John M. Coggeshall: An American anthropologist in Prague
Dear students and colleagues,

The events of the recent weeks and months were both unexpected as well as difficult, forcing us to re-examine and re-evaluate numerous issues and to focus on what is important. Much changed. The Covid−19 pandemic meant that suddenly we had to stay home to stay safe; schools closed their doors and students were no longer allowed to gather; even the country’s borders were shut. It was something quite unimaginable for most of us.

Even as Charles University’s hallways and classrooms emptied, there was a remarkable lesson or takeaway: a university is more than buildings, lecture halls, or science labs: it is about people. For that reason, university life and most importantly learning, continued at a distance and did not “grind to a halt”. Classes continued remotely, as did meetings, consultations, and other communication. Despite initially unfavourable circumstances, the university continued to serve its students as well as society as a whole.

It is clear that science is what makes a difference when it comes to a task as daunting as slowing the curve of a rampant pandemic. It was – and is – up to us to capitalise on science and make use of our skills. At Charles University, more than 3,000 students from across five medical faculties volunteered; researchers prepared test kits; colleagues tested and cared for patients; still other experts conducted research into the novel coronavirus; and the university helped inform the broader public about both the success stories and the risks. Whether they were students or teachers, almost everyone did their utmost to help.

Although numerous challenges remain, this period proved one thing: together, we succeed. Other challenges – from sustainable growth to climate change to an aging population – should not be overshadowed by the pandemic, and shall also require the best from each of us. Now, as in key moments in the past, universities will play a crucial role. We share common values, among them, the desire to learn and discover, the desire to help, and the desire to provide the best possible education to our students. As both a teacher and as a medical doctor, the thing that I look forward to most now is our hallways and classrooms being full again – and to seeing our students in person.

Tomáš Zima
Rector

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An American anthropologist in Prague

John M. Coggeshall is a professor of anthropology at Clemson University in South Carolina. He has spent his career researching American regional ethnic and social groups. He is the author of a seminal paper examining gender roles behind bars, and an oral history called Liberia, South Carolina: An African American Appalachian Community. Coggeshall was a visiting professor at Charles University last semester.

STORY BY Jan Velinger PHOTO BY Martin Pinkas, Shutterstock
Because his students were well-behaved, Coggeshall says he initially thought most were in prison for white-collar crime or crimes like auto theft; but soon he learned that there were inmates in his classes also in prison for murder.

A single course can make a difference

Coggeshall has been teaching for more than 30 years; he himself studied to be an anthropologist in the 1970s and ’80s, when new directions and focus in the field proved inspirational and even pivotal. A course taught by Dr. Charlotte Frisbie, he recalls, stood above the rest: the kind of course all university students hope for and, when they lack out, never forget.

“It was called Women in Cross-Cultural Perspective. I think this was perhaps the single most important class I took, at either the graduate or undergraduate level. It opened me up to a lot of new ideas, including feminism. Other classes, such as introductory courses into anthropology were important when I was beginning my studies, but this one was revolutionary. This was it for me.”

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Traditionally, cultural anthropologists immerse or embed themselves in foreign cultures, using methods relying heavily on participant observation. Coggeshall, however, was more and more field researchers opted to study smaller groups “at home”. Coggeshall was fascinated by local communities in different states in his homeland United States that in the past had been largely overlooked or ignored. “I have always studied ethnic and regional groups and what I always find is that there are very interesting approaches to life in different American communities. How we can understand different approaches to life, and present them in a way that does them justice and also enhances connections between people, is what excites me as an anthropologist.

“What is hugely important is finding the differences that create identities among different groups of people yet at the same time link us together as human beings. The primary goal for cultural anthropologists is to study ordinary people in ordinary times and places; but I found over 35 years as a field researcher that the stories that people have to tell are extraordinary.”

Life behind bars

One of the groups Coggeshall studied in the 1980s were inmates in medium-security prisons. Initially, he hadn’t set out to study them at all. It was something of a happy accident.

“It was a coincidence. I was hitting the jobs market and I needed teaching experience. I noticed an ad asking for instructors who would be interested in teaching university-level courses at men’s prisons in Illinois where I was doing my dissertation. I thought I could try it. The idea was that prisons would offer remedial high school courses, what they call a GED (General Education Development), and then university courses so that once inmates would be released they could find better jobs and hopefully start a better life. It was a popular program in the 1970s but later phased out by the government as being too soft on crime. But at the time, I think it was fairly successful.”

While teaching, Coggeshall says he eventually began taking notes and interviewing guards as well as the students themselves before or after class just to get a better sense of “what life in prison was like.” The atmosphere in the classroom was positive, the building where he taught, modern and new; the students generally well-behaved. There was a guard in the facility but not in the classroom itself and essentially Coggeshall was alone with inmates at a time. He made for someone to look after his and his wife’s house in the US. Then, he focussed on the needs of students he would soon be teaching.

“I talked to professors here as well as a number of Czech students at Clemson University and they suggested that students might be a little hesitant about speaking English. Both courses I was going to teach were discussion-based and I wanted the students to be comfortable. I made sure I wouldn’t be correcting them all the time in writing and speaking. By-and-large, I think everything went very well. In my anthropological theories class, for example, students were very engaged and their speaking ability was actually really good. I was very happy with how they responded.”

How we can understand different approaches to life, and present them in a way that does them justice and also enhances connections between people, is what excites me as an anthropologist.
I figured out that if I wanted to be a top anthropologist I needed to specialize, but I didn’t want to do that. I wanted to remain a generalist. For me, that meant studying different groups besides inmates. Being a generalist and exploring different subjects made me happy.
Thousands of med students, scientists, and lecturers from across multiple fields and disciplines at Charles University all played important roles during the unprecedented health crisis. Over the next few pages, we offer a brief overview of how people helped in the fight against the coronavirus.

STORY BY Marcela Uhlíková, Jitka Jiřičková, Martin Rychlík, Jiří Novák
PHOTOS BY Vladimír Šigut, René Volfík, Hynek Glos
“I decided to volunteer at the hospital in the town of Pelhřimov [in the Czech-Moravian highlands] as Prague hospitals already had a high number of volunteers but smaller facilities still needed assistance. I was able to work with an amazing group of people in the hospital’s ICU, sometimes helping as a nurse, sometimes as an orderly, sometimes as an assistant,” says Kristýna Pončáková from Charles University’s Third Faculty of Medicine. “It was an opportunity to get valuable hands-on experience and all of us hope that things will soon be better. There is reason again to smile even under our face masks,” she adds.

Pončáková was one of some 3,000 students from CU’s five medical faculties (from the First, Second and Third Faculties in Prague, the Faculty of Medicine in Plzeň, and the Faculty of Pharmacy in Hradec Králové) who played a role on the front lines. It is easy to forget that a few short months ago, at the start of the crisis, many facilities lacked sufficient personal protective equipment or PPE. Many students sewed homemade facemasks to counter the shortage.

Students volunteered at partner university hospitals, depending on their faculty. Students from the First Faculty of Medicine helped at the General Teaching Hospital in Prague (where a Czech patient was first given the experimental drug remdesivir on a compassionate use basis). They also volunteered at the Institute for Clinical and Experimental Medicine, and the Central Military Hospital (both in Prague).

Students from the Second Faculty of Medicine volunteered at their “home base” Motol University Hospital and at Bulovka University Hospital and also helped look after the children of medical professionals. In addition, the Second Faculty of Medicine’s dean, Vladimir Komárek, appealed to students to donate blood or blood platelets if they could.

At the Third Faculty of Medicine, sixth-year student Tomáš Sychra and Metodí Rzena coordinated a volunteer initiative called Trimed, which helped place students where they were needed the most. “We tried to cover university hospitals across the Czech Republic,” Rzena explains. Organiser Anna Malešková of the Faculty of Medicine in Plzeň agrees that Trimed played an important role: “We received a lot of information and suggestions from Trimed about how to put volunteer activities into action in the hospitals in the best way and as quickly as possible. There were several hundred volunteers at local hospitals who worked either as orderlies, assistants, or day care workers keeping an eye on the children of medical personnel. Charles University’s rector, Tomáš Zima, himself a doctor, expressed his gratitude for the number of volunteers but smaller facilities still needed assistance.

Hospitals in eastern Bohemia also called for help in difficult circumstances: medical students with at least four semesters completed were sought. Students of CU’s Faculty of Medicine in Hradec Králové volunteered in the regional capital and elsewhere. “As part of the initiative, we shared a map of the country with representatives of other academic faculties from Charles University medical faculties. In this way we could put together emergency services offered by students who could also help other medical faculties. We took charge of the Hradec Králové and Pardubice regions and there [was] considerable interest in our students,” Dean Jiří Manďák confirmed.

Volunteers from the Faculty of Education at Charles University looked after the children of medical personnel. Charles University’s Third Faculty of Medicine. “It was an opportunity to get valuable hands-on experience, be it positive or negative. We see that not all customers are easy to satisfy. They’re sometimes rude to pharmacists, but even that is part of our future profession,” said Eliška Voříšková at the beginning of April. Voříšková is a 4th year student who started a volunteer initiative called “Pomoc lékárnám” (Help the Pharmacies). Hundreds of future pharmacists got involved; an estimated two-thirds of all students helped pharmacists in this most difficult of periods.

The Faculty of Science, which is strong in research, offered not only volunteers but also research on SARS-CoV-2 and testing for its presence. Dr. Barth Tachaj (interviewed in this issue) was one of many experts involved. Experts from the Faculty of Mathematics and Physics calculated prospective epidemiological models, and the faculty also provided its research computational capacity for combating coronavirus as part of the LINDA/CLARIAN-CZ international infrastructure. Faculty students and employees also programmed an application called “Call Back”; using the app, volunteers with the Czech Red Cross were able to contact individuals living alone, to let them know they were not forgotten, combating loneliness and negative effects of social isolation.

Volunteers from the Faculty of Education at Charles University looked after the children of Motol University Hospital employees as part of the “Chci pohlídat!” (I would like a baby sitter) initiative. “The group is diverse in age, colourful, and the older ones help the younger kids. The children entertain each other and at the same time we can spend time with them individually. We already have a stable regimen in place. During the month everything fell into place beautifully,” said organiser Nela Pascmáková and Tíreza Barthová. During the height of the crisis, the Faculty of Education was also involved in the information website Otkorona.vu.cz (About Coronavirus) bringing together experts from a number of schools.

Athletes from the Faculty of Physical Education and Sport also contributed in a novel manner: they gave online advice to people (afraid of gaining weight or falling out of shape during the lockdown) on how to exercise correctly at home. “I feel like the wave of solidarity that the coronavirus crisis inspired. I don’t think sewing masks would have been our strong suit, so I tried to think of a way we could offer help,” said Ondřej Regál, a faculty graduate who launched the educational project “Cvič a pomáhej” (Exercise and Help) capitalizing on the talents of coaches and lecturers.

Advice and help for seniors

Not to be left behind, the humanities and social sciences faculties were also active. Their students and employees were involved in countless charity activities and initiatives. Experts from the Faculty of Arts helped in translating important television messages, thereby enhancing the sense of community in this most difficult of periods.
There were more than a few head-quarters where students coordinated volunteering efforts.

Students from the Catholic Theological Faculty set up a sewing workshop and distributed masks to those in need at healthcare facilities.

