

IMCZ NEWS

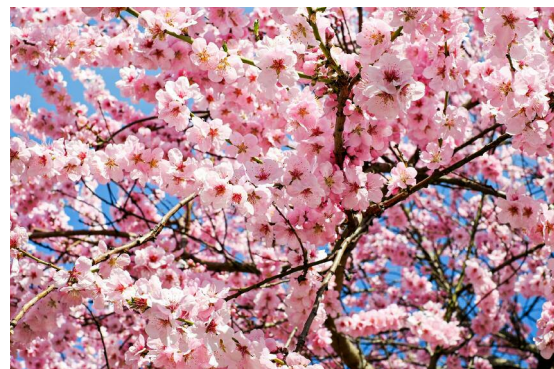


APRIL – JUNE 2023

EDITORIAL

SPRING IS COMING

The days are getting longer and more temperate – although the Winter was hardly a harsh one. The cherry blossom is starting to appear and hopefully we've had the last of the hard frosts / snow in Zug for the year. Now thoughts turn to holidays and travel. For me, it's soon the start of the sailing season and I can hardly wait. Back to the boat and cast off. Now it's Easter, time to join the queue at the Gotthard en-route to warmer climes and relax for a few days before joining the return queue to the North. Or perhaps this year, take the train....



I hope you all have a good holiday and enjoy the break and have an enjoyable Easter.

In this edition of the Newsletter there's a contribution from Matthias Herron from *Die Dargebotene Hand / Heart2Heart*. This well-known psychosocial hotline is now available in the English language daily from 18:00 to 23:00.

The issue of mental health, or people just feeling desperate, is often minimised in our society, perhaps for fear of showing vulnerability or appearing weak or sometimes from a sense of helplessness regarding how to support someone else. I really welcome his initiative to reach-out to the IMCZ and make us aware of the service. Feel free to share this information with others. You never know who is in need. You may save a life.

Alan Cattell

FUTURE EVENTS

For future events, please check our website at <https://imcz.club/Events>.

Also, please note the forthcoming **Disco Nights** event on 12th May. Come and party!

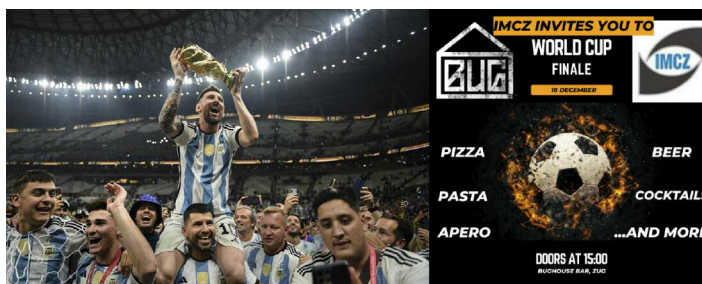
RECENT EVENTS

We've had a very busy time in the last quarter. Here's a summary of what's happened. Our thanks to all who participated and / or organised the events.

FIFA World Cup Final Private Party

Sunday, December 18th the final of the World Cup took place in Qatar between France and Argentina.

IMCZ organised a private party with viewing of the match at our favourite venue Gotthardhof. Around 15 members, friends and family attended the event, and a great time was had by all. Alfie Godenzi and his team laid on refreshments, including snacks, pizza and pasta menu, beer, wine, cocktails or soft drinks. Gotthardhof Bug Bar provided a perfect venue with high-resolution TV to watch the greatest football match. And a dream final it turned out to be with 3 goals apiece after 120 minutes and a dramatic penalty shootout that Argentina won, making Lionel Messi's team world champions for the third time.



In the interval we ran a quiz on the world cup. The winner was Timo Pitkänan, whose kids declared that their dad knew next to nothing about football. The prize was kindly donated by the Gotthardhof.

Richard Beswick

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RECENT EVENTS

2023 IMCZ Ski Weekend: Flims LAAX

Five daring IMCZ skiers, including two club presidents, braved the elements to ski the soft snows of **Flims LAAX** at the end of March. Richard Beswick, Bill Lichtensteiger, Timo Pitkänen, Jukka-Pekka Makinen and his lovely wife, Taina, and I had a wonderful, slightly wet skiing adventure in the vast LAAX ski area.

With our staging area at the mid-mountain **Plaun** location, we were able to ski various sections of the resort, including the two valley descents into both Flims and Laax from **Crap Sogn Gion**. The long run through the trees from **Nagens** to the Flims base area was particularly enjoyable with some challenging soft moguls in a few sections. Earlier in the weekend, Richard and I managed to rack up some nice runs on the steep area off the **Treis Palas** chair. The weather wasn't perfect, making the **Vorab glacier** inaccessible, but it didn't stop us from getting in a fair amount of vertical meters over the two plus days.

When we weren't skiing, we enjoyed some well-earned libations and also wonderful food in two special restaurants. On Friday night, some of us enjoyed local delicacies at the **Chesa** restaurant in Flims Waldhaus and then the whole group had a unique, private experience in the historic stone Keller of the **Hotel Bellevue** in Flims Dorf on Saturday night. Richard was particularly keen on the traditional Graubünden fare and took the chance to sample **Capuns** and **Pizokels** on consecutive evenings. All and all, our group had quite a blast, and we're eagerly looking forward to another destination next season.

Additional Information:

Flims LAAX: www.filmslaax.com

Chesa Restaurant: www.hotelchesa.ch/

Hotel-Restaurant Bellevue: <https://belvueflims.ch/en/something-to-savor/>

Capuns: www.chur.graubuenden.ch/en/capuns/recipe

Pizokels: www.chur.graubuenden.ch/en/pizokels/recipe

Contributed by IMCZ Sports' editor Joseph Dow



Flims View Fence



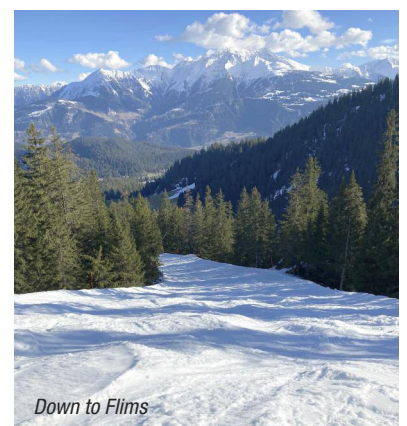
IMCZ Keller Dinner



Flimsenstein



Richard on the hill



Down to Flims

IMCZ

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Thumbnail biographies of board members can be found on our website www.imcz.club under 'About Us' section

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RECENT EVENTS

The 27th IMCZ Burns Supper 2023

- The Host: President Bill Lichtensteiger
- The Master of Ceremonies: Steven Knight and Address to the Haggis
- Selkirk Grace: Pauline Raeymaekers
- The Immortal Memory: Alan Cattell
- Toast to the Lassies: Lindsay Johnston
- Reply from the Lassies: Shona Cattell
- Piper: Craig Holmquist
- Raffle Ticket Hawkers: Timo Pitkänin & Cledan Mandri-Perrott
- Chief Paparazzi: Ben Grech



Christian Hembel, Manager of the Brandenburg Restaurant where the event was held.

