

Politehnica University of Timisoara

Awarding the Honorary Degree of

**HONORARY PROFESSOR**

to

**Professor FRANZ QUINT, PhD**

Timisoara

The 10<sup>th</sup> of November 2015



Hochschule Karlsruhe  
Technik und Wirtschaft  
UNIVERSITY OF APPLIED SCIENCES





Professor Franz QUINT, PhD

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# *Laudatio*

addressed to

**Professor Franz QUINT, PhD**

by

Politehnica University of Timisoara



*Distinguished guests,  
 Dear professor Quint,  
 Ladies and gentlemen,*

*Today, Prof. Franz QUINT, PhD from the University of Applied Sciences Karlsruhe, receives a honorary title - "Honorary Professor" - from our university for his outstanding achievements in research, teaching and international cooperation.*

*To summarize the scientific achievements of professor Quint in a short Laudatio is not an easy task, given his remarkable accomplishments. The major landmarks in his career are: he graduated from the Karlsruhe Institute of Technology in 1990, was a researcher at Fraunhofer Institute for Information and Data Processing Karlsruhe between 1990 and 1993, and did his PhD at Karlsruhe Institute of Technology between 1993 and 1997, being awarded a PhD degree with Summa cum Laudae. His academic career in Karlsruhe started in 2002, as full professor for Digital Communications, after being with Airbus between 1997 and 2002.*

*Professor Quint focused his research on Information Theory and Coding, Digital Signal Processing, Digital Image Processing and Digital Communications. The results of his activity are presented in 9 textbooks, 42 papers in journals or conference proceedings and 2 patents. Among the most important achievements are: Robust 2D-Barcodes for Industrial Environments, Light Field Enhanced Acoustic Navigation for Visually Disabled Persons and Map-Based Interpretation of Monocular Aerial Images.*

*Professor Quint teaches several courses, both at undergraduate and graduate levels: Digital Communications, Digital Signal Processors, Digital Image Processing, Information Theory and Coding, and Spectral Estimation.*

*Besides his research and teaching, professor Quint is very active, being: Program Director of the Master's Degree Program Electrical Engineering and Information Technology at Karlsruhe University of Applied Sciences, Co-Chair and initiator of the Double Master's Degree Program in Electrical and Computer Engineering with Ryerson University Toronto, Co-Chair and initiator of the Double Master's Degree Program in Electrical Engineering with Institut National des Sciences Appliquées (INSA) Strasbourg, Reviewer of research projects for AIF (leading national organization for applied research and development), Member of the technical committee, reviewer and session chair in several international conferences on Digital Signal Processing and Communications, Reviewer of international study programs for the German Academic Exchange Service (DAAD), Reviewer for program accreditation at German Accreditation Association for Study Programs in Engineering and Natural Sciences (ASIIN), Member of the Senate and Member of the*



*Expert Committee for System Accreditation at Karlsruhe University of Applied Sciences, Member of the Faculty Board and Faculty Coordinator for International Activities.*

*The cooperation between the University of Applied Sciences Karlsruhe and Politehnica University of Timișoara dates back to 2008, when, following a visit of a German delegation initiated by professor Quint, an Erasmus agreement and a bilateral agreement between the two universities were concluded. Since then, numerous exchanges of students and staff in both directions took place, mainly in the framework of Erasmus programme. Starting with exchanges between the Faculty of Electrical Engineering and Information Technology and the Faculty of Electronics and Telecommunications, the cooperation evolved to include now 4 faculties of the University of Applied Sciences Karlsruhe and 6 faculties of the Politehnica University of Timișoara.*

*In contrast to many other cooperations, which focus on student exchange only, the cooperation between the two universities of the twin cities comprises most aspects of academic life: student exchange for course-work, for practical training and for project-work, exchange of teaching and non teaching staff as well as common research activities leading to joint scientific publications and doctorates.*

*A major step forward in developing the cooperation between the two universities is the ongoing ProKaTim project (Signal Processing Karlsruhe Timișoara), initiated by professor Quint and started in 2012. The idea of the project was to provide to students of both universities international experience and teaching/training in the field of signal processing. Funded entirely by the Baden Württemberg Foundation in Stuttgart, the project consists of a one-week visit of 20 students to the partner university, creation of mixed teams with 20 students from the partner university, one week of common instruction, separate but networked work during the semester, and another one week visit, this time to the other university to finish the project. During the ProKaTim-week, besides teaching, social events, visits to companies and to the city hall, and a one-day excursion to touristic attractions are organized. The project was given considerable attention by Romanian and German mass media and by local political institutions of the twin cities Timișoara and Karlsruhe.*