Comfort and worship online
Charles University’s three Theological faculties (Catholic, Protestant, Hussite) were also active during the Covid–19 pandemic. When churches were closed during the lockdown, representatives offered public services online and helped teachers and students in the field.

Students from the Catholic Theological Faculty set up a sewing workshop and distributed masks to those in need at healthcare facilities. The archbishop’s seminary helped senior homes in Prague with nursing care and food delivery. Other employees and students were available at the Hospital of St. Alžběta Na Sličce for conversations with patients and healthcare professionals. "This is because the ban on visiting patients weighed heavily on both groups," said Marie Opatrná of the Catholic Theological Faculty.

The Czech Red Cross’ crisis task force directly requested students from the Hussite Theological Faculty in social and charitable work who were qualified for work with seniors and people with disabilities. Students not yet able to perform nursing activities distributed masks, delivered food and mail, and helped seniors with such tasks as taking dogs for walks. Colleagues from other fields took part in the activities of the call centre at Prague’s Na Homolce Hospital, but also helped with such things as babysitting the children of the Prachatice Hospital’s employees. Dean Kamila Veverková said she intended to recognise the volunteer activities of all students involved as work experience as part of their studies.

Representatives of the Evangelical Theological Faculty were also active during the pandemic. "We tried to alleviate the panic and fear, to enable people in their new daily rhythm to find tools to remain calm and think clearly. We offered support so that people could be in solidarity with each other, and so that those who were most committed didn’t burn out quickly. We didn’t limit ourselves only to people who were members of the church, or who consider themselves believers. After all, everyone is looking for spiritual comfort in some way," said theologian Ivana Noble of CU’s Evangelical Theological Faculty.

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facilities.
The volunteering spirit

The Covid-19 pandemic brought together many volunteers from across the country, offering help at a time of unprecedented crisis. Some sewed masks, some helped on the front lines, still others delivered medical supplies. Often the work of universities and the private sector intersected: one group of citizens, recreational pilots, formed an initiative to deliver PPE from schools to hospitals. At CU, even foreign students got involved.

STORY BY Jan Velinger
PHOTOS BY Vladimír Šigut, CU’s archive, Prague; Volunteering, pilotilidom archives
From medical students to expats

At Charles University, med students got involved early: in the first days of the crisis organiser David Kulišiak, from the First Faculty of Medicine, was on a roll, launching a drive on facebook to bring students together and pool individual strengths. Students at the First Faculty were not alone: similar coordinated responses formed at all of the medical faculties and linked up. Vitaly Fetissov, an American student of Moldovan descent in his sixth year at the Third Faculty of Medicine, founded Prague Volunteering, which found ways to bring together foreign med students and others. The initiative soon expanded to include the broader expat community, Fetissov explains:

“When the government put out the call for fifth and sixth year medical students to help, there needed to be an organisational team to put students in places where they were needed. That was directly organised by the Charles University medical faculties and primarily within the Czech curriculum. I offered to help with English-speaking students. After about a week I realised that even though the faculties’ scope was enormous, there was a possibility to expand to include the expat community. I went independent with Prague Volunteering to facilitate matters: it was the logical next step.”

Volunteers signing up at the website were directed to areas where they could best help. Medical students fit within the broader faculty framework, Fetissov says:

“We had forms to be filled that were specific for the school and jobs that were specific for medical students. Jobs they were entitled to do and citizen volunteers could not.”

When this is over, people are going to realise that the work that mattered was what they did for others.

Medical students were able to volunteer in making masks, running a help line (most often taking calls from people who were displaying possible Covid–19 symptoms), doing research, or helping in clinical work. Citizen volunteers were also able to sign up to make protective masks or collect fabric or in other ways. Even small businesses got involved: one donated fresh-brewed coffee to help medical students who went independent with Prague Volunteering to facilitate matters: it was the logical next step. After about a week I realised that even though the faculties’ scope was enormous, there was a possibility to expand to include the expat community. I went independent with Prague Volunteering to facilitate matters: it was the logical next step.

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The Front Lines

Clara Boettcher Mallmann is a fellow volunteer and second-year student from Brazil responsible for public outreach at Prague Volunteering. She told Forum how she got involved:

“I originally got in touch and asked Vitaly if he could help me with a video for my hometown in Brazil because I had been so amazed with what he had done. I wanted to provide people there with info about how to set up a similar initiative. And from him I learned that he still needed more organisations in the project here to help with the website and organising duties. I was one of four days after they began. They were very busy and there were many things to be done.”

Boettcher Mallmann suffers from asthma so she worked from home and not at a medical facility. She says that balancing work and distance learning went well, even if it was all a little confusing at first. But she successfully balanced her time between distance learning, reading study materials, and doing volunteer work according to a regular daily schedule. And heard back from fellow students in the field:

“I have some friends in the third year who were on the very front lines: most of the hospitals had work actually slowed a little bit: even early on there was a sense that the crisis here was almost under control. All the same, we continued our activities – including research and compiling information on the virus – and staffing the helpline.”

The help from professional sectors was also most welcome:

“The donated coffee shows the specific kind of drive and mentality that I really respect. Many others contacted us, offering help on a larger scale, and we had input from graphic designers who helped us create a more aesthetically pleasing website. It all made a difference.”

There is no question that the pandemic – as it spread in Europe – brought many people together; Vitaly says whether one was a med student helping on the front lines or someone working from home, it was inspiring to see so many people get involved.

“Our professor, an expert in infectious diseases, said as students of medicine we were lucky to witness an historic crisis like this in real time; that is not to say it was a good thing but it provided us with the valuable insight into this kind of virus as opposed to historical records and past analysis.”

One question probably contemplated by most in the days of lockdown from behind windows and computer screens when cities had gone eerily quiet, was how much things would change.

“Will the world change? I think it already has: I am seeing more comradery between people, more teamwork, people are starting to take a more human computer screens when cities had gone eerily quiet, was how much things would change.

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“I did not realise so many people would join and with so much enthusiasm. Many people really wanted to get involved. On the ground level, with the way things developed in the Czech Republic, work actually slowed a little bit: even early on there was a sense that the crisis here was almost under control. All the same, we continued our activities – including research and compiling information on the virus – and staffing the helpline.”

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The sky's the limit
The mix of students and citizen volunteers involved in Prague Volunteering at Charles University is inspiring and shows how we are all called on to be part of the broader public interest. Another initiative, called Piloti lidem, saw private citizens also do their utmost to help schools deliver needed materials. Pilots flying recreational planes offered their help early on in the crisis to deliver medical equipment and other supplies around the country and their effort made international headlines. One example was the delivery of 3D printed masks designed by covmask.cz connected with the Czech Technical University (ČVUT).

Tomáš Čap, a pilot and one of the members of the organisational team, told Forum it began with a Facebook post, when a member floated the idea of using planes; it caught on almost immediately. Within days there were hundreds of volunteers coming forward who were willing to fly, covering most (if not all) of the costs themselves. "It all started with a single post in an aviation-related group. Our founding member, Mílošar Chlán, asked if anybody had thought about using private planes to deliver medical goods and Adam Zahradníček replied. Together they built a website and began assembling a team."

Čap says that pilots came from different backgrounds, some of them former airline pilots or former military, while others were recreational. All of them shared one thing in common: "What we share is that – under normal circumstances – most of the time we fly for fun."

The love for flying, in this case, provided a bigger opportunity: to not be grounded at home, but to help.

"We had almost 400 pilots. We flew Cessnas, Piper, usually two- or four-seaters or ultralights. I think many of us were thinking about doing something like this, you know, taking the plane and flying... but it always takes that special individual who gets things in motion for it to happen."

So when those two guys published the initial challenge, it got a response from pilots across the country. We began delivering supplies for example from Prague to Most, to Ostrava, wherever they were needed.

Jan Bradáč is a private pilot who got involved and flew masks to the ARO section of a hospital in Most and also volunteered to work at least one day a week in dispatching for Piloti lidem. A well-known figure in the Czech film industry, he says he is glad he could get involved: "Everything these days has become more personal. Because there is no one who in some way was not touched by the crisis. My feeling was if I could do something, I would. Here you had a bunch of guys and girls who came from different parts of the country and most of us had never even met face-to-face.

"Everything was done through electronic media: we had a person from the railways, another who was a teacher, some were younger while some were a little older like me (laughs). It was great to watch something like this come together, something I could never have imagined, and I am proud to have been a part of it. I didn’t forget my job of course (laughs) and I always hoped that a return to business was really not that far into the future; but of course the health situation took precedence."

In May, the Czech government began easing restrictions, some of them ahead of schedule, when it became clear that social distancing, wearing masks, lockdown and special shopping hours for seniors, had managed to push or keep the rate of infections (less than 10,000) meant steps to slowly reopen businesses as well as regular workplaces could be introduced. Some measures – the requirement of masks and social distancing – remain for the time being (until July 1) in public transport and inside stores: people walking or exercising in the park without masks has become a common sight once again. No doubt there were - and still are - divergent views on where to go from here to restart the economy and return life fully “back to normal”. There are questions if that will even be possible given the lack of a vaccine or more effective treatment. Perhaps there will be a new “normal” in which we learn to live with the threat and possibilities of a second wave as many epidemiologists have warned. So far, luckily, no signs of a second wave have emerged, although that could change in the autumn.

No one knows what the future will bring but if there is a “silver lining”, it is this: that so many people volunteered and met the challenge head on: The one thing shared by most? The hope that this spirit would continue. Even after the crisis had passed.

Hundreds of pilots signed up to fly medical supplies where they were needed.
At the beginning of April, BIOCEV (a joint centre of the Academy of Sciences and Charles University), was granted permission to conduct large-capacity testing for SARS-CoV-2 which causes Covid-19. Samples tested came primarily from hospitals and nursing homes. Laboratories complying with the strictest criteria for working with contagious biological samples were designated and specially modified to test for the presence of the virus in the population. For security reasons, the lab area has only two entrances: one for laboratory staff to enter and leave and a drop-off entrance for samples to be brought in. That ensures that no samples pass through the main entrance used by BIOCEV employees.

Only specially-trained staff who are part of the BIOCEV Covid-19 team have access to the lab and we are able to watch what is going on inside by monitor. More than 100 BIOCEV staff members came forward to help with testing. Laboratories and research infrastructure from the First Faculty of Medicine and the Faculty of Science at Charles University and the Biotechnology Institute and the Institute of Molecular Genetics at the Academy of Sciences of the Czech Republic all provided their expertise. As a result, we are able to test around 300 samples a day.

**Professor Ivan Hirsch**
Special supervisor of testing, from the Department of Genetics and Microbiology at CU’s Faculty of Science
Taking aim at the unexpected

If the novel coronavirus had never hit, Ruth Tachezy would have been doing other things: applying for funding, heading a national reference laboratory, and publishing. She would have been helping her students at the Faculty of Science and would have been preparing for an upcoming conference and a mountaineering vacation. Instead, she opted to tackle a higher “mountain”, setting her sights on SARS-CoV-2, the pathogen that changed the world drastically in just a few months.

STORY BY Marcela Uhlíková  PHOTOS BY Luboš Wiśniewski, Ruth Tachezy’s personal archive
Do you remember your thoughts when you first heard about the outbreak in China?