The 27th IMCZ Robert Burns Supper was a night to remember! The atmosphere, conviviality, inebriation, ceremony, bagpipes and even the smuggled haggis were all perfect and enjoyed by some 60 guests.

We were fortunate enough to have a marvellous cast of genuine Scots to entertain, amuse and educate us on the culture of their fair land.

The essential ingredient of our feast the evening was the Haggis, a wee beast found only in Scotland. A team of 7 intrepid men from our club, volunteered to hunt the elusive pedigree Scottish Haggis. The mission was totally successful, and all the brave poachers returned safely, with nothing more than a whisky hangover.

President Bill Lichtensteiger opened the evening with a warm welcome and an introduction to this iconic IMCZ event.

Steven Knight then took over as the Master of Ceremonies, guiding the audience through the traditional Address to the Haggis with its accompanying Piper, Craig Holmquist.

Pauline Raeymaekers gave a beautiful rendition of The Selkirk Grace.

Following her Alan Cattell's gave The Immortal Memory, giving an insightful introduction to the life, loves and works of Robert Burns.

Lindsay Johnston gave a rousing and highly amusing Toast to the Lassies.

Shona Cattell made a spirited Reply on behalf of the Lassies.

Raffle ticket hawkers, Timo Pitkänin and Cledan Mandri-Perrott, kept the evening lively with their enthusiasm.

Ben Grech was the Chief Paparazzi of the event, capturing the evening's joyous moments.

Plentiful aged single malt whisky lubricated the event and complemented the delicious haggis.

And of course, no Burns Supper would be complete without the excellent venue, service and delicious food and drinks provided by the Brandenburg Restaurant under the management of Christian Hempel.

All in all, it was a night of friendship, good food, and great company, a night that will be remembered fondly till the next Burns Supper in 2024.

Richard Beswick



The Haggis

As is traditional, the haggis was piped in and then Steven Knight recited the poem "Address to a Haggis". This is a very tongue-in-cheek poem in praise of the traditional food, extolling its merits with negative comparisons with French fare. It's a fun start to the serious business of the evening (eating and drinking).

The Immortal Memory

The only serious (semi) part of the evening and, regarding the memory of Robert Burns, the most important. It's an honour to present. There is no formula for this, but the goal is to give a perspective on the life and (many) loves of the great poet and to show the impact he has had on Scottish culture over the years since his death in 1796. An imperfect man, he was a poet-of-the-people like no other.



Toast to the Lassies

This is the traditional humorous celebration of the fair sex, as one would have imagined Burns himself would have given. With many references to his many loves and considerable number of children, it's a fond, sometimes bawdy but always loving celebration of our better halves.

Reply from the Lassies

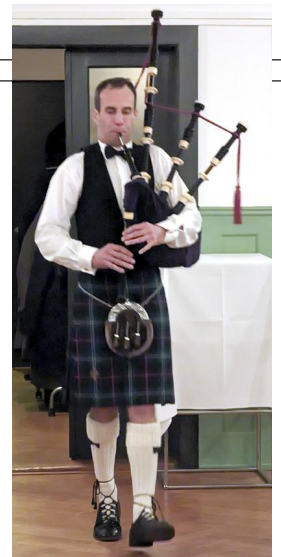
This is an equally humorous reply to the previous toast. Polite banter is perhaps the best description. Nonetheless, it's a thank-you reply to the heartfelt toast to the Lassies.

The Piper

The night would not be complete without a piper. With Craig Holmquist we struck gold.

Some musical instruments are painful to listen to when not played well – the violin springs to mind. But the pipes are excruciating when played badly – because they are also LOUD.

Fortunately, with Craig there is no such fear. He's a real student of the pipes and traditional pipe music. It was an immense pleasure to listen to him again, especially his selection of pieces after the main speeches.



Since January “Die Dargebotene Hand” has, with “Heart2Heart”, crisis support in English

In the first two months already 132 people dialled the toll free number 0800 143 000 and contacted the new English service, «Heart2Heart» which can be reached daily from 6 pm to 11 pm.

More and more English-speaking people living in Switzerland are not able to communicate in one of the national languages. In urban areas such as Zurich, the number of English-speaking residents has increased almost sevenfold in the past twenty years, to over 12 percent of the population. This percentage is similarly high in the canton of Zug and in the Lake Geneva region.

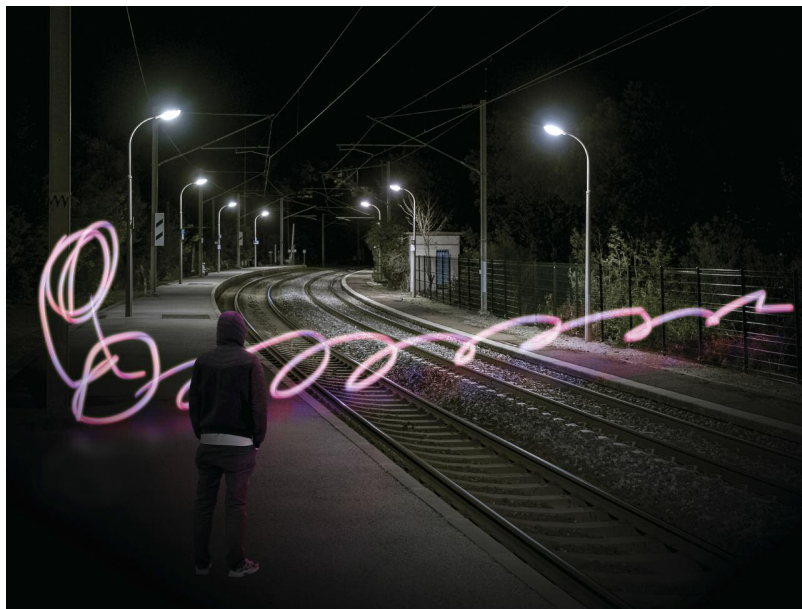
The impact of this increasing number of English-speaking people is already being felt by *Die Dargebotene Hand*. Although the services of Tel 143 are currently only available in the respective national languages, a rising number of callers are requesting a conversation in English. In recent times, the number of English-speaking callers contacting *Die Dargebotene Hand* in the Zurich region has doubled from year to year. Even though many of these people have a basic knowledge of a national language, they are not always able to talk about their problems in German, French or Italian in crisis situations.

As the best known easy accessible psychosocial hotline, *Die Dargebotene Hand* is now, since January 2023, also accessible to the largest non-national language group in Switzerland. English-speaking people calling Tel 0800 143 000 can contact (daily from 6 – 11 PM) trained volunteers, either native English-speakers or people with a very good command of English to talk to.

By the end of February, the volunteers of *Heart2Heart* already held 132 conversations in English. This is, on average, 2.24 calls per evening. The *Heart2Heart* team is excited that in February, the number of conversations

increased by 50% compared to January. Compared to the German line, on the English Hotline, more issues about relationships connected to violence and psychological problems came up. Only a minority were native English speakers. As far as we know, callers come from Taiwan, Israel, Greece, the US, or other countries.

