

30 ans de JUAS

27/11/2024 au CERN

ESI-JUAS: a win-win collaboration

I was kindly invited by Jean-Michel Thénard, ESI's current president, to address you today on behalf of ESI. A privilege that my high-school physics teacher, would have had difficulty believing, if he actually ever gave a second thought to the future career of probably one of the least able and least motivated pupils he ever encountered. As a future student of modern languages and linguistics, I would happily delve into comparative philology and lexical semantics, but physics, was long to remain a mystery to me, even worse, an irrelevance.

And then, in 1997, I started work at Archamps Technopole and met a group of people who unknowingly to them, and also to me at the time, radically changed that outlook. I'm talking about Marcelle Rey-Campagnolle, Yves Lemoigne, Denis Linglin, Louis Rinolfi, and over the years many others, in particular Hans Hoffmann, the late Vittorio Vaccaro, Philippe Lebrun and Elias Métral. Thanks to all of them for many happy hours spent in discussion. I don't admit to understanding everything they shared with me, but their boundless enthusiasm for the physics, technologies and applications of particle accelerators never failed to move me, and I am proud to have played my part in the JUAS success story.

The subtitle of this locution is a "win-win collaboration". To put it simply, JUAS wouldn't be here today without ESI, and ESI would never have existed without JUAS.

Louis has recalled how JUAS had its origins in the courses he and his colleagues gave in Grenoble in the early 90's. At the same time as JUAS was coming into being, another CERN-based physicist, Yves Lemoigne, along with colleagues from CMS and Geneva Hospital, was looking at how to develop training in the fast-developing field of medical physics. Like the JUAS group, they, too, solicited support from CERN as well as from Archamps Technopole, which was willing to put teaching facilities at their disposal. To cut a long story short, both CERN and Archamps felt it would be more efficient to have a single entity providing the administrative support for both the medical physics project and JUAS, which had successfully run its first session a few months previously. The fact that JUAS had already proven its

feasibility was a key factor in getting the green light to create ESI. And so, in November 1994, ESI was founded as a non-profit association under French law, and the win-win collaboration was up and running.

Yves Lemoigne's medical physics project quickly took shape, first with the ACOBIO series of symposia leading to the launch in 1998 of ESMP, the European School of Medical Physics. ESI could now boast two European postgraduate schools and, with the technical and intellectual support from CERN and the financial support from the local authorities in France, was able to leverage further funding from a range of sources including the European commission, NATO, and research facilities and institutions from all over Europe. A pretty remarkable achievement for a small association. ESMP held courses until 2013 and although adopting a very different format to JUAS, did incorporate one of the accelerator school's founding features: mobilizing leading specialists from CERN and all over Europe willing to teach intensive, state of the art classes in highly specialized fields. When ESMP started in 1998, there were virtually no European universities offering dedicated master's courses in medical physics. When it closed in 2013, there were dozens. ESMP and ESI played a significant role in the development of this academic specialization. None of this would have been possible without the initial impetus from JUAS.

In 2012, ESI was contacted by Professor Johann Collot who wanted to develop a high-level postgraduate course in the field of particle detector technologies and applications. A professor at Grenoble, based at LPSC, he was fully aware of JUAS and proposed to develop the new course along the same lines: two back-to-back courses integrated into Master's programmes initially in Grenoble and Strasbourg, the first on physics, the second on technologies and applications, with faculty drawn from leading regional and European laboratories including CERN where practicals could also be hosted, and attended by postgraduate and doctoral students from all over Europe and North Africa. The first edition of ESIPAP, the European School of Instrumentation for Particle and Astroparticle Physics was held in 2014 in the Mont-Blanc building, ESI's new home in Archamps. It was JUAS which provided the model and hence the credibility of this new training course, and was instrumental in Johann being able to secure funding via the labex Enigmass.

With JUAS as its flagship school, and ESIPAP reinforcing ESI's link with CERN and European universities, ESI was subsequently approached by Professor Philippe Sabatier from Grenoble University's Faculty of Pharmacy, who was in the process of setting up an EU-funded Erasmus mundus Master's degree with Barcelona, Turin and Cluj-Napoca in the field of biomedical computing. ESI became an associate partner of the project and ran the first Biohealth Computing summer school in August 2014. The Erasmus Mundus scholars - pharmacists, biotechnologists, computer scientists and medics - recruited from master's programmes all over the world through a highly competitive selection process, came to Archamps at the start of the course where they met each other and key faculty for the first time before heading off to one of the partner universities. During 10 highly intensive days in Archamps, they had to conceive and design interdisciplinary innovation projects in the field of medical computing. At the time this intensive, immersive and innovation-oriented approach was highly original and the success of this first edition was resounding. New summer schools were subsequently developed by Philippe and ESI with Grenoble and its European partners in the fields of big data and medical research, the safety of nanomaterials, and in precision oncology, the latter still going strong today and enjoying a close collaboration with the CERN Knowledge Transfer group and its medical applications team.

JUAS 2020 was coming to the end of its penultimate week when the French government announced that due to the Covid-19 pandemic, a nationwide lockdown would become effective the following week. ESI's administrative and logistical capacity came into the fore, and with Philippe Lebrun, we successfully organised the repatriation of students and improvised on-line examinations so they could validate the course and obtain the corresponding credits from their home universities.

We didn't know this at the time, but ESI would not host face-to face on-site training until more than two years later June 2022. The 2020 BioHealth Computing summer schools were successfully run on line, with Stéphanie and Lise providing all the back-office support to ensure faculty could concentrate on just giving their courses. It's easy to forget now, but at the time, none of us had ever used Zoom, less still collaborative platforms like Slack. The experience was extremely positive, and so when John Jowett, in his first year as JUAS director, and in the context of a resurgent Covid, was faced with the choice of holding JUAS 2021 on-line or not at all, he was reassured that ESI would be able to take on the challenge

of ensuring that ten weeks of live lectures and virtual visits were run virtually without a hitch.

The symbiosis between JUAS and ESI continues today, with ESI co-organising highly successful spin-off schools, the impetus for which came from former JUAS directors and members of ESI's Conseil d'administration. Firstly, with Louis Rinolfi : the I.FAST CBI challenge-based innovation on the application of accelerator technologies to solve environmental and health problems, which held its third edition this summer and, if funding is secured plans to continue next year. And secondly, with Philippe Lebrun and the TOSCA summer school on the management of big-science projects, co-organised with Paris-Saclay and La Sapienza as a module of the Erasmus Mundus Master programme, LASCALA.

In January last year, ESI signed a three-year partnership agreement with ArchParc and the University of Grenoble to consolidate and co-construct new immersive programmes within the framework of Grenoble's new interdisciplinary graduate school. Entering into this kind of formal collaboration with France's leading university outside of Paris would not have been thinkable without ESI's track record over the years.

As I hope I have made clear, JUAS has played an integral part in forging ESI's credibility and legitimacy as an original actor in European inter-university collaboration. In parallel, ESI has shown the collective intelligence and reactivity necessary to offer JUAS directors and faculty an environment in which they can focus on the task in hand: sharing their knowledge with the upcoming generations of accelerator specialists.

A win-win collaboration, if ever there was one.

Thank you for your attention.