I do. I tried to be optimistic. In interviews I wanted to calm the public and I didn’t admit to myself that the outbreak could go global and turn into a real pandemic. I thought the outbreak would remain local in two or three countries, like the original SARS, that it would be contained. In a way, the events as they unfolded reminded me a little of 9/11. Then, I had been waiting to pay at a gas station and a TV was airing images of the planes hitting the World Trade Center in New York. I didn’t realise immediately what I was seeing was real but thought it was “just some stupid film”. But of course, it wasn’t. The start of the pandemic was similar: a week earlier, my son, daughter and I were watching a BBC documentary about pandemics and suddenly here we were... in the midst of one.

It might sound strange, but in terms of your profession it must be an interesting period; is it?

I would never say I was happy to have gone through this experience but it’s true that “on paper” it was a situation I had always been curious about. It was within the realm of possibility and one could imagine something like this might happen one day. But a real epidemic or pandemic is extremely distressing and difficult to tackle – for all of us – and is not anything anyone can be happy about.

When did you first realise the gravity of the situation?

Before the outbreak spread significantly in Wuhan, friends and I had been organising an annual trip to the High Tatras in Slovakia. We go there every winter. I mostly leave the climbing to others now but still do a lot of trekking and now that my kids are older they often come too and help me carry my backpack to the top (laughs). But as the extent of the crisis became clear, we cancelled our plans – just the first of many restrictions the pandemic brought.

The mountains taught me discipline, strength of will and the ability to take responsible decisions at tough moments.

Who did you get your love of the mountains from?

I come from a family of mountaineers and mountain climbers. In the early 1970s, my dad, Jan Červinka, founded a mountaineering club in Vrchlabí. He himself was a famous mountaineer who had been part of Czechoslovak expeditions in the Himalayas, the Hindu Kush, and other major mountain ranges. Today, he is one of the oldest surviving members of the first expedition in Afghanistan. Since he and my mum were passionate about sports and travelled often to the mountains, my sister and I also “caught the bug”. That said, I suffered a bad injury in a climbing accident 20 years ago which could easily have cost me my life.

My kids love climbing too, though: my daughter has been climbing since she was 15 and my son, who I tried to dissuade a little from taking up the sport, does orienteering. Now he has gotten me interested in orienteering as well. We all love the mountains, including my husband, whether on foot or on cross-country skis.

Do you remember your first bigger climb?

My father took me to the Caucasus Mountains and I remember the climb as being extremely difficult and long, in terms of energy I hit rock bottom. Later in life, it helped greatly: whenever I faced a difficult situation where I thought I was “down”, I knew that I still had reserves I could draw upon. The mountains taught me discipline, strength of will and the ability to take responsible decisions at tough moments. It’s like that with many sports.

I was a downhill skier, who attended a sports academy and raced and even later competed at university. Regular training teaches you to organise your time. But even though sports were important, my parents still emphasised academic excellence. Had my marks suffered in school, I don’t think they would have let me continue doing sport.

If we turn to work, the coronavirus soon became the main focus, didn’t it?

At first, colleagues and I prepared testing at the Institute of Hematology and Blood Transfusion. Once the lab was successfully up and running, I began testing samples at BIOCEV. Usually I’d be there from around 7 am sometimes to midnight and at home I’d still have to prepare for the next day. The period was intense. Things are now changing: responsibilities at the department are calling, although I remained in touch with my students throughout the crisis, I still felt like it wasn’t enough. I am trying to balance things out now with online courses and individual consultations. I also gave a lot of interviews, for which I had to study all of the latest information. I am continuing to follow the latest epidemiological information, answer dozens of emails a day and handle numerous calls. On top of that, you have regular organisational tasks and problems that arise. And of course each day at BIOCEV, we have to release the results from hundreds of samples.

What first drew you to microbiology when you were younger?

I was always interested in medicine. My mum, a paediatrician, worked until she was 86! I liked going with her to the hospital, I wondered who her patients were and what treatment they were receiving. My mother liked microbiology and recommended me a book on the subject that became my favourite. My aunt, who was a microbiologist at the National Institute of Public Health, was also a big inspiration for me. I longed to become a doctor and even to take part in rescue missions around the world.

How did you put together your current team?

There was a lot of enthusiasm. It was an emergency situation and we were in a position to help. Scientists are a very specific community: most of us are happy to stick to our research and there is usually quite a bit of rivalry. But here a lot of people got involved very quickly and one of the reasons we got up and running so successfully was because of support from BIOCEV management, the Faculty of Science, and also Vice-Rector Jan Konvalinka. They made it possible to begin proper testing, quickly. Have you ever joined forces against a “common enemy” with others? With someone who might otherwise have been a rival? It happened a lot before the fall of communism in Czechoslovakia in 1989 when the common enemy was the regime. That brought us together then – in the labs and even in the mountains. We had a lot of fun, felt safe in each other’s company, shared a lot similar views and felt very little rivalry at all. This was a little bit similar.

Do you have a favourite story from those days?

The most personal one is from my marriage. My husband is a parasitologist; in 1986, before we...
What happens next will depend a great deal on how people will behave and whether they will continue to respect restrictions as they are lifted. If you suddenly have crowds of people waiting for beer, that’s not following recommendations. It would be easier perhaps if the virus were “visible”.

married, he left for two years on an internship in China. There were no mobile phones, email didn’t exist, and letters took weeks to arrive and were censored. I was head-over-heels in love and he just disappeared. I very much wanted to travel to see him but wasn’t given permission by the state. So we came up with the idea of getting married at the embassy in China in line with the Helsinki Accords. But that was also rejected. You know what happened? My partner filled in the necessary papers in China, and I got married in Vrchlabí with a friend acting as a surrogate during the ceremony! Once married, I thought the authorities would have to let me go and see him. And they didn’t! They claimed I didn’t have the sufficient capital to go.

At the time, my father was at basecamp at Mt. Everest but when he heard about it, he contacted his sister in Switzerland and asked her to send me 300 dollars. I got the funds and became eligible. I hunted down all the necessary documents from the ministries of education, finance and foreign affairs and then waited for three days at the then-state travel agency Čedok to get a train ticket from Ulaanbaatar to Beijing. No obstacles remained and I was able to reunite with my husband.

And here we are: today, you are a highly-repected scientist and once again China is the centre of the story...

I try to do my job as best I can and I enjoy it. In science, nothing is ever complete, there is always more to be done, and there are always things that could be done better. My parents didn’t teach us to relax. In the 1990s, I worked with great enthusiasm to improve screening for cervical cancer. I was focusing on related viruses. I spent a considerable part of my career fighting for vaccines against human papillomavirus, and it wasn’t easy and came down to money.

The intensity was similar to what I am experiencing now: it was necessary to fund research through grants and to back studies running then. It made sense to me. I always asked people I wanted to work with if they wanted to do something together that would matter, or make a difference. Something they wouldn’t be paid for, for which there’d be no medal. I don’t know what must have gone through their minds, maybe they would rather have killed me (laughs). But the fact that people came on board was great: on your own, you wouldn’t get the same results.

Where are we when it comes to the coronavirus pandemic? Is the end far? Or near?

I am a little afraid that the “easiest” solution, developing a vaccine for broad immunisation, is probably not just around the corner. A vaccine stimulating the production of antibodies is certainly the best hope, but it may not succeed, for many reasons. Another approach can be a vaccine stimulating a T-cell response, capable of wiping out infected cells. That road is even more uncertain and difficult. All the same, I want to be optimistic and believe we will come up with a vaccine, even if it takes longer.

What about effective treatment?

There might be a greater chance there: tens of thousands of molecules are being tested and it is possible some will prove effective against the illness. If they stopped the potential infection of additional cells, they could be used preventively. But to manufacture enough to “cover” the entire world population is a much greater challenge than tackling a local epidemic.

How do you see the lifting of restrictions and return to normal life?

I think that the head of the country’s healthcare statisticians, Ladislav Duleč, and Professor Roman Prymula, who is the deputy health minister, did a fine job and I think decisions that were taken were correct. What happens next will depend a great deal on how people will behave and whether they will continue to respect restrictions as they are lifted. If you suddenly have crowds of people waiting for beer, that’s not following recommendations. It would be easier perhaps if the virus were “visible”.

The coming days will determine where we go from here, but if people who are annoyed and tired of restrictions suddenly throw all caution to the wind, there could be local outbreaks and hot spots. On the other hand, if people are careful, the warmer months may see transmission of the virus stop.

And then?

It’s possible the novel coronavirus will just disappear one day with “a snap of the fingers”, but it’s not very likely. If it comes back, it could become seasonal, like the flu. Ahead of us is a period where there will be fewer serious cases, I think, but in my opinion, it will take roughly a year before restrictions are completely lifted. But I think it’s the only way forward. We’ll have to keep a close eye on developments and in the case of sudden increases of cases, temporarily tighten restrictions again. The main task is to ensure the virus doesn’t ever swamp the healthcare system. Certainly, it hasn’t been easy, especially for families with little kids. But also for people who live alone.

Ruth Tachezy, Ph.D., was born in Olomouc, in the former Czechoslovakia. She studied molecular biology and genetics at the Faculty of Science at Charles University, receiving her doctorate in molecular virology. She is a researcher in the Department of Experimental Virology at the Institute of Hematology and Blood Transfusion and the head of the National Reference Laboratory for Papillomaviruses and Polyomaviruses. She heads the Department of Genetics and Microbiology at the Faculty of Science.
Bats’ remarkable immunity and Covid-19

A number of deadly viruses are believed to have originated in bats, including Ebola and the original SARS. The indications are that the novel coronavirus SARS-CoV-2 also made the jump from bats, most likely through an intermediary species. Why are so many pathogens linked to the flying mammal? Radek Lučan of CU’s Department of Zoology says the answer lies in the animal’s robust immune system. In short, bats can weather viruses that in “a perfect world” would never spill over to humans.

STORY BY Jan Velinger    PHOTOS BY Vladimír Šigut

Deadly viruses from Ebola to Marburg or the first SARS were found in bats; but in order to know for sure how pathogens jumped to humans (whether it was directly or through an intermediary animal) we would have to be able to locate Patient 0. That is practically impossible. For example, we have no idea who patient zero was in the transmission of the coronavirus SARS-CoV-2 that causes Covid-19.

Experts warned for years that a deadly pandemic was coming and there were earlier threats: SARS, MERS, avian flu. Covid-19 is the one that went global, becoming an unprecedented health crisis.

Human population density plays a central role: if a pathogen is especially virulent and human-to-human transmission proves possible, it can move very quickly. When you combine this with how interconnected the globe is today through air travel and trade, a pathogen can pop up on the other side of the world in a matter of hours or days.

I am not sure how we can change that. As we press up more and more against nature, it seems
Throughout my career, I never heard of a scientist dying from anything caught from a bat.

More and more likely that such situations will happen. If you take into account the diversity of wildlife as well as the density of local populations in tropical areas, the chances of an outbreak are even greater. The main difference is, in the past pathogens could not spread as quickly.

Many of my colleagues lay the blame with humans for encroaching more and more on nature, but paradoxically more people live in big cities than ever before. Half the people around the world live in cities and have less contact with nature than ever. Eighty percent of kids in the Czech Republic, for example, are unable to recognize a blackbird. Even when I take my students at the university on fieldwork to study wildlife, it is a real eye-opener for some of them because it is the first time they have ever slept under the stars. A lot of them have never been in the forest at night.