Matthias Herren, Stellenleiter,
Dargebotene Hand Zürich / Heart2Heart
<https://www.heart2heart.143.ch/>



Disco Nights



ZWIC-IMCZ Private Party at the Bughouse Nightclub, Zug
May 12th – 20.30-24.00+ Bughouse, Gotthardhof, 16 Bundesplatz, 6300, Zug
Entrance Fee: Adult CHF30.- Junior 18-25 CHF15.--
includes 1 drink voucher and snacks & nibbles

A celebration of 70-80-90s themed disco with solid dance music – Daddy Cool – Stayin' Alive – Disco Divas, set in an authentic night club decked out in period fashion, with hip dress code for guests.
DJ classic dance music, including play requests. Dress and dance competitions
Come dance like you did before!

Friends & Members of ZIWC & IMCZ welcome!

Entrance by pre-registration only @ IMCZ <https://imcz.club/>
ZIWC <https://ziwc.ch/event-calendar> Registration Deadline: May 3

Payment to ZIWC or IMCZ as preferred:
International Men's Club of Zug: IBAN: CH79 0078 7785 7613 0190 0
Zug International Women's Club: IBAN: CH40 0900 0000 1752 1935 3

For any questions please contact: events@imcz.club or annualevents@ziwc.ch



Hot Tea And Cancer

Remo P. Jutzeler van Wijlen, Head R&D Sponser Sports Food
Ing. Appl Food Sciences, MAS Nutrition & Health ETHZ

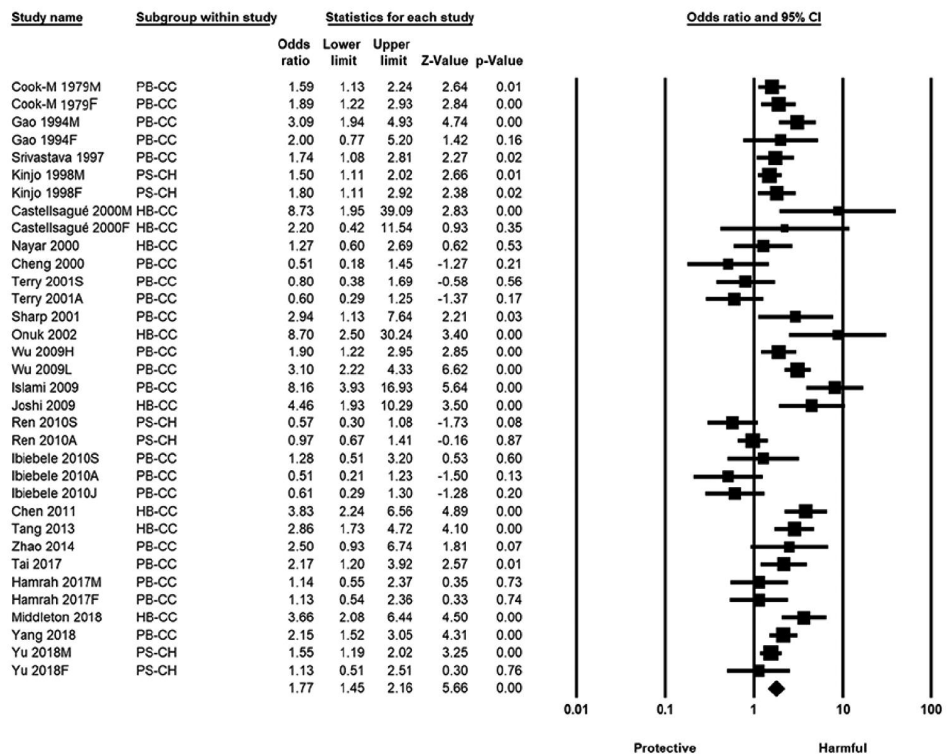
Regarding its reputation, tea is usually better off than coffee, which is kind of considered its unhealthy antipode. Tea, made by using dried leaves from *Camellia sinensis*, is mainly consumed in the form of black and green tea. Green tea is rich in polyphenols, which are considered to offer multiple health benefits due to their antioxidant properties, e.g. even as a cancer chemo-preventive agent. The most abundant and active polyphenol in tea is epigallocatechin gallate (EGCG). EGCG was reported to block cancer progression in epidemiological studies. The association between tea drinking and reduced esophageal cancer (EC) risk was also confirmed by several case-control studies, prospective cohort studies, and meta-analyses. However, both opposing and non-significant conclusions were also reported, especially when drinking tea at higher temperatures. Lately, concerns have arisen due to anecdotal cases of serious liver toxicity associated with high green tea catechin consumption.



To many consumers surprise, very hot beverages with the concomitant potential thermal injury are identified as carcinogens for esophageal squamous cell carcinoma (ESCC) by the International Agency for Research on Cancer. According to the IARC classification system of carcinogens, “drinking very hot beverages at above 65°C” has been classified as “probably carcinogenic”. Esophageal cancer (EC) is the seventh most commonly diagnosed cancer and the sixth cause of cancer mortality worldwide, with approximately 70% of cases occurring in men and a 2- to 3-fold difference in the incidence and mortality rates between different regions. ESCC and esophageal adenocarcinoma (EAC) are the two main histologic subtypes. The ESCC is the predominant histological type worldwide, accounting for over 80% of all EC. However, currently, the EAC subtype is starting to be the dominant one in Australia, the United States, and some Western European countries, moving the ESCC subtype to second in incidence in these regions. Heavy alcohol drinking or smoking and their synergistic effects are the major established risk factors for ESCC in Western countries.

Tea beverages are usually a mixture of boiling water and tea leaves and consumed hot. In 2022, a meta-analysis of 34 individual studies including a total of 5050 cases and 10'609 controls was performed to explore whether hot tea consumption was a risk factor of EC. The overall results of this meta-analysis showed that people who drink hot tea have a higher risk of EC than those who do not, with a combined odds ratio value of 1.77 ($p < 0.001$), meaning the risk is 1.77 times higher to develop EC. Notably, the study noted a “significant heterogeneity in the overall meta-analysis for EC”, but failed to identify any individual study as a contributor to the heterogeneity even when performing a sensitivity analysis by omitting one study in turn, which supports the robustness of the evidence. Also after subgroup analysis for potential confounders such as alcohol consumption and smoking results remained similar.

Nevertheless, as so often with “increased risk and odds” for multi-factor dependent diseases, even a “significant” increase may become close to irrelevant for very rare diseases. In high-risk areas EC incidence rates can reach more than 100 per 100'000 population, i.e. 0.1%. And even though the prognosis of EC is poor, with the average 5-year survival rates between just 15 to 25% after comprehensive treatment, a 1.77-fold higher odds ratio still seems very moderate. Even more so when considering that there are many other factors, among those a simple varied and balanced diet and healthy lifestyle, which may counter potential risk factors on their part. A certain amount of serenity and healthy fatalism also seems particularly appropriate, since many diseases simply depend to a greater extent on ones unalterable genetic make-up than on nutritional factors which are considered in isolation.





Autonomous Vehicles

Contributed by IMCZ member, Alan Cattell

Automotive Technology is changing rapidly

Over the last few years there has been a huge change in the cars we buy. Perhaps the most obvious of the changes is the change in drive units. Diesel vehicles are less common, and the rapid progress of electric vehicles has made them a more common sight on our roads. Much of this is due to environmental concerns. However, rather less visibly, there is a dramatic shift in the level of driver assistance offered by car manufacturers. And this change is accelerating.