*To extend the cooperation beyond study abroad, research contacts were established mainly between the Faculty of Electronics and Telecommunications and the Faculty of Electrical Engineering and Information Technology. These contacts and subsequent exchanges of research assistants resulted in 20 scientific papers authored and published jointly, professor Quint playing a major role in that.*



*To conclude, professor Quint, a great friend of our town and of our university, has major contributions in research, teaching and cooperation with the Politehnica University of Timișoara. Therefore, the Faculty of Electronics and Telecommunications proposed the Senate of the University to award Prof. Dr.-Ing. Franz Quint the title of Honorary Professor. The Senate welcomed and approved the proposal on the 6th of June 2015.*

*Vivat, crescat, floreat!*

*Thank you,*

*Timișoara, November 10, 2015*



# *Curriculum Vitae*

**Professor FRANZ QUINT, PhD**

Karlsruhe University of Applied Sciences

Faculty for Electrical Engineering and

Information Technology



## CURRICULUM VITAE

**1. Family Name:** QUINT

**2. Given names:** Franz

**3. Date of birth:** 24.08.1965

**4. Place of birth:** Jimbolia, Romania

**5. Civil Status:** Married, 3 children

**6. Address:**

Karlsruhe University of Applied Sciences  
 Faculty for Electrical Engineering and Information Technology  
 Moltkestr. 30, 76133 Karlsruhe, Germany  
 franz.quint@hs-karlsruhe.de  
 Phone: +49-721-9252254  
 Fax: +49-721-9251513

## 7. Education:

INSTITUTION (Date from - Date to)	DEGREE(S) or DIPLOMA(S) OBTAINED
Electrical Engineering at Politehnica University Timisoara, Romania (1984-1986)	
Electrical Engineering at Karlsruhe Institute of Technology, Germany (1987 - 1990)	Diploma in Electrical Engineering



## 8. PROFESSIONAL EXPERIENCE

### *Karlsruhe University of Applied Sciences, 2002 -*

- Appointed as full professor for Digital Communications since March 2002 in the Faculty for Electrical Engineering and Information Technology

#### Research interests:

- Information Theory and Coding
- Digital Signal Processing
- Digital Image Processing
- Digital Communications

#### Teaching:

- Digital Communications (course and lab, undergraduate)
- Digital Signal Processors (course and lab, undergraduate)
- Digital Image Processing (course, undergraduate)
- Information Theory and Coding (course, graduate)
- Spectral Estimation (course, graduate)

#### Recent Research Projects:

- Robust 2D-Barcodes for Industrial Environments  
Keywords: design and decoding of LDPC codes, message passing algorithms, joint estimation and decoding, Hidden Markov Models
- LifeAid: Light Field Enhanced Acoustic Navigation for Visually Disabled Persons  
Keywords: plenoptic cameras, visual 3D object recognition, simultaneous localization and mapping (SLAM), structure from motion (SFM)

#### Position in Academic and Professional Associations

- Program Director of the Master's Degree Program Electrical Engineering and Information Technology at Karlsruhe University of Applied Sciences

- Co-Chair and initiator of the Double Master's Degree Program in Electrical and Computer Engineering with Ryerson University Toronto, Canada
- Co-Chair and initiator of the Double Master's Degree Program in Electrical Engineering with Institute National des Sciences Appliquees (INSA) Strasbourg, France
- Reviewer of research projects for AIF (leading national organization for applied research and development)
- Member of the technical committee, reviewer and session chair in several international conferences on Digital Signal Processing and Communications
- Reviewer of international study programs for DAAD (German Academic Exchange Service)
- Reviewer for program accreditation at ASIIN (German Accreditation Association for Study Programs in Engineering and Natural Sciences)
- Member of the Senate of Karlsruhe University of Applied Sciences
- Member of the Expert Committee for System Accreditation of Karlsruhe University of Applied Sciences
- Member of the Faculty Board
- Faculty Coordinator for International Activities

#### ***Airbus, 1997 - 2002***

- 1997 – 2002 development engineer at DaimlerChrysler Aerospace in Ulm, Germany (today Airbus) in the areas of Digital Communications, COMINT and Radar Signal Processing
- leader of project teams, since 1999 head of the department “Digital Signal Processing Algorithms”

#### ***Karlsruhe Institute of Technology, KIT, 1993 - 1997***

- 1993 – 1997 researcher on a project of the DFG (German federal research agency) for automatic aerial image understanding
- 1997 PhD-thesis, „Kartengestützte Interpretation monokulare Luftbilder“ (Map-based interpretation of monocular aerial images), awarded degree: Dr.-Ing. with summa cum laude