If we have less and less contact with nature – what about other countries? I spent a lot of time in the Middle East and in North Africa and the contact between locals and wild animals was not as common as you might think. If we are talking about bats, they might feature in local shamanistic rituals. If we are talking about parts of Southeast Asia and some parts of Africa, they hunt bushmeat, consuming bats such as “flying foxes”, along with domestic animals like cats and dogs. All of these animals are cooked or roasted and all of them carry viruses. The danger is in the actual preparation of the raw meat: that is the point where the virus can make the jump.

It is hard to imagine how things might be different in the future. If your city is at the very centre of an outbreak there is even less time to respond, even if you know how. Short of living in some sci-fi fantasy, it’s not clear how much can really be done. We’d have to be completely apart from nature and live in some kind of sterile aquarium hooked up in a Mars-like VR existence, which is nonsense. We will have to get used to the fact that there will be epidemics and new illnesses and we have to prepare for them as best we can. I strongly believe we have enough technologies and know-how to manage such threats successfully.

To come back to the current outbreak, there has been a lot of speculation about where Covid-19 originated, including no shortage of conspiracy theories. I don’t think any serious scientists are entertaining the idea that it was bioengineered but certainly it is striking, at least for many of us who study bats, that the outbreak happened in the same city where a lab lost a dozen bats – a level-4 lab was studying bats for zoonotic illness. The lab in Wuhan is a level-4 lab and given it is often asymptomatic, a scientist could have been exposed to the virus and accidently carried it out of the lab without knowing. He or she could even have gone shopping at the market and the sheer number of people there, in the suburban humidity, would have ensured that it spread quickly.

Do you think an international investigation will ever uncover the truth? One question is China’s regime. I don’t think it will be at all easy to get to bottom of what happened. The only information that gets out is what the regime allows. Methodologically, I don’t see any way it can be done either: it is simply extremely difficult to trace back what happened. Even in scenarios where a lab followed all of the necessary protocol and we even had a lot of decent information, it would still be hard to piece together the exact chain of events.

In terms of future threats, what is something we can influence? The unregulated hunting of wild game and the eating of bushmeat remains the problem: the easiest restriction would to limit the consumption of bats and wild game. At the same time, plenty of places have restrictions in place and locals do it anyway and not because their livelihood depends on it: may simply be a question of tradition. I spent some time in the Philippines where hunting for bushmeat is banned but every local has a firearm using CO2 cartridges. They hunt by flashlight and fire those guns at any creature that blinks in the dark.

They could live without the bushmeat but for them the meat has a deeper significance. They see it has medicinal properties and – illegal or not – bushmeat is simply part of their way of life. For that to change, there would have to be people monitoring the situation on the spot, which is unrealistic. It comes down to education and upbringing and that is not something that can be done overnight. By comparison, in the Czech Republic, the hunting of traditional game like wild boar or deer is of course also regulated and meat has to be tested and meet veterinary standards for parasites and dangerous known pathogens. But there is no reason a novel virus couldn’t slip through undetected the same way even here. It doesn’t have to be in some place far away in the tropics.

When it comes to studying bats in the field in the Czech Republic, are any precautions required? There are around 45 different species of bat in Europe and most of them are tiny: while we usually have hares and carry diacritic, their bite wouldn’t even break through your skin. We wear goggles especially when it comes to the bigger species and bites are simply unpleasant. The threat of rabies exists but incidence is very rare – much less than 1 percent of the bat population have antibodies which still does not mean they have rabies. We are vaccinated of course but here’s another interesting fact: unlike dogs, bats do not have rabies present in their saliva so the threat of transmission is absolutely minimal. Throughout my career, I never heard of a scientist dying from anything caught from a bat.

You have done a lot of conservation work as well as popularisation. Do bats enjoy a better reputation today because of it? They do. The Czech bat conservation trust – which I was a secretary of for many years – does a lot of public education, such as International Bat Night, attracting around 10’000 visitors at around 50 sites in the Czech Republic. We are involved in Czech schools with presentations and lectures. The public perception has certainly changed. In the old days, if someone found a bat in their attic they would just bash it with a shovel. Now, people know better and they know whom to call. In all seriousness, people have learned what fascinating creatures bats are. The protection of bats is in our legislation so when you have the renovation of pre-fab apartment blocs underway and bats are found, the houses are put up for their protection. Without question, we have seen a lot of progress over the last 20 years.

Historically, bats got a bad rap as well, didn’t they… In medieval Europe, or in the Christian world, they were associated with night and areas underground that brought to mind Hell; their wings were seen as demonic. In many cultures in the past, bats were feared or disliked but one exception was Japan, where they were a good-luck symbol. Bats are remarkable and they are very beneficial in many ways. They play crucial roles in tropical and other ecosystems, responsible for pollinating all kinds of plants, including banana or durian. They keep insect populations, such as mosquitoes, in check. A single bat can eat one-third of its body weight in mosquitoes in a single night. In 2007, a study in Science showed that in the US one single species, the Mexican Free-Tailed Bat, saves America four billion US dollars per year in insecticides. They have a positive impact.

While they certainly carry viruses, as I said, there is no record of any direct transmission to humans. If anyone was ever at threat it would have to have been Ozzy Osbourne [in the infamous incident when he allegedly bit off a bat’s head. And he was okay and has been going strong ever since. (laughs)] But otherwise? Ordinary people almost never come into contact with bats and even when they do, they are far more likely to simply spot them flying overhead than to ever hold one in their hands.

Raděk K. Lučan, PhD, is an expert in vertebrate zoology, chiropterology and biogeography at the Department of Zoology at the Faculty of Science at Charles University. His professional interests include the population ecology and conservation of bats in the Western Palearctic and bird and bat migration. Current projects include a study of the biogeography of the fruit-bat (Houonetta aegyptiacus) in the Mediterranean region and conservation ecology of grey long-eared bat in the Czech Republic. He is a leader of a large project focused on long-term monitoring of bird, bat and insect migration at Gorní Jesenský Mountains in the Jeseníky Mountains.
As the coronavirus held the world in its grip — claiming lives across the globe — it grew apparent that an important tool in fighting the spread was the introduction of smart quarantines: tracing the movement of infected individuals to free up at least some sectors of society. The potential impact was examined in a study by economist Ole Jann, published by CERGE-EI.

I asked Dr. Jann in April about how smart tracing was used in Asia and how it was expected to help in the Czech Republic, where a pilot project was run in South Moravia.

Why have South Korea and Singapore largely been success stories in reining in the number of new cases?

Both learned from the experience of narrowly avoiding catastrophe several times in the past: there was the SARS epidemic in 2002-2004, and later, MERS. They looked at how close they came to disaster and began planning. That meant building infrastructure, organising training exercises, and preparing testing kits. In Europe, we were maybe more complacent: these were problems that just seemed “far away” and there just wasn’t as much preparation here.

What they did—and did early on—was to test a lot. In South Korea, they were able to run tens of thousands of tests per day. In most cases, the results were negative but of course in other cases they learned that many infected people were asymptomatic and that was a very useful result.

How important a role did the smart quarantines play there?

This is something else they implemented very quickly. When we talk about contact tracing that is something that all countries already do to an extent, but with different degrees of success. The big difference was that South Korea was very diligent in testing and very carefully followed the chain: when someone tested positive, the South Koreans were very careful to follow up on all others who were in the chain. In Europe, until now, we put the main contacts in quarantine, but it often stopped there. We didn’t follow others on the chain diligently; because this illness can be largely asymptomatic in many cases, that has a negative effect.

What kind of data was monitored?

In South Korea, they used many different sources: medical histories and histories of recent doctor’s visits. Then, they tracked cell phones (usually with consent even though the legal situation suggests they can do so without a warrant). They traced credit card transactions (which is very useful in a society where everyone pays by card) and they used CCTV cameras to check where people had been. They also used data from apps. Apps tailored for monitoring, which can be used very quickly, are an asset while data from cameras is far harder to gather and verify.

What is, potentially, the weakest link in smart tracing or a smart quarantine?

If people don’t cooperate, that can hurt these efforts significantly. There are different reasons why they might not be helping: someone might shrug off only mild symptoms and not report them. And that can lead to the downfall of the system: the whole idea is that people take part and want to help. We can talk about incentives to cooperate but above all people should not have any reason NOT to cooperate.

By that, you mean guaranteeing that the information will remain private, not be passed on and not be accessed by other state institutions, where the risk of abuse would exist…

The information absolutely needs to be protected, to be kept secret from everybody else, there needs to be a clear outline when the data will be destroyed and people need to know for what purposes it will be used. And it needs to be separate from all other state purposes. What I think makes sense there is to build a really separate infrastructure because that will both reassure people and also make it physically very hard for the state to abuse that data. It is also something that can be torn down easily and removed once the crisis has passed. The only other state records you need are addresses because obviously if someone has been infected, you need to find those people. But you don’t need the data to otherwise be cross-referenced.

What we saw at the height of the crisis in the Czech Republic were blanket restrictions, requiring people to stay home, to work from home if they could, to keep children out of schools. Almost all businesses were closed and a great deal of commercial activity was stopped, to flatten the curve.

Yes, it is effectively a “dumb” quarantine where you have to treat everyone as if they were infected: everyone has to wear masks, to stay at home and avoid meeting others including older family members. But as we learn who is likely to be infected, to be part of the chain, that means we can free up other parts of society and economic activity.

In South Korea, they were able to run tens of thousands of tests per day. In most cases, the results were negative but of course in other cases they learned that many infected people were asymptomatic and that was a very useful result.
An infection is a stochastic thing and it is a question of probability: we can’t say for sure even if you met someone for an hour who has it that for sure you will get it or that you will not get it if you met for only two minutes.

In the Czech Republic, one worry was that people might be wary about being so closely monitored - even during such a crisis...

There are cultural differences and there are different approaches to community and the individual’s role in community, but another reason is that the Czechs have a very recent history of state surveillance and the state invading peoples’ private lives and using what it finds against them. In South Korea, they don’t have that kind of experience and also they have more community enforcement, more enforcement of the rules. All of these things matter a lot.

In South Korea, how well did their smart quarantine work? Were there blind spots? Did they plan for the data not being complete?

I think they did and it’s the only reasonable thing to do: there are going to be contacts you miss. You can’t catch every case. Not everyone will be forthcoming, things will be overlooked; also, an infection is a stochastic thing and it is a question of probability: we can’t say even if you met someone for an hour who has it that for sure you will get it or that you will not get it if you met for only two minutes. The goal is to make the system as reliable as possible and if something does pop up that we didn’t expect, to follow up very quickly. Find the initial contact, then contacts of contacts, and test them.

How great an impact can a single missed contact have?

It can be enormous. In South Korea, they reacted so quickly and looked at so many people travelling from China, they had the epidemic pretty much under control for the first 30 patients. But then came the famous patient number 31, who continued to participate in daily life, did not follow the measures, did not tell anyone although she had the symptoms, went to church and was in close contact with others and infected up to 1,000 other people. They infected still more people and then it became very difficult to get back under control. That’s why South Korea, instead of having cases in the hundreds, rose to around 10 thousand.