Autonomous driving

There's been a lot of hype about this topic, particularly from Tesla. However, there is an internationally agreed definition of the different levels of automation as defined by the Society of Automotive Engineers (SAE). There are six levels of autonomy, as follows:

Level 0 (No Automation): The driver is in complete control of the vehicle at all times. There is no automation involved.

Level 1 (Driver Assistance): The vehicle has some automated features, such as cruise control or lane departure warning, but the driver is still responsible for controlling the vehicle.

Level 2 (Partial Automation): The vehicle can control both steering and speed, but the driver must remain attentive and ready to take control if necessary.

Level 3 (Conditional Automation): The vehicle can handle most driving tasks, but the driver must still be ready to take control when necessary and may need to intervene in certain situations.

Level 4 (High Automation): The vehicle can handle all driving tasks in certain circumstances and environments, and the driver may not need to be attentive at all times.

Level 5 (Full Automation): The vehicle can handle all driving tasks in all circumstances and environments, and there is no need for a human driver at any time.

The different levels of automation and the driver & system responsibility is outlined in the diagram from SAE International below.

All significant car manufacturers are working on autonomous driving and have extensive development programmes. Tesla has led the hype, but their offerings are currently level 2 automation. Nissan has a major activity and, two years ago, a Leaf drove 230 miles using autonomous technology from the company's technical centre in Cranfield, Bedfordshire, to its manufacturing plant in Sunderland. Most of that journey on predictable motorways was handled by computer, but safety drivers still chose to intervene a couple of times. There are many other examples.

However, Mercedes Benz are the first OEM to meet the legal requirements of UN-R157 for SAE level 3 systems^[1]. The German Federal Motor Transport Authority (KBA) has given

system approval for the Drive Pilot system which is currently available on EQS / S-class cars. Initially the approval is for autonomous driving in heavily congested motorways at speeds up to 60 km/h. Drivers in such cars still need to be in the drivers seat and able to respond to a request to take over control within 10 seconds. However, they are able to phone, text, watch video etc. legally when the system is active (in Germany on designated routes – around 13,000 km of such routes).

If the driver does not respond to a request to take back control within 10 seconds, the vehicle will stop, set the activate the hazard warning lights, unlock doors and windows and activate the emergency call system.

Mercedes are also working to have their Drive Pilot approved in other countries – or in the case of the US, in specific States. Although they are the first, many other car manufacturers are following closely and most have extensive test and development programmes in this area.

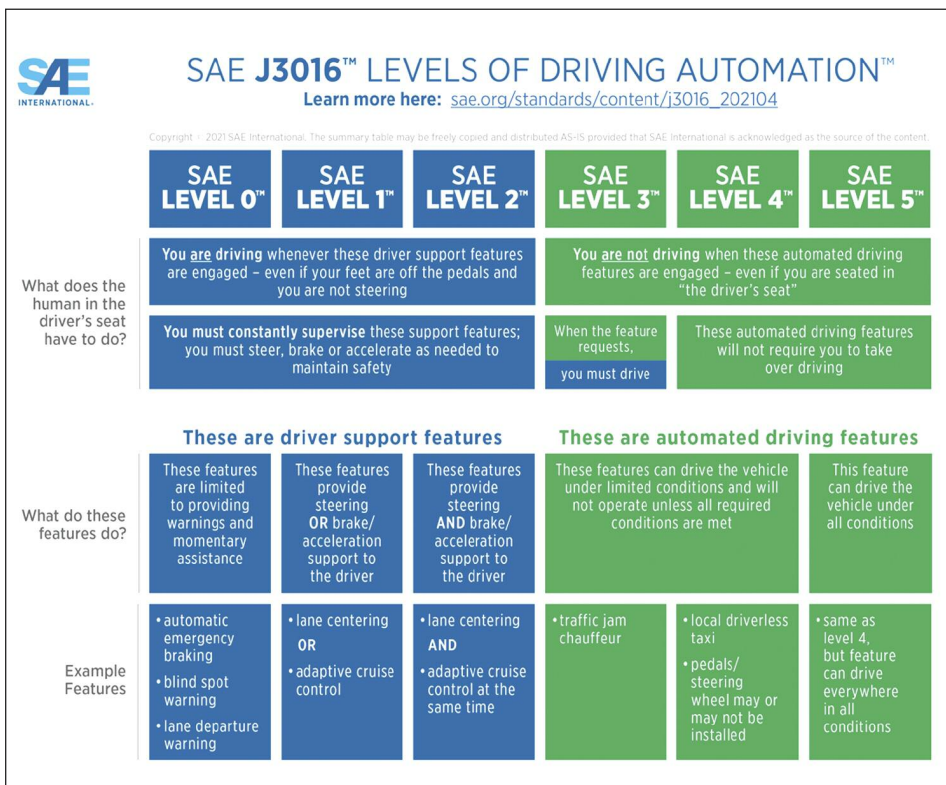
They also have approval for a limited level 4 system. The KBA has approved an automated parking system for use in the P6 parking garage at Stuttgart Airport. The car is dropped off in a designated space and then, on your smartphone, you send the car to a pre-booked parking space. No driver is needed – the car does everything itself. Of course, the parking garage needs to have specific technical infrastructure to make this possible, but it's a significant step. Such automated valet services are also being tested by Mercedes in the USA.

Technologies behind Autonomous driving

If a car is to drive safely without driver intervention, the challenges are many. Firstly it needs to know about it's environment. The diagram on the next page shows the possible array of sensors and their purpose. None of these sensors work alone. They only function when they are linked to a powerful computer platform which is able to interpret the signals they get and compare them with signals from other sensors to ensure consistency. There are a wide range of sensors being deployed, and different manufacturers have different approaches to the problem.

The following are some of the major sensor systems used.

1. Cameras: These are one of the most important sensor systems in autonomous cars. They are typically placed around the car and provide a high-resolution view of the environment. These cameras can detect and identify objects in the road, such as other cars, pedestrians, and obstacles – but the interpretation of the scene depends on the computer processing algorithms.



2. **LIDAR:** (Light Detection and Ranging) is a sensor system that uses scanned laser beams to create a 3D map of the environment. This allows the car to accurately determine the distance and position of objects in the road.

3. **RADAR:** another sensor system that is commonly used in autonomous cars. It uses microwave radiation to detect objects in the environment and can provide information about the speed and direction of those objects.

4. **Ultrasonic sensors:** Ultrasonic sensors use high-frequency sound waves to detect objects that are close to the car. These sensors are typically used for parking and manoeuvring in tight spaces.

In addition to these sensors, usually GPS is used to determine the location of the car to a very high accuracy (cm scale). Other sensors are used to measure things like surface moisture on the road which affects braking distance.

Inter-vehicle communications can also be implemented to allow cars to share environmental information.

ultrasound sensors on their cars as parking sensors, relying instead on the cameras.

Camera systems are cheap, but perform only as well as the IT behind it allows. They don't measure distance for example – rather the distance information is interpreted from the image processing. So the system needs to be trained extensively on real-world examples to get the image processing to work reliably in different lighting conditions. There is also the issue of visibility (fog, rain, snow, dirt). A key challenge is fail-safe reliability.