#### ***Fraunhofer-Institute for Information- and Data-Processing Karlsruhe, 1990 - 1993***

- 1990 – 1993 researcher
- projects on industrial image processing and aerial image understanding





# *List of Publications*

**Professor FRANZ QUINT, PhD**

Karlsruhe University of Applied Sciences

Faculty for Electrical Engineering and

Information Technology



### Textbooks:

1. J. Hoffmann, F. Quint, "Simulation technischer linearer und nichtlinearer Systeme mit MATLAB/Simulink (Simulation of Technical Linear and Nonlinear Systems with MATLAB/Simulink)", De Gruyter Oldenbourg, 2014
2. J. Hoffmann, F. Quint, "Einführung in Signale und Systeme (Introduction to Signals and Systems)", Oldenbourg, 2013.
3. J. Hoffmann, F. Quint, "Signalverarbeitung mit MATLAB und Simulink. Anwendungsorientierte Experimente (Signal Processing with MATLAB and Simulink, hands-on experiments)", Oldenbourg-Wissenschaftsverlag, first edition 2007, second edition 2012.
4. Quint, F., "Kartengestützte Interpretation monokularer Luftbilder (Map-based interpretation of monocular aerial images)", Deutsche Geodätische Kommission DGK Reihe C, Verlag der Bayerischen Akademie der Wissenschaften, München, 1997.

### Chapters in books:

1. W. Proß, F. Quint, M. Ottesteanu, "Decoding of LDPC-Based 2D-Barcodes Using a 2D-Hidden-Markov-Model", in: M. Obaidat, J. Sevillano, J. Filipe (Eds.): E-Business and Telecommunications, Communications in Computer and Information Science, Vol. 314, p. 374-387, Springer, Berlin, Heidelberg, 2012.
2. Quint, F. Objekterfassung aus Karte und Bild, in Bähr, H.-P., Vögtle, T. (Hrsg.), Digitale Bildverarbeitung, p. 108-144, Wichmann, Heidelberg, 1998.
3. Quint, F.: MOSES: A structural approach to aerial image understanding, in Grün, A., Baltasvias, E.P., Henricsson, O. (Hrsg.), Automatic Extraction of Man-Made Objects from Aerial and Space Images II, p. 323-332, Birkhäuser, Basel, 1997.
4. Quint, F., Sties, M.: An evidential merit function to guide search in a semantic network based image analysis system, in Perner, P., Wang, P., Rosenfeld, A. (Hrsg.), Advances in Structural and Syntactical Pattern Recognition, p. 140-149, Springer, Berlin, 1996.
5. Quint, F., Sties, M.: Map-based semantic modeling for the extraction of objects from aerial images, in Grün, A., Kübler, O., Agouris, P. (Hrsg.), Automatic Extraction of Man-Made Objects from Aerial and Space Images p. 307-316, Birkhäuser, Basel, 1995.



## Articles in Journals and Conference Proceedings:

1. N. Zeller, F. Quint, U. Stilla: "Narrow Field of View Odometry based on a Focused Plenoptic Camera", ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. II-3/W4, 2015
2. N. Zeller, F. Quint, U. Stilla: "Applying a Traditional Calibration Method to a Focused Plenoptic Camera", Proceedings, 1st BW-CAR Symposium on Information and Communication Systems, SInCom 2014.
3. N. Zeller, F. Quint, C. Zangl, U. Stilla: "Edge Segmentation in Images of a Focused Plenoptic Camera", Proceedings, 11th IEEE International Symposium on Electronics and Telecommunication ISETC'14, Timisoara, 2014.
4. R. Ionel, S. Ionel, P. Bauer, F. Quint: "Water Leakage Monitoring Education: Cross Correlation Study via Spectral Whitening", Proceedings, 40th Annual Conference of the IEEE Industrial Electronics Society, Dallas, pp. 2465-2471, 2014.
5. N. Zeller, F. Quint, U. Stilla, "Calibration and accuracy analysis of a focused plenoptic camera", ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. II-3, pp. 205-212, 2014.
6. N. Zeller, F. Quint, L. Guan, "Kinect based 3D Scene Reconstruction", in Communication Paper Proceedings 22nd International Conference on Computer Graphics, Visualization and Computer Vision (WSCG), Prague, Vol. 22, pp. 73-81, 2014.
7. N. Zeller, F. Quint, U. Stilla, "Kalibrierung und Genauigkeitsuntersuchung einer fokussierten plenoptischen Kamera", in: Seyfert H (Hrsg) 34. Wissenschaftlich-Technische Jahrestagung der DGPF, Vol. 23, 2014
8. N. Zeller, F. Quint, L. Guan, "Hinderniserkennung mit Microsoft Kinect", in: Seyfert H (Hrsg) 34. Wissenschaftlich-Technische Jahrestagung der DGPF, Vol. 23, 2014.
9. L. Ivascu, M. Izvercian, F. Quint, A. Radu, "Applying the principles of activity-based costing method for the modeling of the sustainable university", 6. Int. Conference on Manufacturing, Science and Education, MSE 2013, Sibiu.
10. Radu, M. Izvercian, F. Quint, L. Ivascu, "Modelling human resources education in the e-learning and e-teaching era", 6. Int. Conference on Manufacturing, Science and Education, MSE 2013, Sibiu.
11. W. Pross, F. Quint, M. Otesteanu, "Comparing the error-correction capabilities of different 2D barcodes in industrial environments", Scientific Bulletin of the Politehnica University of Timisoara - Transactions on Electronics and Communications, vol. 57(71), no.2, 2012, pp. 31-35.w
12. W. Proß, F. Quint, M. Otesteanu, "Design of irregular LDPC codes for nonparametric channels", Proceedings of the 10th International IEEE Symposium on Electronics and Telecommunications (ISETC2012), Timisoara, 2012.