And of course we see how serious the situation became, from country to country. The number of deaths rose and the stringency of the measures by the government sent a message. We also saw what is going on in other countries. One snag is that, if you are successful, it will never become fully apparent how serious the situation was. If you look at the past cases, SARS or the swine flu, governments did react and did so quickly and effectively. In the case of SARS, SARS had a mortality rate of 10 percent; if that had broken out uncontrollably, there would be fewer people living in the Czech Republic and elsewhere now.

Many people rediscovered or learned about Bill Gates’ now famous TED Talk from 2015 where he warned exactly of the danger of microbes and that the next crisis the world faced would be a pandemic. Many steps are now being implanted to try and curb the spread but given how many countries were caught off guard, do you think we will be better prepared next time, if and when Covid-19 is in the rearview mirror?

You can never learn the lesson completely, even looking back. There will be lots of differences between what happened here, what happened in Germany and what happened in the US. There will be different analyses and various explanations and factors, such as the age of the population and so on. Of course, we will learn from Covid-19 but what we learn may not be applicable next time. We have been talking about South Korea and Singapore: they were very lucky in the sense that the kind of outbreak they prepared for was similar to SARS or MERS. But the next such pandemic or epidemic might well be very different. The lessons might not be as useful or could even lead us down the wrong path. You have to do more than just learn from what happened but have to simulate or try to anticipate the next kind of threat.

I suppose a super flu was the biggest hypothetical worry before Covid-19?

Sure, if you take the 2015 Ebola outbreak. With Ebola, people have symptoms and succumb very quickly, meaning they can’t infect as many others. But imagine something as dangerous as Ebola which would be asymptomatic - that would be very hard to control.

Your paper mentions very clearly that when a society tries to implement a smart quarantine it only gets one shot. Why is that?

The rules and procedures have to be well-designed and clear and have to dissuade people from being clever about the rules and trying to trick the system. For example, someone may try to be clever to shorten their quarantine and so on. There is a bit of a culture sometimes about being clever with rules and some people take pride in getting around them, from labour to tax laws. In the case of tracing, that would be very demeaning and could be catastrophic and then the only solution is to reintroduce blunt rules for everyone. And as we talked about, someone who is having an extramarital affair, or someone dodging taxes or someone who goes to a brothel, needs absolute assurance that no one is interested in that information or will pass it on. The only thing that is needed is to trace the route of infection.

That’s a line that stuck in my head from Dr. Emily Landon at her press conference in the US near the start of the crisis when she said “It’s really hard to feel like you’re saving the world when you’re watching Netflix from your couch.” (laughs) Yes, but that is what is expected when you have a lockdown. Not to fight in the trenches but to sit on the sofa and stay at home.
Ideas for restarting the country

They aren’t as visible as medical workers wearing masks or face shields, but that doesn’t mean they haven’t been hard at work, weighing numerous models and considering different approaches on how to stop Covid−19, while limiting as much as possible damage to the economy. Scientists at CERGE-EI began their mission in mid-March. Central in the fight against the virus was the launching of the IDEA anti-Covid−19 project, issuing recommendations to help mitigate the impact or negative effects which hit, and are likely to further affect, Czech society.

“In the first phase of the fight against coronavirus, doctors, nurses and epidemiologists helped. But experts from CERGE-EI, the joint workplace of Charles University and the Czech Academy of Sciences, also contributed. They were determined to do their part, having worked on dozens of potentially beneficial studies throughout the crisis.”

STORY BY Pavla Hrubáková
PHOTOS BY Hynek Glós, CU archive

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In the first phase of the fight against coronavirus, doctors and other healthcare workers helped. But experts from CERGE-EI, the joint workplace of Charles University and the Czech Academy of Sciences, also contributed. They were determined to do their part, having worked on dozens of potentially beneficial studies throughout the crisis.
New “corona words” helped us laugh

“Czech is not a global language, so we don’t feel as much pressure to be comprehensible as with languages such as English. We can play with it at will,” says journalist and copywriter Martin Kavka. “At the same time, there’s no need to worry about its future,” adds lexicographer Michal Škrabal of the Institute of the Czech National Corpus at the CU Faculty of Arts. Eleven years ago, Kavka founded a website for neologisms, or newly-invented words, called Čeština 2.0 (Czech 2.0). Now Kavka and Škrabal have published a book from some of the new words in book form.

On average, how many neologisms got added to your online dictionary every day?

Martin Kavka: More than 20, which is about triple the usual number. The coronavirus is beyond all previous benchmarks. The first word, “skorona” (‘skoro’ meaning ‘almost’ plus ‘virus’), appeared on our site on 28 January. It signifies a flu so strong that it raises suspicions of being sick with Covid-19. Since then, more than 300 words were added. We’re going to jump over 400 soon, maybe 500, because the rise has been massive.

Where does this increased need to create new words spring from?

MK: It’s one of the ways to describe a new situation, often with exaggeration, and thus a kind of coping mechanism. If you recall, when Facebook, Twitter and other modern sites appeared, they brought with them new terminology taken from English, so for example, instead of saying “Ibí se mi” you’d hear “lajkovat’” (an informal Czech transposition of the English “like” and “unlike”). It doesn’t seem forced or artificial.

It seems to me that these new words relieved social tension at a difficult time. They sound sympathetically unforced. For example, the word “koronáč” doesn’t seem as depressing as coronavirus.

Do we play with words more than other nations?

MK: I don’t think we’re exceptional. There are dictionaries of slang and new words such as urbandictionary.com, which is kind of our English equivalent and a forerunner of our own website, Čeština 2.0. But as the linguist and Czech scholar Jiří Marvan, who has given lectures on the Czech language on almost every continent once said, the advantage of Czech is that it’s just the right size. It’s neither large nor small. Also, it’s not a global language which has to be comprehensible to everyone, it can allow itself more insight and wit. It uses its potential for itself, and doesn’t have to take non-native speakers into account. The whole world speaks English, and the pressure for simplicity is much stronger, while we can play with our language as we please.

Now Kavka and Škrabal have published some of the new words in book form. Of course they weren’t happy about the current crisis, but thanks to their fondness for Czech, they were able to have at least a little fun.

Do you look for the authors of the neologisms that you receive?

MK: I try to, but it’s something like a good joke. If I can find the person who used the word first from open sources, then I mention it in the dictionary. But what mostly happens is that five different people will claim that they thought up a certain term. I deal with it by publishing the name of the person who sent me the neologism first, which of course doesn’t mean they’re the author.

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Czech is incredibly malleable. It enables people to easily handle the neologisms’ de-
Neologisms in the time of coronavirus
(taken from the online dictionary Čeština 2.0):

koronaut [kəˈrəʊnənɔːt] a healthcare worker dressed in personal protective equipment during the coronavirus epidemic (combining the words ‘koronavirus’ and ‘kosmonaut’)

netkafe [netˈkæfeɪ] to meet someone for coffee, but online (referring to the internet and Nescafe)
koronášup [kəˈrəʊnəʃup] a person who knows absolutely everything about the coronavirus; if he ran the state there would be no infections and no deaths (‘korona’ from ‘coronavirus’ plus ‘nafoukany’ meaning ‘a blowhard’)
koronovela [kəˈrəʊnənələ] the second wave of infection (‘korona’ from ‘coronavirus’ plus ‘šup’ meaning ‘whoosh’)
zoombik [zoomˈbiːk] a user of the Zoom videoconferencing app who has become zombified

coronovela [kəˈrəʊnənələ] never-ending and detailed news reports about the coronavirus (‘koronavirus’ plus ‘telenovela’)
prymulex [prɪmˈjuːlɛks] the set of government measures against coronavirus; named after chief epidemiologist Roman Prymula (and referring to Primelex, a popular house paint, as well as ‘lex’ meaning ‘law’)
rouškomil [rəʊʃˈkɒmil] a person who wears a mask even during activities where it isn’t required (‘rouška’ meaning ‘mask’ plus the suffix -mil meaning ‘tummy’)
covidité se [kəˈvɪdɪtə se] to co-videoconference, to see each other by video chat in the time of coronavirus
deprýmulevany [dɪprɪˈmjuːləvən] depressed by the measures proposed by chief epidemiologist Roman Prymula

MŠ: All people on the planet have had to adapt to new situations and this includes their language, to frame things verbally. In this regard, we really won’t be any more or less than the Uruguayans or the Tongans, although from what I know about the Tongans … What I really see is sort of pan-human universalism, which gives the genius Homo an admirable degree of adaptability to new conditions and the ability to survive in them.

Do you remember the first word that brought you to the idea of collecting neologisms?

MK: Quite clearly. I once heard a young lady on a tram tell another young lady that her boyfriend was a ‘sračkogán’ (“sraču” meaning “the run” plus “to-bogán” meaning “tooboggan”). I started writing down these new words, and when I had a nice collection of them, it occurred to me that I could start a website and let other people add their own. The advantage of an online dictionary is how up to date it is. It gains new words quickly, continuously, everyone can take part in it and help to understand the neologisms as soon as they are created. Classic academic printed dictionaries get old quickly. Before it’s published, classic academic printed dictionaries aren’t used because they are incomprehensible to readers.

But you yourselves decided to publish the dictionary in book form. Were you afraid it might meet the same fate?

MK: We prepared it for the 20th anniversary of the founding of Čelina 2.0. This isn’t a classic dictionary. Instead we wanted to try to present the past decade from the perspective of a modern living language. Because every word was added by someone different, their emotional colouring is different. They’re these playful little feuillets of our time. We didn’t try to arbitrate and judge whether a specific word was appropriately formed or not. It should be comprehensible to as many people as possible, and it should be clear from its definition why it was created at all.

Homo an admirable degree of adaptability to new conditions and the ability to survive in them.

MŠ: Was the notional guarantor of lexicographical staff culture. As a conscious and conscientious amateur, which is to say a lover of the Czech language, Martin turned to me as a person from a field where he felt a bit wobbly – he visibly didn’t want to risk that the resulting artefact would be rushed off, half-baked, bungled. I appreciate this kind of approach, and I’d wish for it to be shared by as much of the population as possible. The current crisis shows us, among other things, that despite any number of garbages and increase, we need educated and professionally trained people, we simply won’t make it without specialisation. Today we need epidemiologists. Tomorrow it’ll be entomologists and who knows, the day after tomorrow it might be etymologists.

Can you predict which new words will settle in the Czech dictionary for good?

MŠ: I like harouněma (“harun” meaning “beat” plus “harouněma” meaning “quarantine” or spending the quarantine with your kids at home) and naroušitel (“narušit” meaning “to disrupt” plus “rouška” meaning “mask” or a person being disruptive in public without a mask). They accurately capture the atmosphere in society, yet there’s a bit of a smirk in them, a pleasant exaggeration. As to whether they’ll really stick around, that’s up to time and people. Some clues are already in the online dictionary. People can evaluate every newly added word – they either give a thumbs up or down. The most popular words are the ones that cross over to the regular vocabulary most often. Language is a tremendous organism. People will use only what they like, what fits in their mouths and what has emotional value for them. Words that sound too artificial or too difficult to pronounce will disappear.

MŠ: I don’t want to make any predictions but I will say that we have several candidates for Word of the Year already. For example, ‘rouška’ (mask) or ‘sisečka’ (disposable mask) have had a remarkable “career”. So it occurs to me, Martin, that ‘sisečka’ could also be a free pass to the city of Ústí nad Labem if necessary under quarantine. I remember when that city was flooded, the country’s jokers had renamed it Ústí pod Labem (Ústí-under-the-Labe). Yet one more of the countless pieces of evidence that we really don’t have to worry about our mother tongue or the “risk” of English taking over.

