenance
National developments on projects

Kjeld v.d. Schaaf is a systems architect and Manufacturing Execution Systems (MES) expert. He studied nuclear physics at the university of Groningen and worked as Lead Engineer for the LOFAR radio telescope. In 2006, he founded the company KxA. The work of KxA focussed on systems improvement through advanced data analysis in the field of technical systems and industry. KxA has developed dedicated software platforms to support these tasks and implement real-time data management systems in business critical environments. Today, these software platforms include Manufacturing Execution Systems for the industry.

In my presentation I use the example of analysis work on passenger trains to introduce our approach to predictive models and predictive maintenance in particular. The studies involve train engines, an air compressor and snow. The presentation will show in some detail how these analyses were done, and give insight into the statistical mathematical methods applied.
I will also talk about an approach to generalise the data crunching needed in predictive maintenance for customer specific equipment.

My name is Bart Beima. I was born in the North of the Netherlands in a small village called Hardegarijp near Leeuwarden. As a fanatic cyclist I love to continuously improve and win.

Before I started working for the Northern AI coalition, I worked as Branche Director Life Science Industry and Global Branche Driver at Brunel. Next to that, I set up a Maintenance Excellence Centre. Together with partners Wonderware, Cothink, Actemium and Maxgrip, we created the “next generation” maintenance manager and reliability engineer and developed a new course about operational technology; resolving resource problems. All courses are available for highly skilled young professionals who have just graduated and for companies who want to educate their employees. Currently I work as an independent professional for the Northern AI Hub, which is a partner of the Dutch AI coalition. I’m working on projects in the field of (predictive) maintenance and industry, and on setting up a learning community for smart and sustainable mAIntenance.

Predictive maintenance is one of the biggest drivers for upskilling people. Jobs and processes are changing, technology is increasing and assets are ageing... That is why I always say: don’t forget the people, the most important asset.

Mijn naam is Dennis Fischer, Field Sales Engineer bij Schaeffler Nederland BV.

Mijn expertise ligt op het gebied van accountmanagement en ondersteuning van technische vraagstukken.

Sinds acht jaar werk ik bij Schaeffler, de grootste lagerfabrikant ter wereld.
Hier ben ik sales verantwoordelijk voor klanten in Noordoost-Nederland, variërend van OEM en distributeurs tot MRO-bedrijven.
Ongeveer drie jaar geleden is mij gevraagd het focusgebied Industrie 4.0 in Nederland te coördineren voor Schaeffler. In deze rol richt ik mij met name op oplossingen met betrekking tot smeersystemen en condition monitoring, die we tegenwoordig Schaeffler Life Time Solutions noemen.

Ten aanzien van Predictive Maintenance hebben we als bedrijf meer dan 20 jaar ervaring in Condition Monitoring. We beschikken over tools om data te loggen evenals de middelen, ervaring en mensen om deze data te analyseren en op juiste wijze te interpreteren.
Daarmee adviseren wij onze klanten en ondersteunen wij ze op het gebied van condition based maintenance. Onze klanten komen uit verschillende industrieën, zoals pulp & paper; food & Beverage; etc..

Tijdens het symposium wil ik graag iets vertellen over de mogelijkheden voor en het belang van predictive maintenance van met name de mechanische delen in de processen.

My name is Sidney Stokkers and my areas of expertise are Aerospace, maintenance, big data and agile/scrum.

I am a graduated Aerospace Engineer. My first job was Consultant operational excellence at Berenschot in 2014. In this job my main task was to optimise manufacturing and maintenance processes, for example for Fokker Services. I joined KLM E&M in 2017 as Product Owner predictive maintenance. In 2019, we received an award for ‘best operational innovation’ within KLM. In 2021 I returned to Berenschot where I work as a Senior consultant. My work consists of advising on digital transformation projects in maintenance and industry.

At KLM E&M, I was responsible for the development of predictive maintenance practices for the widebody and narrowbody fleet. I lead the process of defining predictive maintenance strategy, data capture, data processing, data storage, data science, model development and practical use in maintenance operations. Together with the development team we implemented multiple models on air conditioning, cooling, braking, electrical systems for Boeing 787, 777, 737 and Airbus A330. Additionally, our team evaluated external suppliers of predictive maintenance software for the E&M maintenance landscape.

It is essential to set up a multidisciplinary agile team of business representatives, engineers and IT staff to co-develop predictive maintenance practices. Strong collaboration enables new insights that can be translated into useful applications for your company’s operational processes.

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Predictive maintenance in practice: a journey at KLM Engineering & Maintenance
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Maryam Ghandchi Tehrani, Professor
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Faculty of Science & Engineering
Research group: Dynamics and Vibration

Area's of expertise
Dynamics, Vibration testing, Active vibration control, Energy Harvesting, Nonlinear Systems.

Work history
My research is in the field of active vibration control, energy harvesting and nonlinear dynamics. I am interested in both theoretical and experimental work. I develop control algorithms for vibration suppression of engineering structures. I also carry out experiments to analyse the vibration behaviour of systems.

Practical examples of her research
I have worked with leonardo, a helicopter company in the UK for vibration control of helicopters. I have collaborations with other industries such as Ultra Electronics in developing control methods and with TWI for structural health monitoring.

Contact
I would like to work with companies in vibration analysis, health monitoring and control.

Jasper Veldman, Associate Professor
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Faculty of Economics & Business
Research group: Operations

Area's of expertise
Technology management, Asset Management.

Work history
After finishing my studies at the University of Groningen I obtained a PhD in the area of asset management. I worked for four years at the University of Twente where I learned more about supply chain management. I returned to Groningen in 2013, and I now teach the courses Technology Management (bachelor's level) and Asset Management (master's level). Research activities revolve around supply chain management, condition-based maintenance, and sometimes a combination thereof.

Practical examples of his research
Condition-based maintenance and production control optimization, service logistics for offshore wind farms.

Message
Predictive maintenance has been around for some time, but it is also hard to implement. Let's try to understand why and make it happen!

Contact
I'm always open to exploring cooperation with any company interested in maintenance and service logistics, to tackle practically and scientifically relevant issues. This can be done in many ways: master's thesis, guest lectures, making company cases, larger research projects.

Andrea Capiluppi, Associate Professor
Email: capiluppi@rug.nl

Faculty of Science & Engineering
Research group: Software Engineering and Architecture (SEARCH)

Area's of expertise
Software Engineering, Software Maintenance, Open Source software.

Work history
I have been a Senior Lecturer in England between 2004 and 2020. I am now working as an Associate professor in the Computing Science department at RUG

Practical examples of his research
In the past three years since I joined RUG I have collaborated with 40 companies, and delivered 80 software-related projects on topics chosen by industrial partners. This was achieved as part of the courses that I teach: Software Engineering and Software Maintenance.

Message
There is an excellent opportunity for companies to work in collaboration with our Software Engineering course: formulate your software-related problem or need, and upload it at https://unico.web.rug.nl

Contact
Companies willing to produce their software-related needs, please get in touch.

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Our LinkedIn page of the industry-academy collaboration is:
https://www.linkedin.com/company/unicorug/

The web portal that is used by our collaborators to upload their project proposals is: https://unico.web.rug.nl