LIDAR

LIDAR, or Light Detection and Ranging, is a remote sensing technology that uses laser light to measure distances and create high-resolution, three-dimensional maps of the environment. LIDAR has a wide range of applications, from self-driving cars to environmental monitoring, and is becoming an increasingly important tool in many fields.

LIDAR works by emitting short pulses of laser light and measuring the time it takes for the

road ahead, including the location of other vehicles, pedestrians, and obstacles.

Another advantage of LIDAR is its ability to operate in a wide range of weather and lighting conditions. Unlike cameras, which can be affected by glare, shadows, and low light conditions, LIDAR sensors are able to generate accurate measurements even in adverse weather conditions, such as rain or fog. This makes LIDAR particularly useful in applications where reliable sensing is critical, such as in autonomous vehicles or aircraft. LIDAR needs much more limited computer processing power as it is actually measuring the distance and direction to objects (like a laser range finder).

There are two main types of LIDAR sensors: time-of-flight (ToF) and frequency-modulated continuous wave (FMCW) LIDAR. ToF LIDAR works by measuring the time it takes for a laser pulse to reflect off an object and return to the sensor. FMCW LIDAR works by measuring the frequency shift of a laser pulse as it reflects off an object. Both types of LIDAR have their own advantages and disadvantages, and the choice of sensor will depend on the specific application.

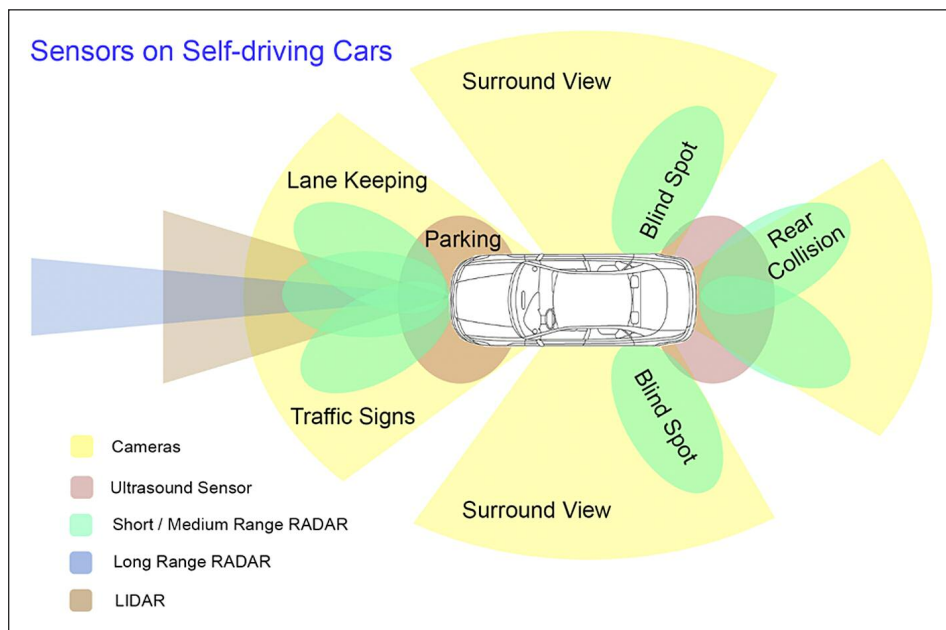
One of the challenges of LIDAR is its cost. LIDAR sensors can be expensive, which has limited their use. However, as the technology continues to advance and become more widely adopted, the cost of LIDAR is expected to come down dramatically. LIDAR laser light also needs to be eye-safe. A common laser wavelength for LIDAR is 1550 nm which is inherently eye-safe.

RADAR

The term “mmWave” refers to the frequency range used by this type of radar, which is typically between 24 and 86 GHz (wavelengths of about 3 to 12mm). This frequency range allows the radar to achieve high resolution and accuracy, even in challenging weather conditions such as rain, fog, or snow.

One of the key advantages of mmWave radar is its ability to detect objects at a much greater distance than older automotive radar systems. This is due to the use of shorter wavelengths which are able to penetrate more effectively through obstacles such as rain or foliage. As a result, mmWave radar is able to detect objects up to several hundred meters away, providing advanced warning of potential hazards.

Another key advantage of mmWave radar is its ability to provide highly detailed information about the objects it detects. This is due to the use of advanced signal processing algorithms, which are able to extract a wide range of information from the radar signal. This information can include the distance to the object, its velocity, its size, and even its shape or orientation.



Cameras

Multiple cameras around the car are used, together with computing algorithms, to generate a model of the surrounding environment. “Surround” cameras have been installed in vehicles for many years, but the processing power to interpret the camera images and create a model of the environment from this is more recent. Tesla is the OEM most focused on camera technology. They are working on a “vision only” approach (Tesla Vision) and have recently stopped installing

light to reflect off objects and return to the sensor. By calculating the distance between the sensor and each object, LIDAR can create a detailed map of the environment.

One of the key advantages of LIDAR is its ability to generate high-resolution, three-dimensional maps of the environment. This makes LIDAR particularly useful in applications where accurate, detailed information about the shape and structure of the environment is needed. For example, in the field of self-driving cars, LIDAR can be used to create a detailed map of the

One of the challenges of using mmWave radar for autonomous driving is the need to minimize interference from other sources, such as other radar systems or cellular networks. This is achieved through the use of advanced signal processing techniques, which are able to filter out unwanted signals and focus on the radar echoes that are of interest.

mmWave radar has been installed on cars for many years and the technology is improving and costs are falling. These systems are almost always solid-state (semiconductor) systems so the cost point should continue to go down.

Ultrasound Sensors

These sensors use sound waves to detect objects and obstacles in the path of a vehicle, providing drivers with an early warning of potential hazards. The basic principle of ultrasound sensing is to emit a high-frequency sound wave and measure the time it takes for the wave to bounce back from an object. By measuring the time delay between the emission and reception of the sound wave, the distance to the object can be calculated. This process is similar to how bats use echolocation to navigate in the dark.

Ultrasound sensors are mainly used in automotive applications for parking assistance and nearby obstacle detection. These sensors are typically mounted on the rear or front bumpers of a vehicle and emit sound waves that bounce off nearby objects, providing drivers with an audible warning of potential hazards.

One of the key advantages of ultrasound sensors is their ability to detect objects at a very close range. This makes them particularly useful for parking assistance systems, where vehicles need to be manoeuvred into tight spaces without damaging surrounding objects or the car. Ultrasound sensors can detect objects as close as a few centimetres away, providing drivers with precise information about the location and distance of nearby obstacles.

Another advantage of ultrasound sensors is their low cost and ease of integration into existing automotive systems. Ultrasound sensors are relatively simple devices that can be easily incorporated into existing vehicle designs, making them a cost-effective solution for adding safety features to vehicles.

Of course, they have a very limited range compared to other sensing technologies such as LIDAR or RADAR. Ultrasound sensors are generally only effective at detecting objects up to a few meters away, making them unsuitable for high-speed driving or long-range obstacle detection.