Ústí pod Labem
Reading makes us who we are

CU graduate Anežka Kuzmičová returned to Prague after more than a decade abroad to conduct new research into children’s reading, made possible largely thanks to the Primus programme.

Kuzmičová completed her Master’s in comparative literature and Scandinavian studies at CU’s Faculty of Arts back in 2007; from there, she continued her studies at Stockholm University, where she received her doctorate. Research took her to other places as well: to Denmark, England and Canada. Now – some 12 years later – she’s back at Charles University.

“I had a post-doctoral position in Stockholm that I knew would be ending in January, and had taken some time to complete. In Sweden, you can postpone work – including research – for maternity leave and I had had two children. For the last two years, I had been thinking intensively about what to do next, and we wanted to return to the Czech Republic,” Kuzmičová says. Now she’s researching reading – ultimately how reading informs who we are – at the Institute of Czech Language and Theory of Communication at the Faculty of Arts.

She first prepared to apply with the Grant Agency of the Czech Republic, but the head of the department, Jan Chromý, suggested that she try Charles University’s internal Primus programme as a viable alternative. Primus exists primarily to help young researchers establish new research teams at CU; it started its fifth year in March. Alongside 21 other researchers, Kuzmičová won support and has CZK 4 million at her disposal for her research over the next three years.

Getting to the core of readers’ experiences
Kuzmičová’s focus is research into reading, especially children’s reading, in a natural environment.

“I wanted to work in a team that would be formalised in some way. Until now, I’ve held an individual postdoc position, and for the last two years I worked in Bristol; all contacts and collaborations depended on my personal initiative. It was informal academic cooperation, not consolidated by an official grant, so to speak,” she says in Prague.

From the start she knew exactly whom and what she wanted. “There are four academics on the team. Each member brings something completely different to the project and that is the main joy for me,” she says. The three-year project is called Integrating Text & Literacy Research (InT&L). Kuzmičová’s senior colleague is Markéta Supa of the Faculty of Social Sciences at Charles University, who researches media education, as well as how children experience media, its messages and narratives. “She’s inspired me a lot. She’s got a lot of experience from abroad and a doctorate from Great Britain. She’s building something that didn’t exist in the Czech Republic,” Kuzmičová says. The researcher is also betting on two younger colleagues who are doctoral students: Jana Šegi Lukavská who focuses on children’s culture and Kamila Humolková whose area of expertise includes didactics and communication in education.
For a long time and on an interdisciplinary basis, Kuzmičová has been delving into the depths of reading as a cognitive process and activity, and has published a number of studies. Her work shows, for example, how important the inner experience is for reading, as well as what different reading situations and visual scenes stored in memory do for text comprehension. In other words, she focuses on how books co-create or help form readers’ personalities (and vice versa).

Given the context, it seems natural that a psychologist would be a part of the team, but that isn’t the case. Kuzmičová explains: “I’ve already worked with psychologists a lot, and I will be using them as consultants. This time I’m not planning experimental research. We’re interested primarily in the personal experiences and feelings and talking about them. “The purpose of our project is to see how children are – or could be – led to start perceiving reading as a holistic experience, that it isn’t just something abstract that happens in their heads, but also something that they can experience physically and that can shape them,” Kuzmičová says, adding that reading is also a social activity, where, in the words of Ondřej Hausenblas, “people commune with text.” But children have to enjoy it enough to feel motivated to talk about texts in depth. She is interested in how the will to read can be skilfully developed, promoted and stimulated.

Swedish children’s literature used to be a buzzword and category unto itself. What’s it like there today? “The image presented by the media is not surprising: just like here, the perception is that Swedish children don’t read. But of course they do. Some schools have introduced 10 minutes of listening to a self-selected audiobook every morning, so children have a moment of experience and concentration. The teacher doesn’t care what the topic is; what’s important is the setting – ‘now I’m enjoying this and I have the time to notice how I feel,’” Kuzmičová says. She adds that expert and parental experience show how important it is for children in various stages of life to be enchanted by themes presented in books: children then concentrate on selecting what they’re interested in: football, adventure, nature… Early literacy instruction in the Czech Republic apparently focuses on reading for information and then in later stages it is all about literature. That risks missing important aspects: experiences, scenes, visualisation and the pure joy of reading itself.

“It’s a shame when teachers don’t tell children anything about how they read them,” she says. This is why she wants to teach a new course at the Faculty of Arts called Reading: Theory, Practice, Reflection. During the semester, university students will take one book they’ve long wanted to read but were never able to get around to, and during 12 weeks they’ll read it in a self-reflective style and thoroughly analyse not only the book but above all their own reading processes.

Results for research and practice
The team intend to use the findings from their research in primary schools and elsewhere in academic publications as well as in developing recommendations for practitioners. Kuzmičová already has extensive experience in this regard; she has been published in academic journals such as Sémantica, Communication Theory, the Journal of General Psychology or Poetics Today. Last October, in a ranking in the magazine Fokus, she was ranked first among all humanities researchers in Sweden, something which surprised her considerably. “I thought they’d made a mistake,” she laughs. The ranking’s methodology was based on work published between 2012 and 2015 and citation tracking adjusted with a subject coefficient, which was overseen by an expert who led the latest reform of Swedish university financing. A religious studies scholar from Stockholm came in second place, while a lecturer in ancient culture from Gothenburg placed third.

What would she say was the most important skill she learned abroad? “Mainly how to work in an environment where nobody knows me. In different countries, even the disciplines look different; it gave me the possibility to define myself, what I do and how I do it, and to concentrate on relatively big topics. And the best decision right at the beginning was to start writing all publications in English,” says Kuzmičová, who originally studied Swedish.

In excellent company
Kuzmičová is among 22 young researchers who received Charles University internal Primus grants for three years to start their own research teams. The largest number of successful applicants so far were from the Faculty of Mathematics and Physics (8 recipients), the Faculty of Science (5 recipients) and the First Faculty of Medicine (4 recipients).
The project will start on 1 July 2020.

At the same time, there are plenty of reasons to be excited: the boost in funding for this phase will provide deeper insight into how much greenhouse gas could potentially be released from the entire ice sheet.

“We want to find out whether the rapid melting of the ice sheet may contribute to an increase in methane concentration in the atmosphere and so constitute a positive climate warming feedback.” This is where the microbiologist sees one of the benefits of the research, to which he adds immediate-ly: “We’re realists. We already know that there are much more significant anthropogenic methane sources. The amount of methane coming from Greenland’s subglacial ecosystem will probably be negligible globally, but still, it should not be ignored.”

The team led by Marek Stibal will also be interested in how and when methane appeared under the approxi-mately million-year-old glacier, wheth-er it has been produced continuously or whether it is old gas released due to accelerating melting. “I am mostly inter-ested in the microbial processes occurring under the glacier,” he says.

An international team is being assembled

“It does look like a significant amount of money,” Stibal agrees with a smile in answer to a question about what he is going to do with the 58 million crowns he was awarded by the Ministry of Education, Youth, and Sports of the Czech Republic. That was based on submitting the project to the Europe-an Research Council. A simple calcula-tion, however, reveals that about a half of the amount will cover the salaries of the team members, including three postdocs, two Ph.D. students, a logistics manager (who will organise transportation and coordinate the field work), and a project manager responsible for administration.

Team members will be recruited in several steps, as required by the project structure. The limited pool of national expertise in the subject will likely result in an international team. “A substan-tial part of the grant amount will be re-quired to cover the drilling itself as well as flight hours of helicopter transport,” Stibal says. He made dozens of trips to Greenland, especially during the time he worked in Copenhagen – he would just take his backpack and fly there for a weekend. To do science, naturally.

A return to science... and the band

Marek has not seen a glacier for almost two years. Not that they have lost their charm for him, far from it; the reason is prosaic – he became a father last Au-gust and wants to spend as much time as possible with his son. “Gradually, I am starting to focus more on science again. What other choice do I have now that the project’s been funded?” he asks. The microbiologist is a little reluctant to speak about his hobby, playing in a band; he says that he and his fellow musicians are rather lazy, all have small children, and their plans have also been affected by the coronavirus. This year, they have only met three times in the re-hearsal room and not more. “Don’t ask me about the musical style – it is differ-ent every time,” Marek laughs, conclud-ing: “I won’t tell you the band’s name – you could google us!”

Boreholes in the ice in Greenland

Further research of biological processes under the ice sheet have been made possible by an ERC CZ Consolidator Grant worth CZK 58 million. As the scientist admits, this will be the greatest challenge he has ever faced. At the same time, there are plenty of reasons to be excited: the boost in fund-ing means he will be able to hire the best possible colleagues for his team. The project will start on 1 July 2020.

Kilometre-deep boreholes

The project will be split into several phases: during the first, six sections of the western margin of the Greenland Ice Sheet will be mapped for methane release. To be able to answer funda-mental questions regarding the release of greenhouse gases, he and colleagues will need to obtain samples of undisturbed subglacial sediments. That means taking samples not only from easily accessi-ble areas at the margin of the ice sheet which have been used for research so far, but from places where sediments are not affected, for example, by the pres-ence of oxygen.

“It is this sampling that is potential-ly going to be the most interesting part of the research,” says Stibal, adding “we will have to get through a layer of ice that in some places is up to a kilo-metre thick. Due to the demands of the drilling process, this is where we face the greatest risks and have to take the greatest care, but we will at least give it a try.” The scientists succeed in get-ting the samples needed, the field phase will be followed by laboratory work with incubation experiments, and computer modelling.

The presence of methane under the Greenland Ice Sheet has been con-firmed: its release was discovered in 2015 by a team of scientists from eight institutions including Charles Univer-sity. The concentrations of dissolved methane in samples of meltwater from a 600 km² ice sheet catchment were determined and its origin analysed. The measured amount of six tonnes per melting season corresponds to the methane production of a hundred cows. The new project is going to provide deeper insight into how much greenhouse gas could potentially be released from the entire ice sheet.

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Theoretical mathematics inspired by the real world

“Most of my work still takes place on paper,” says theoretical mathematician Zdeněk Dvořák from the Computer Science Institute of Charles University. He focuses on combinatorics, graph theory, and theoretical informatics, and he received the ERC CZ Consolidator Grant for his research.

STORY BY Pavla Hubálková  PHOTO BY Vladimir Šigut

Being awarded the grant will allow me to focus on research and fund a postdoc and other doctoral students who will work on the project with me. Most importantly, it will allow me to continue in international cooperation,” the mathematician says. “We cooperate especially with McGill University in Canada and the National Institute of Informatics in Tokyo. I was supposed to be leaving for Japan, however, due to the coronavirus this had to be postponed,” he adds.

Dvořák obtained more than CZK 7 million for solving a project named Algorithmic and complexity within and beyond bounded expansion. “It is a graph theory project, which may be misleading for non-experts. A non-mathematician usually imagines a graph as a line, perhaps the exponential. Mathematicians imagine a graph as something which may be called a network. A computer network, a Facebook relation network, a road network, for example: some points interconnected by relations. What we are interested in, is solving problems occurring in these networks. To show it in an example – on social networks, we may study the patterns of relationships appearing there, and deduce certain qualities based on that, such as: has this community apprérend spontaneously, or was it purposely created by somebody? Studies of real networks open problems which we then want to solve also in abstract networks. And we can see that numerous problems cannot be solved effectively in an entirely abstract network,” the mathematician explains.

