

Dr. Lucjan Janowski

Assistant professor at the Department of Telecommunications of the AGH University of Science and Technology in Krakow. He defended his doctoral thesis in 2006. In 2007 worked as a postdoc at CNRS-LAAS (Laboratory for Analysis and Architecture of Systems of CNRS) in France, where he focussed on discovering anomalies and network attacks. He conducts research on telecommunications network users' quality of experience – mainly video services (VOD, monitoring systems, computer games).

DURATION OF THE SCIEX PROJECT:
1.10.2010–31.03.2011

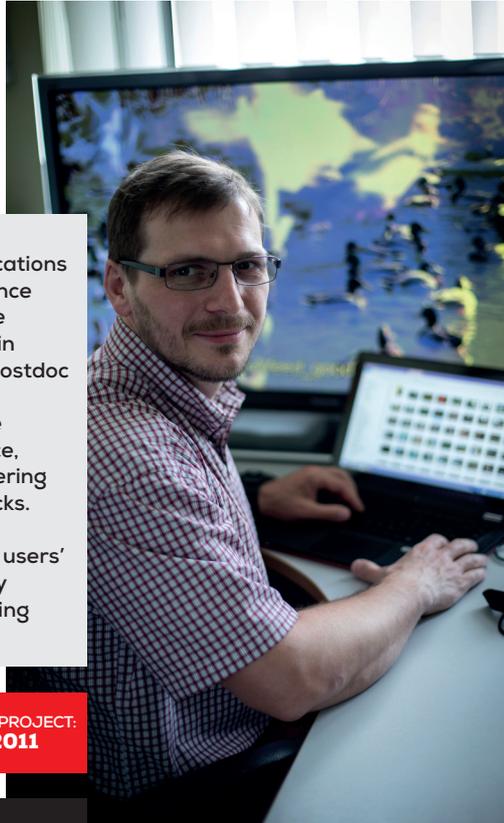
PROJECT:
**QoHealth – QoE
Optimisation for Health
Tele-monitoring and Tele-
treatment Systems with
Constrained QoS**

AGH University
of Science and
Technology in
Krakow

PL

CH

University
of Geneva



What was the objective of your project implemented as part of the SCIEX programme?

The main problem concerned the quality of data transmitted through telecommunication networks: we focussed on a very specific domain – telemedicine. We wanted to develop quality tests for ultrasound data transmitted through telecommunications networks – at the time that way of gaining insight into the results of medical analyses seemed a revolutionary solution for Mali, a country with probably just one surgeon practising in the whole territory apart from the capital of the country, and where access to other specialists is just as limited. We focussed on developing software which – despite poor satellite signal quality – would be able to transmit ultrasound images for the purposes of medical consultation.

What were the outcomes of the project?

Although we achieved our objective related to the technical part of the project, we failed to implement the solution: it turned out that the volume

of medical cases in Mali was low and that nurses conducting ultrasound examinations needed just some weeks of training plus some months of practice to make consultations with a doctor unnecessary. In the course of my SCIEX project I was invited to do some other research on quality: it was about using mobile applications (some years ago that was a groundbreaking idea). That research was conducted for *Carnegie Mellon University, USA* (one of the best universities of technology in the world). I fully succeeded there: I wrote the best article in my entire academic career, later published in *Communications Magazine*.

What impact did the fellowship have on your professional and private life?

The SCIEX project was a significant part of my professional development – owing to the fellowship I managed to narrow an extensive range of general topics down to two which are becoming more and more important in scientific research: telemedicine and mobile devices. The results of my Swiss research will be included in my postdoctoral thesis – in this respect the fellowship is a very important contributing factor.

The SCIEX project also meant invaluable experiences, for example the opportunity to meet Prof. Antoine Geissbuehler, a true guru in his domain, and the chance to observe his style of working and ways of thinking, etc. Working in a new team is always a tremendous inspiration to a scientist: only in this way are you really able to broaden your scientific horizons and build up valuable contacts. And the last but not the least benefit – my increased self-confidence. I went there, I succeeded, I got along just fine!

If not for the fellowship...

...I am sure I would not have taken an interest in mobile devices quality or perhaps in telemedicine. And even if I had somehow stumbled on something like that, without the SCIEX project I would have had no funds giving me freedom of action. I am a grant holder of a ministerial grant for young and outstanding scientists which, most probably, would not have been possible if not for my participation in the SCIEX programme.