Summary

Level 3, and limited level 4 autonomous vehicles are starting to be available. The key challenge is fail-safe reliability. If an OEM manufacture is licensed for level 3 autonomous driving, then clearly any accident which occurs while the system is being used properly is the responsibility of the manufacturer. So it's vital that the systems are reliable, and above all fail-

safe. For most manufacturers, fail-safe means multiple redundancy in the vehicle for both the controlling systems and the sensors. No one point of failure should be able to create an unsafe condition. Sudden loss of a key IT component or one of the systems must be able to be compensated. For this reason, the technology is available first on the more expensive cars where the cost of redundancy and the price of "leading edge" sensors is less of an issue. But the history of automotive technology tells us that what's on an S-class Mercedes today will be everywhere in a few years.

In the longer term, once the OEMs have experience from extensive real-world use of their equipment, I expect that the sensor systems used can be simplified and the cost reduced. The number of sensor components will fall while the reliability of "interpretation" of images will increase so there will be an overall improvement of safety.

And finally, as an example of what works well and what does not, you might like to look at the YouTube link [3] below – unfortunately with annoying adverts.

Links

1. [UN_R157 – Automated Lane Keeping Systems](#)
2. [Demystifying LIDAR](#)
3. [YouTube of self-parking – various cars](#)

Generative AI – Bane or Boon to Creativity?

Contributed by IMCZ president,
Professor Richard Beswick

'AI is the most important tech advance in decades. It is as fundamental as the microprocessor, the Internet and the mobile phone. It will change the way people work, learn travel, get health care and communicate with each other' Bill Gates, 2023

The last few months has seen an explosion of Generative AI platforms, notably Chat GPT, but also Bard, Watson and others. Microsoft has taken a controlling stake in Open AI and is already adding Chat GPT to its ecosystem.

Generative artificial intelligence (AI) based on machine learning, describes algorithms (such as ChatGPT) that can be used to create new content, including audio, code, images, text, simulations, and videos. Recent new breakthroughs in the field have the potential to drastically change the way we approach content creation. McKinsey 2023

OpenAI has opened the door to the mass public by making their beta version Chat GPT3 available free of charge to anyone who wants to register for the playground.

Chat GPT3 works has been trained on huge data sets up to 2021. Its successor Chat GPT4



is currently being launched, this time as a pay as you go service, fed on an even more extensive and up to date data set

The versatility, capability and precision of Chat GPT4 is quite remarkable.

It can create mini-games, 3D designs, debugging code, creating Google ad extensions, co-pilot spreadsheet software and much more.

Some even go so far as to credit Chat GPT with sentience (the capacity to experience

feelings and sensations), hitherto considered the unique domain of Homo sapiens.

There are many other Generative AI products emerging, such as IBM Watson or Google Bard promise even more capabilities and it remains to be seen who will establish dominance in the field.

Current digital ecosystems will be disrupted. One of the first casualties may be data search engines and the associated advertising model, such as Google, which may see a significant



part of their search business disrupted by Generative AI.

What is certain is that Generative AI represents a general purpose technology that will change the way we search, analyse, examine and evaluate data.

What better way to discover what ChatGPT is, than to ask it to explain itself.

As with following case:

My Question 1: Chat GPT please explain what you are:

Chat GPT's Answer: ChatGPT is an artificial intelligence language model developed by OpenAI. It uses deep learning techniques to generate human-like text responses to questions and prompts given to it. ChatGPT is capable of generating coherent and diverse responses, making it useful for tasks such as chatbots, question-answering systems, and language translation.

My Question 2: Chat GPT what is the range of your capabilities?

ChatGPT's Answer: ChatGPT has a wide range of capabilities, including:

1. Text generation: It can generate human-like text responses to a prompt or question.
2. Question answering: It can provide answers to factual questions by extracting information from a given context.
3. Conversation: It can engage in conversations, respond to questions and prompts in a natural and coherent manner.
4. Summarization: It can summarize long documents into shorter, coherent versions.
5. Translation: It can translate text from one language to another.
6. Sentiment analysis: It can determine the sentiment (positive, negative, neutral) of a given text.
7. Text classification: It can classify text into different categories based on its content.

These capabilities demonstrate the versatility and potential of ChatGPT in various language-related tasks.

My Question 3: How can Chat GPT engage in conversations, respond to questions and prompts in a natural and coherent manner?

ChatGPT's Answer: ChatGPT engages in conversations by using a large corpus of text data to generate responses. It uses a deep neural network architecture called the Transformer to generate text. The model has been trained on a large dataset of text from the internet and other sources, allowing it to generate coherent and diverse responses to questions and prompts.

When given a prompt or a question, ChatGPT uses its internal understanding of language to generate a response that is

contextually relevant and consistent. The model uses its knowledge of grammar, vocabulary, and common phrases to generate text that resembles human writing.

Additionally, ChatGPT can be fine-tuned for specific domains and use-cases, allowing it to generate more accurate and relevant responses. For example, fine-tuning on customer service data can make the model better equipped to handle customer inquiries in that specific domain.

Overall, ChatGPT's ability to generate human-like responses is a result of its advanced deep learning architecture and large-scale training data.

The bot can be instructed to reveal further levels of data up to the point where the bot decides it has nothing more to yield.

My Question 4: ChatGPT can you calculate?

ChatGPT's Answer: Yes, to some extent, ChatGPT can perform simple arithmetic calculations such as addition, subtraction, multiplication, and division. It can also provide answers to mathematical questions, such as solving simple equations or providing information about mathematical concepts. However, it's important to note that ChatGPT's ability to perform calculations is limited and it may not always provide accurate answers for complex mathematical problems.

My Question 4.1: ChatGPT what is 2 times 2?

ChatGPT's Answer: 2 times 2 is equal to 4.

My Question 4.2: ChatGPT what is 223 times 465?

Answer: 223 times 465 is equal to 104195. (accurate answer is 103695 according to my calculator!)

My Question 4.3: ChatGPT what is the square root of 100?

ChatGPT's Answer: The square root of 100 is equal to 10.

My Question 5: ChatGPT please list the kings and queens of England starting from 1066.

ChatGPT's Answer: Here is a list of the kings and queens of England starting from 1066:

- William I the Conqueror (1066-1087)
- William II Rufus (1087-1100)
- Henry I (1100-1135)
- Stephen (1135-1154)
- Henry II (1154-1189)
- Richard I (1189-1199)
- John (1199-1216)
- Henry III (1216-1272)
- Edward I (1272-1307)
- Edward II (1307-1327)
- Edward III (1327-1377)
- Richard II (1377-1399)
- Henry IV (1399-1413)
- Henry V (1413-1422)
- Henry VI (1422-1461 and 1470-1471)
- Edward IV (1461-1483 and 1471-1483)

- Edward V (1483)
- Richard III (1483-1485)
- Henry VII (1485-1509)
- Henry VIII (1509-1547)
- Edward VI (1547-1553)
- Mary I (1553-1558)

Why did it stop in 1558 when I asked for all kings and queens of England after 1066? Because all subsequent kings and queens ruled both Scotland and England. ChatGPT was able to explain the rationale for its decision to stop with Queen Mary.