This is why mathematicians invent the theory of bounded expansion. It may be explained as limiting the complexity of networks. Once again, they find inspiration in the real world: “Roads, for example, cannot intersect arbitrarily – there are rules and limitations in their use. At the same time, there are numerous imperfections and exceptions: bridges are a good example.” Zdeněk Dvořák’s research is purely theoretical: “The goal of the project is to find the hierarchy of qualitative network limitations – whether there is, for example, a certain geometrical structure that might be described.”

The entire approach is entirely new and unknown. “We do not know whether there actually is any related geometrical structure. If we succeed in finding it, it will guide us new tools for solving problems as well as inspiration for further research.” The question about examples’ possible practical use of solving these algorithms is one he finds slightly annoying. The reason? “Science should be done out of interest and curiosity. Practical use, of course, important, but it shouldn’t be the primary motivation. These algorithms might help improve the efficiency of navigation – they might help in finding the required path quickest.”

Cooperation is motivating

As a general rule, research teams in mathematics tend to be small, and many mathematicians work individually; Zdeněk Dvořák, however, prefers working with colleagues: “I am glad when a foreign colleague visits us, or when I am visiting somebody for a few weeks. It is great motivation – both in terms of different approaches and thus more ideas, and of performance. I would feel stupid working alone. If I didn’t get any idea after several hour’s work,” he laughs.

The work of theoretical mathematicians takes place in discussing ideas and solutions to problems and trying to apply the concepts and verifying whether their ideas are valid in the remaining time. They use computers, sometimes. “Ninety per cent of my work takes place on paper. Sometimes it is also created by somebody – ideas written there may be easily erased, and blackboards are great when you are working with somebody – but a pencil and paper are winners for me.”

Dvořák tries applying various principles that proved effective in other areas on solving problems. “From time to time I get an entirely unique idea. This happens, when I have been working for about two weeks on a problem, and then this new idea comes suddenly, when I am walking a park, perhaps,” he says.

Greater interaction is needed

The mathematician focuses on teaching and popularization, among other things: “We organize an informatics-oriented version of Mathematical Olympiad for high school students and also correspondence seminars of informatics,” he points out.

He got inspiration also during his postdoc stays in the USA and Canada: “The science itself is quite similar there. In our field we need no special equipment – a pencil and paper is used abroad as well as in the Czech Republic. What is interesting, is the way of teaching – university education is broader in the United States. Students may combine mathematics with such subjects as literature or theatre. I found that interesting. After returning home, the thing he misses most is more interaction of students with teachers: “What I liked in the US was that the students were more active in their interaction and communication with tutors – they would have consultations. I tried introducing it here in the Czech Republic, however, with less success,” he states.

Dvořák has been recognised on multiple occasions for his work and recently received the Neuron Prize for young scientists in 2014. However, the one he values the most is the European Prize in Combinatorics: “This prize is awarded to young promising scientists in the field of discrete mathematics, combinatorics, and graph theory. I feel honoured that they saw me as promising at that time,” he admits.

In his leisure time, he enjoys reading sci-fi literature and doing the Japanese martial art Shinto Muso Ryu Jodo. “Jodo has several levels for me; it is a sport which I spend most of the time at work sitting, which means that exercise is a welcome change. But there is also a spiritual level, mental relaxation. I also like the fact that although I have been doing it for 15 years, there is still a lot to learn or improve.”

Japanese culture has been his interest for a long time: “I would say it is one of the few developed countries which is not a western-style one. The Japanese culture and mentality is completely different. I enjoy discovering more about it and I love the Japanese landscape. Within two hours, you can get from a metropolis like Tokyo into the heart of intact nature. I love the contrast,” he says.

ERC grants are awarded by the European Research Council and funded from the EU budget. These are very prestigious grants aimed at supporting excellence in science in all fields. A great emphasis is on entirely new revolutionary ideas with the potential of influencing the given field significantly, of extending its boundaries, or even opening new perspectives of research.

Presently, it is possible to apply for 5 types of ERC grants: Starting (early-career researchers), Consolidator (young researchers with their own teams or projects), Advanced (excellent senior researchers), Synergy (groups of 2 to 4 researchers), and Proof-of-Concept (support in the early phase of commercialization of research outputs). ERC CZ grants are awarded by the Ministry of Education to researchers who have achieved great results in the ERC competitions, but received no EU funding due to funding limits.
Enchantment and spirituality in Eastern Europe

**Italian scientist Alessandro Testa has already written four book-length monographs. The works focus on different topics, such as on the relationship between ancient myths and modern mythology, public rituality, and the history of religions. He has been published in renowned journals such as Folklore, Method and Theory in the Study of Religion, and Social Anthropology.**

Testa’s erudition, diligence and ideas have now been awarded with a prestigious ERC CZ Starting Grant, which is the Czech version of support from the European Research Council for outstanding applicants. Although Testa got high marks from the committee in Brussels, there wasn’t enough funding left in the demanding competition to secure his project. Testa’s research project, titled “The Re-Enchantment of Central-Eastern Europe,” received CZK 12 million (around EUR 435 thousand) from the Czech Ministry of Education for two years, with the obligation to compete again for other international funding – especially the EU’s ERC grant.

Charles University won three ERC CZ projects, in addition to Testa, the theoretical mathematician Zdeněk Dvorský of the Faculty of Mathematics and Physics won one, as did ecologist Martin Rychlík of the Faculty of Science. Marek Stibal of the Faculty of Science and Physics won one, as did ecologist Dvořák of the Faculty of Mathematics to compete again for other international opportunities, but which have not yet been sufficiently taken into account. As a trained historian, religious scholar and anthropologist, Testa has extensive experience with revealing the subtler layers of religiosity through historical and ethnographic methods. The methods include field research, participant observation, interviews and research in archives, as well as the collection of other written and oral materials, such as gray literature. There is a wide range of sources. The scientific team plans to purchase software for data analysis as well as necessary books and documents.

“The key task will be to study and understand the reasons for the return of spirituality or the general cultural conditions and motivations that made it possible for Central and Eastern Europe to rediscover this phenomenon, and to understand the historical and societal factors that underlie this social transformation,” Testa says, explaining that he has the Czech Republic, Slovakia, Poland, Hungary and eastern Germany in his sights. This will be the focus of a five-member team. In addition to Testa, there will be an doctoral students chosen in an international selection process and one postdoc, most likely from a Czech university. “The postdoc will be my right hand,” Testa adds. Although the sympathetic globetrotter has worked at the Faculty of Social Sciences for more than a year, he fell in love with Prague long ago.

**A long time passion for Prague**

Testa visited the Czech metropolis for the first time in 2002. During his studies and academic activities, he then worked in Spain and France (at the Sorbonne), but also went to Estonia, Iceland and Vienna, where he worked at various universities. In the meantime, he spent two years as a postdoc at the University of Pardubice (2013 to 2015). Why Pardubice? Testa explains.

“That was a bit of a coincidence. A couple of days after my doctorate, I received an offer from eastern Bohemia, to Pardubice, and I said to myself, ‘Carpe diem. Try it.’ It’s a nice region and moreover close to Prague, which I fell in love with,” Testa recalls. He was also enchanted by eastern Europe; he lived in Vienna in the following years.

What enriched him the most? “It’s extremely important for researchers, especially at the beginning of their careers, to expand their horizons as much as possible. Living and working in different countries helped me enormously. I learned several languages – we could have done this interview in Czech as well – but English is more accurate for expressing myself. Absorbing knowledge in different places is invaluable. I have been exposed to various scientific environments, approaches.”

Testa praises Prague and his work at Charles University. “There’s a good ratio between the cost of living, quality of life, and enjoyment, and working infrastructures. I’m very content and satisfied here. Students rate my courses well, I have enough time to write and publish, and I’ve received interesting opportunities for national and international cooperation. I want to be worthy of this new opportunity here. I also have a lot of friends in Prague. And of course, the secret reason is the excellent beer. During the months of lockdown, I was extremely disappointed because I couldn’t go with my friends to the pub!” helaughs, switching to fluent Czech.

**Epidemics as an opportunity for creativity**

The Covid-19 pandemic hasn’t threatened his project, luckily, or at least so far. Limited mobility is devastating for science, but nevertheless, the ERC CZ plan will start within the next few months, and field research is planned for the end of the first year. “There’s a pretty safe time cushion. But the doctoral students should come for interviews next semester, so I believe that what President Zeman said – about the borders being closed all year – isn’t going to happen,” Testa says.

“Fortunately, my family is ok. The region I come from, Molise, is the least affected in the entire country. I’m using the current quarantine as a sabatical and I’m concentrating on writing,” Testa says.

“Another book should be borne from his research on Central Europe. “Let’s hope that a lot of publications will be created from the ERC CZ project, but in research you always take a risk because you don’t know how the research will come together. But there will definitely be a book, articles and a conference. In addition, I’d like to get the acquired knowledge to a wider audience – at lectures, events in museums and the like. My ambition is to advance knowledge not only among scientists and experts, but also among the general public,” Testa concludes.

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**Alessandro Testa is an Italian historian and anthropologist working at the Institute of Sociological Studies at the Faculty of Social Sciences at Charles University. Alessandro Testa studied history, religion and classical studies at universities in Italy (Florence, Rome, Messina) and in Paris (at the Sorbonne). He later worked in Tallinn and Vienna, as well as at the University of Pardubice. He focuses on the anthropology of religion and cultural heritage, and has lectured at a number of universities. He is the author of four monographs and several edited volumes. He speaks 7 languages including Czech.**
The secret of binary star V1309

In late 2019, three young researchers at Charles University won the Neuron Prize for promising scientists in the Czech Republic. One of them was astrophysicist Ondřej Pejcha, an expert on binary stars who studied at CU and at Princeton University.

What was it like to win a Neuron Prize? Does it have a reputation among Czech scientists abroad?
I was really happy about it and I appreciate it very much. It’s a recognised award and the people who received it before me have my respect and admiration. I already knew about the Neuron when I was in the USA.

You have been described as one of the “most talented astrophysicists” by the council of the endowment fund. What prompted you to return to Charles University from Princeton?
The internal Primus programme made it possible. That created a place for me and ensured the operation of my team. I came in September 2017 and a year later I received a so-called starting grant from the European Research Council (ERC) to study interactions of binary stars.

You’d been abroad for several years; how did you find things upon your return?
Some things really pleased me. I am very happy, for example, that my colleagues from the Institute of Theoretical Physics at the CU Faculty of Mathematics and Physics are very inquisitive and smart people and capable scientists. They’re working on different problems than I, so we cannot discuss the details of our work right away, but they quickly understand what the problem is.

A large part of the research at our institute focuses on the theory of gravity, the general theory of relativity, and the physics around compact objects such as neutron stars and black holes. There is also a group here working on quantum physics, which recently hired Zdeněk Mašín after a doctorate in England and a postdoc in Germany with a Primus project. Our groups are related to each other by doing calculations on supercomputers. After all, I invested part of the money from the ERC grant into the expansion of the computing cluster at the Faculty of Mathematics and Physics in Karlín.

What did you find less than optimal? Are there areas that the university should improve?
It’s hard to take a general position because I get the impression that the situation varies greatly between individual faculties and departments. The uni-
My limited impression is that our students are ahead of those abroad in depth of knowledge, but are behind in soft skills: in the ability to communicate, which is also related to thinking about why and where they’re heading.

Professor Todd Thompson, as a great role model. He was a different type of scientist than anyone I’d known before that from the Czech Republic. He inspired me with his curiosity and the style of work, his original ideas, and an effort to take everything to the higher level. At the beginning of my doctorate I found it interesting that people in the department there were each successful in a completely different way. Todd was an excellent mentor.

Ondřej Pejcha, Ph.D., is a theoretical physicist and astrophysicist who won an ERC starting grant in 2018. He studied theoretical physics at the CU Faculty of Mathematics and Physics (2000) and continued in his study of astronomy at Ohio State University (Ph.D. 2013). He then worked as a postdoc at Princeton University in the USA, where he also won a NASA scholarship. In September 2017, he returned to CU thanks to the Primeus programme. He is the author of around 50 studies; he is raising two children with his wife, Eva.

Tell me more about the members on your team: who are they?

Our group is made up of three postdocs, two master students, a bachelor student, and myself. I’m now looking for a doctoral student and we’re gradually coming to a natural change of postdocs after their three-year stints. We have four years of the ERC grant left, during which I anticipate that other successful scientists will become part of the team.

What would you advise colleagues who want to apply for such a grant?

Aside from the usual lessons, like that the application has to answer a number of basic questions – why this topic, why you specifically and why now – with the ERC I would advise that they really push on the “high risk, high gain” threshold. From my point of view, the project design was a lot riskier than any other thing I’d ever written. The committee appreciated that, but then you’re afraid that they’ll come to the conclusion that you can’t fulfill it.

Will you try for a higher academic rank in the Czech Republic?

It’s probably necessary. The local academic system requires associate professorships and professorships; it’s also important for access to students, accreditations and so on. I want to habilitate.

In one interview, I was interested to learn that you described your advisor from Ohio, Professor Todd Thompson, as a great role model.

He was a different type of scientist than anyone I’d known before that from the Czech Republic. He inspired me with his curiosity and the style of work, his original ideas, and an effort to take everything to the higher level. At the beginning of my doctorate I found it interesting that people in the department there were each successful in a completely different way. Todd was an excellent mentor.
The year 2020 has largely been the Year of the Woman in Academia at Charles University, recognising the enormous contribution of female academics, pedagogues, scientists and researchers. In January, the university marked the 50th anniversary of the death of Milada Paulová, the first female full professor in the history of the school. Paulová, an expert in Slavonic Studies, received the professorship in 1925.

Thousands of visitors attended the Gaudeamus exhibition fair promoting university education and lifelong learning, among them many high school students on the eve of graduation considering where to continue their studies. Charles University, as always, was a major participant.

American geneticist Eric S. Lander (a professor at Harvard and MIT) and Israeli biologist Joel L. Sussman (from the Weizmann Institute of Science) were honoured for their lifelong contributions, receiving the degree honoris causa in a special ceremony at CU’s historic Carolinum.

CU’s Rector Tomáš Zima and the director of Charles University’s Refectories and Dormitories, Jiří Macoun, reopened the university’s refectory in Voršilská Street in a special ceremony after renovation was complete. The site houses not only the canteen but also offices used by the Faculty of Arts, the Faculty of Social Sciences, The Institute for Language and Preparatory Studies and numerous student organisations.

Honorary degrees awarded
Life at CU

Forum 8

Videomapping event celebrates CU’s history

CUTTING-EDGE EDUCATIONAL INITIATIVES WERE THE FOCUS OF A 4EU+ CONFERENCE IN COPENHAGEN IN FEBRUARY, WITH KEY SPEAKERS INCLUDING THE ALLIANCE’S SECRETARY GENERAL VOLKER BAIL AND CU’s VICE-RECTOR FOR EDUCATION MILENA KRALÍČKOVÁ. THE VICE-RECTOR DISCUSSED TRANSFERAL SKILLS THAT ARE ESSENTIAL FOR STUDENTS WITHIN 4EU+: MULTILINGUALISM, DATA LITERACY, ENTREPRENEURSHIP, CRITICAL THINKING AND SOCIAL ENGAGEMENT. FORUM INTERVIEWED THE UNIVERSITY OF COPENHAGEN’S RECTOR HENRIK C. WEGENER ABOUT THE ALLIANCE.


LÁSZLÓ LOVÁSZ RECEIVES HONORARY TITLE

THE WORLD-RENOWNED HUNGARIAN MATHEMATICIAN LÁSZLÓ LOVÁSZ RECEIVED THE HONORARY TITLE OF DOCTOR HONORIS CAUSA, RECOGNISING HIS ENORMOUS CONTRIBUTIONS IN GRAPH THEORY AND COMBINATORICS.

“MIRRING VENICE” AT THE CAROLINUM

A GALA VERMISSE WAS HELD AT THE OPENING OF AN EXHIBITION CALLED “MIRRING VENICE”, HELD AT THE CAROLINUM UNDER THE AUSPICES OF RECTOR TOMÁS ZIMA AND ITALIAN AMBASSADOR TO PRAGUE SAVERIO NISIO. THE SHOW FEATURED WORKS BY ACADEMIC PAINTER JAKUB ŠPANHĽ AND EXHIBITED VENETIAN MIRRORS FROM THE ONGARO E FUGA ARTISTIC MIRROR COMPANY IN MURANO, ITALY.
Charles University orchestra and chorus receive special recognition

The Orchestra of Charles University in Prague re-ceived special recognition as Orchestra of the Month by ENUO (the European Network of University Orchestras) in April. Chief conductor Haig Utidjian described as “wonderful” the opportunity to present the orchestra’s work to the broader public at a time when rehearsals and performances were on hold because of Covid−19.

Charles University marks 672nd anniversary in midst of crisis

The ceremony traditionally held at the Carolinum’s Grand Hall (Aula Magna) was cancelled this year due to the coronavirus pandemic. Instead, Rector Tomáš Zima delivered his speech in a taped video address. He said that while the emptiness of the hallways and buildings at Charles University was far from pleasant, he was “filled with pride, energy and optimism” by all those at the university who were helping in the time of crisis. One silver lining? The crisis allowed for the renovation of the historic site to be completed.

Representatives from the Association of Czechoslovak Legionnaires and Charles University honoured the memory of WWII victims. The event took place on the occasion of the 75th anniversary of the end of the global conflict. Together, representatives unveiled a new bronze memorial featuring the words Universitas Carolina and a statue of the Greek goddess Nike holding a broken wreath, symbolising the paradox of victory combined with suffering and loss.

Slovakia’s education minister welcomed at Carolinum

In June, Slovakia’s Minister of Education Branislav Gröhling travelled to the Czech Republic for his first official foreign visit, taking part in a debate at the Carolinum. Fellow speakers included Charles University’s rector, Tomáš Zima, and other school representatives. Czechs and Slovaks traditionally have a strong understanding and close ties due to their past history. Rector Zima wrote on his Facebook page that his meeting with the minister had focused on expanding international cooperation with universities in Slovakia. More than 3,000 Slovak students are studying at CU.

The appeal of 11

Eleven top personalities from Charles University including the professors Jan Pirk, Pavel Kolář and Rector Tomáš Zima, published a public appeal outlining ways in which the country could gradually reopen following the worst of the pandemic. They expressed the view that public health, economic well-being, and the prosperity of the country (based on epidemiological data and the prognosis at the time) required restrictions to be lifted faster than had been planned.
Water & Civilization

Water & Civilization is a unique open-air exhibition in 24 photographic panels highlighting the importance of water for sustaining life on the planet. Visitors can explore the past, present, and future of water usage on Earth and read entries from top international scientists.

The photographs feature scenes from across the globe: Australia, Europe, Africa, the Americas as well as the world’s oceans. The exhibition can be viewed day or night, thanks to illumination from solar panels.

“Water was crucial in life taking hold and we are all used to current conditions continuing indefinitely. While there is enough at the moment, that could change very quickly,” says the curator of the exhibition, Charles University Professor Miroslav Bárta. “We have to look to the future, change our established ways of thinking and find new solutions.”

The travelling exhibition, which can be visited for free 24/7, will be hosted by the following towns or cities next:

Hradec Králové: 12. 6. – 6. 7. at 28. října square
Český Krumlov: 11. 7.—2. 8., riverfront
Karlovy Vary: 15. 7.—9. 8., terrace at Hotel Thermal
České Budějovice: 7.—25. 8., Přemysl Otakar II. square
Vysoké Mýto: 9. 9.—4. 10., Přemysl Otakar II square
Plzeň: 16. 9.—14. 10., Šafařík orchards

This exhibition is organised by Medialogue together with several Charles University faculties, and both domestic and international scientific workplaces.

The mask maker

For now, it appears that the worst of the pandemic is over in the Czech Republic. But we wanted to take one last look back. Our focus? Respirators made by a CU student at the Carolinum – the heart of Charles University – during the peak of the crisis.

During the pandemic, CU doctoral student Jan Hrabovský wanted to help but at first wasn’t sure how. “I didn’t want to sit at home, and I can’t sew. On the other hand, I do have a 3D printer,” says Hrabovský, who is doing his doctorate at the Faculty of Mathematics and Physics. His “workshop” is right in the Carolinum, and it’s there that he ended up printing original respirators for hospitals and other institutions in need.

Hrabovský first offered his respirators on his own website, where he also posted print files so that others could print their own and provided basic information on cleaning and disinfection. He then became actively involved in the Soueďská pomoc (Neighbourly Assistance) volunteer initiative and offered his respirators through the organisation.

“I’ve had this 3D printer for three years, so I thought I could put it to good use,” he recalls. After getting approval, he borrowed a second printer from the lab, to increase the speed of output. He then became actively involved in the Soueďská pomoc (Neighbourly Assistance) volunteer initiative and offered his respirators through the organisation.

I prepared models in two sizes for smaller and larger faces. It’s also possible to adjust the shape a bit when you soak part of the mask in hot water,” he advises.

“Essentially, they were better masks. You could say they were semi-respirators,” Hrabovský explains. In the first weeks of the pandemic, he produced around 200 respirators, and these went to places like the Vinohrady University Hospital, Motol University hospital, to fellow colleagues from Soueďská pomoc and to the crisis task forces at Prague 1 and Charles University. He even printed a respirator for the school’s rector, Tomáš Zima.

How were the masks manufactured? PLA plastic was used as the base material: in the process, a thin fibre is gradually melted as it unwinds from a wheel. It is printed layer by layer – first the body of the mask and then the front cover with an inner barrier. The finished plastic skeleton is then supplemented with a filtration layer; the simplest could be made of 100% cotton. A single unit took about two-and-a-half hours to print.

The masks weren’t meant to replace certified PPE; they served only as a replacement at a time when respirators and masks were almost impossible to get. But they made a difference: yet another example of how much even just one person, in a time of unprecedented crisis, can help.
koronaut [koˈrɔːnɔːt]  
a healthcare worker dressed in personal protective equipment during the coronavirus epidemic (combining the words ‘koronavirus’ and ‘kosmonaut’)