Humans have recognized potential social and ethical dangers with Generative AI, including:

- Plagiarism by the user
- Plagiarism by the bot
- Potential to disseminate incorrect, incomplete or inaccurate information
- Usurping human research, analysis and creativity
- Manipulation of the tool to engender political or social bias and censorship
- Copyright infringement and endangering the living of human authors
- Unfair usage of others' intellectual property
- Replacement of human labour and stimulating unemployment
- Monopoly of data
- Potential to damage the search engine model, on which society has come to rely for data and knowledge
- Breaking sacrosanct academic practices and regulations
- Dumbing down by reducing the need to understand what we collect.

Conversely, it is recognised that Generative AI brings social and ethical advantages:

- Increasing the speed and quality of dissemination of knowledge
- Removal of arduous primary research steps, allowing researchers and students to move to higher level analytics and dispense with the grunt work associated with collating data.
- Provision of and external second opinion, and confirmation of facts
- Speed of knowledge dissemination
- Creation of a mega library of a scale unparalleled in human history
- Working partner for the solitary researcher
- Common ground of knowledge for almost any conceivable topic
- Stimulation of creativity
- Rethinking and rejuvenating sacrosanct academic practices and regulations
- Support of human labour and stimulating new forms of employment

Much like many earlier disruptive technologies, such as the printing press, electricity, or computing, generative AI looks set to provide a transformational impact on society, technology and education processes.

This opportunity for mankind should be embraced, however with vigilance against abusive use, monopolization or socially disruptive practices.



Investment Commentary

APRIL 2023 • WAGNER & ASSOCIATES Investment Consulting

Contributed by IMCZ member Christian Wagner

ECONOMICS AND POLITICS

The “solution” to the problem of an ailing Credit Suisse has made headlines. Although many important details are still missing, the federal government and central bank have created the pre-requisite for a takeover by UBS, the other universal bank. Use of emergency law and government guarantees are disturbing. If the CHF 209 billion bet on a single “monster” bank pays off remains to be seen.

BOND MARKETS

The central banks are not wavering in their more restrictive policy. Even the ECB has raised its key interest rate by 0.5% despite turmoil in the banking sector. While doing so, it referred to the continuing upward trend of core inflation. The American central bank increased by a smaller amount, by 0.45% to 5.0%. In his appearance before the US Senate Banking Committee, the Fed chairman Powell stressed his intention to speed up interest rate increases if necessary.

EQUITY MARKETS

The economic environment is forcing analysts to lower their earnings forecasts. In the first two months of this year, their expectations for the S&P 500 in the 1st quarter were reduced by no less than 5.7%. Further downward revisions are coming. The insolvency of SVB (Silicon Valley Bank) should remind people that credit should only be granted against adequate security. Otherwise, the bankruptcy of a bank which consciously avoided capital requirements and had an extremely risky balance sheet is to be welcomed. The fact that auditors and rating agencies were “asleep” is another subject.

CURRENCIES

The war in the Ukraine and the tensions with China strengthen the USD. Since the USA also has better economic prospects, the upward trend of the currency remains intact.

FOOD FOR THOUGHT

Contrary to financial markets expectations, the rise of inflation has not proven to be a short-term problem. Although the central banks have taken smaller steps in the recent past, inflation remains stubbornly high. Should the price increases have been limited to energy and food the optimism could have been justified, but in the meantime core inflation is the bigger problem. Since labour costs for service companies are a substantial part of costs, the shortage of qualified employees provides additional inflation pressure.

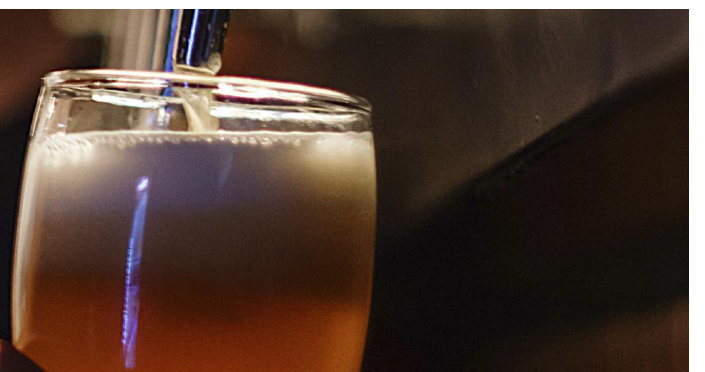
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STAMMTISCH

Every Thursday from 18:00-20:30

We meet at different venues – please
check our website for the location:
<https://imcz.club/Club-Events>





Just Enough: Wrapping up the 2022/23 Ski Season

Contributed by IMCZ Sports' editor Joseph Dow



«**Technical Snow**» We finally got a season out from under the spectre of Covid and despite the mild winter seeing limited natural snow, the skiing was surprisingly good. In the bigger resorts, there was nice coverage and superb grooming on the actual pistes. Locals explained to me that snowmaking in Switzerland has advanced greatly and the artificial, manmade or “*technical snow*,” as it is called, saved the season. One of the leading companies in the snowmaking world is **TechnoAlpin** with its Swiss operations based in Flüelen (maybe we can arrange a tour for the club). Large sections of the mountains remaining brown are not as beautiful as the sea of white we are accustomed to in Swiss resorts. However, carving on the piste was as exhilarating as ever thanks to technology and innovation.

The ski of choice was definitely a slalom carver for this one, until the softened snow in late March required a bit more width under foot. Maybe I will detail the different alpine ski types for next fall’s “*Get Ready to Ski*” article, as the correct choice of ski width (and length) can make skiing much more comfortable.

After kicking off the season with our **IMCZ Snow Sports Show**, some early November weekends high up in Zermatt, and a few days before Christmas in **Engelberg**, I mostly spent the winter in the resorts covered by my **TOPCARD** season’s pass: **Arosa Lenzerheide**, **Davos Klosters**, and **Flims LAAX**. Flims was the choice to ride out the regular season for our wonderful **IMCZ Ski Weekend** at the end of March.





There is never really a bad ski season in Switzerland, even when it's mild. So, enjoy these photos from this snow year and get ready to enjoy a hot summer until it's again time to think snow!

Additional Information:

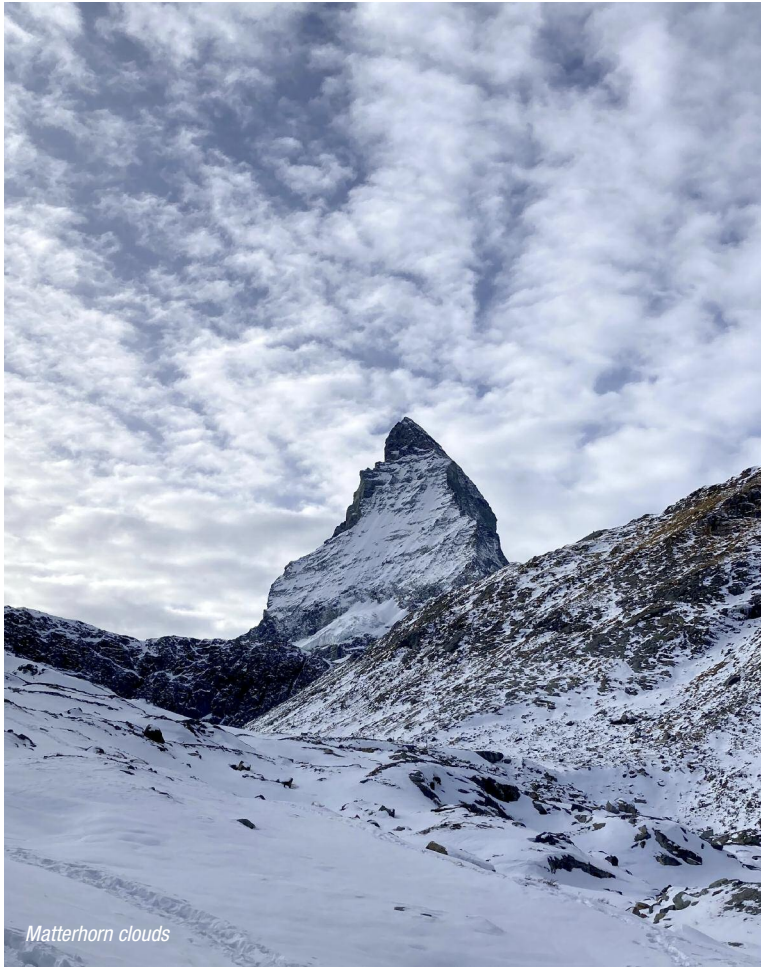
TechnoAlpin Snowmaking Systems: www.technoalpin.com/en/

TOPCARD Season's Pass: www.topcard.info/en/

Arosa Lenzerheide: arosalenzerheide.swiss/en

Davos Klosters: www.davos.ch/en/

Flims Laax Falera: www.flimslaax.com



Matterhorn clouds



Breithorn Zermatt



Lenzerheide Skis



Matterhorn clouds



Vollmond Lenzerheide



Driving Test

A teenage boy had just passed his driving test and asked his Dad if he could start using the family car.

The Dad said he'd make a deal with his son, "You bring your grades up from a C to a B average, study your Bible a little and get your hair cut. Then we'll talk about the car"

The boy thought about that for a moment, decided he'd settle for the offer and they agreed on it.

After about six weeks, the Dad said, "Son, you've brought your grades up and I've observed that you have been studying your Bible, but I'm disappointed you haven't had your hair cut."

The boy said, "You know, Dad, I've been thinking about that, and I've noticed in my studies of the Bible that Samson had long hair, John the Baptist had long hair, Moses had long hair, and there's even strong evidence that Jesus had long hair."

His Dad replied, "Did you also notice that they all walked everywhere they went?"



Chess Talk

A group of chess enthusiasts checked into a hotel and were standing in the lobby discussing their recent tournament victories. After about an hour, the manager came out of the office and asked them to disperse. "But why?" they asked, as they moved off. "because," he said "I can't stand chess nuts boasting in an open foyer."



Work for food

A man approaches a houses and knocks on the door and when the owner of the house answers, the homeless man asks him for a meal. The owner replies that he would be happy to feed the man in exchange for some honest labour. He tells the homeless man to go into the garage, get a can of paint from the shelf, and put a fresh coat of it on his porch. Fifteen minutes later, the wealthy man hears a knock at his door again. When he opens the door, he is greeted again by the homeless man who says, "Hey I'm all finished up with that paint job, but you should know that's a BMW in there, not a Porsche."



A Raise

A worker walks into his boss's office and says "I've got three companies after me right now, so if you want me to stay here, I'll need a 5% raise." The boss agrees and the man gets up to leave. As he's walking out the door, his boss asks "What are the three companies after you?" The man replies "The electric company, the water company, and the gas company."



Computer Error-messages in Haiku

For that mindful experience when all goes wrong.

Yesterday it worked
Today it is not working
Windows is like that

Stay the patient course
Of little worth is your ire
The network is down

Three things are certain:
Death, taxes, and lost data.
Guess which has occurred.
The Web site you seek
cannot be located but
endless more exist.

A crash reduces
your expensive computer
to a simple stone.

Error messages
cannot completely convey.
We now know shared loss.



Virus Warning

This just came in : NEW AI VIRUS WARNING

If you receive an e-mail with a subject line of "Badtimes," delete it immediately without reading it. This is the most dangerous Email virus yet.

It will re-write your hard drive. Not only that, but it will scramble any disks that are even close to your computer. It will recalibrate your refrigerator's coolness setting so all your ice cream melts and milk curdles. It will demagnetize the strips on all your credit cards, reprogram your ATM access code and use subspace field harmonics to scratch any CDs you try to play.

It will give your ex-boy/girlfriend your new phone number. It will mix antifreeze into your fish tank. It will drink all your beer and leave its dirty socks on the coffee table when there's company coming over. It will hide your car keys when you are late for work and interfere with your car radio so that you hear only static while stuck in traffic.

Badtimes will make you fall in love with a hardened paedophile. It will give you nightmares about circus midgets. It will replace your shampoo with Nair and your Nair with Rogaine, all while dating your current boy/girlfriend behind your back and billing their hotel rendezvous to your Visa card.

Badtimes will give you Dutch Elm disease. It will leave the toilet seat up and leave the hairdryer plugged in dangerously close to a full bathtub. It will remove the forbidden tags from your mattresses and pillows, and refill your skim milk with whole.

It is insidious and subtle.

It is dangerous and terrifying to behold.

It is also a rather interesting shade of mauve.

These are just a few signs.

Be afraid. Be very, very afraid.



Members' Marketplace

Are you **selling** your yacht (harboured in Piraeus)?

Your Aston-Martin old-timer with the roll top roof?

A gorgeous view of the Bay of Biscay, with a little bit of house attached?

Or are you cashing in the half of your stamp collection that is finally worth something?

Perhaps you're **looking** for all of these things?

Then ADVERTISE here, in the IMCZ News;

The Members' Marketplace is reserved for unformatted advertisements of 150 characters (approx. 3 lines) of text. These are free of charge to IMCZ members.

Advertisements must be submitted as illustrated below. Longer advertisements cost CHF 30.-

Example: FOR SALE: gorgeous view of Bay of Biscay with stunning sunsets and high waves. Wee house (12 rooms), dock and yacht included. Call Bill at 041 123 45 67.

IMCZNEWS Advertising Rates

The IMCZ newsletter is delivered bi-monthly to about 200 members representing 20 nationalities. IMCZ members have personal or professional interests in both the international community and in the canton of Zug.

Format: A4 vertical, full color.

Ad content delivery: electronic by e-mail, .pdf, .jpg, .gif

Advertising Rates:

- Full page, A4 vertical. (19 x 27.7 cm), Fr. 210.-
- 1/2 Page, A5 horizontal (19 x 13.5 cm), Fr. 115.-
- 1/3 Page, vertical (6.3 x 27.7 cm), Fr. 85.-
- 1/3 Page, horizontal (19 x 9.2 cm), Fr. 85.-
- 1/4 Page, A6 vertical (9.2 x 13.5 cm), Fr. 65.-
- 1/4 Page, horizontal (19 x 6.9 cm), Fr. 65.-
- Business Card (9.2 x 6.45 cm) Fr. 40.-

Extra costs may be incurred for typesetting, special formatting, etc.

Discount for year of advertising - 20%

Discount for members - 20% off single adverts, 30% off annual advert



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