14. C. Dita, F. Quint et al.: "A Scanning Method for Industrial DMC Marked on Spherical Surface", 11th WSEAS International Conference on Telecommunications and Informatics (TELE-INFO 2012), Saint Malo, 2012.
15. C. Dita, F. Quint et al.: "Using Mean Shift Algorithm in the Recognition of Industrial Data Matrix Codes", 11th WSEAS International Conference on Signal Processing (SIP '12), Saint Malo, 2012.
16. C. Dita, M. Oteșteanu, F. Quint, "Data Matrix code - A Reliable Optical Identification of Microelectronic Components", in Proceedings IEEE 17th International Symposium for Design and Technology in Electronic Packaging (SIITME 2011), 39-44.
17. C. Dita, M. Oteșteanu, F. Quint, "Scanning Industrial Data Matrix Codes", 19th IEEE Telecommunications Forum (TELFOR 2011), Belgrad, 1211-1214.
18. C. Dita, M. Oteșteanu, F. Quint, "A robust localization method for industrial data matrix code", in Scientific Bulletin of the Politehnica University of Timisoara, Romania, Transactions on Electronics and Communications, Tomul 56(70), Fascicola 2, 2011, pp. 12-17.
19. W. Proß, F. Quint, M. Oteșteanu, "Design of short irregular LDPC codes based on a constrained Downhill-Simplex method", in Scientific Bulletin of the Politehnica University of Timisoara, Romania, Transactions on Electronics and Communications, Tomul 56(70), No. 2, 2011, pp. 33-37.
20. W. Proß, F. Quint, M. Oteșteanu, "Estimation-Decoding of short blocklength LDPC codes on a Markov-modulated Gaussian channel", in 3rd IEEE International Conference on Signal Processing Systems (ICSPS2011) Proceedings, pp. 383-387, Aug 2011.
21. W. Proß, F. Quint, M. Oteșteanu, "Estimation-Decoding on LDPC-based 2D-barcode", in 2011 International Conference on Signal Processing and Multimedia Applications (SIGMAP2011) Proceedings, pp. 34-39.
22. Proß, W., Quint, F., Oteșteanu, M.: Using PEG-LDPC Codes for object identification, in: Proceedings of the 2010 9th International IEEE Symposium on Electronics and Telecommunications, Timisoara, 2010, pp. 361-364, ISBN: 978-1-4244-8458-4.
23. C. Fischer, F. Quint, W. Proß: "Bildverarbeitung für die 2D-Data-Matrix-Code-Erkennung in industrieller Umgebung", in Forschung aktuell 2010 Hochschule Karlsruhe - Technik und Wirtschaft, 2010, pp. 70-72, ISSN 1613-4958.
24. Proß, W., Quint, F.: Comparative Study of a CDMA2000 Turbo code and a linear time encodable PEG LDPC code over GF(q), in: P. Scharff (Hg.), Proceedings of the 54. IWK International Scientific Colloquium on Information Technology and Electrical Engineering, Devices and Systems, Materials and Technologies for the Future, Ilmenau, 2009, ISBN: 978-3-938843-45-1.
25. Proß, W., Quint, F.: Decoding performance of Turbo-Codes and LDPC-Codes with short blocklength, in: I. Sabin (Hg.), Doctor Etc 2009, Editura Politehnica Timisoara 2009, 97-102.

26. Quint, F. et al.: A Real-time HF Channel-simulator with C6711DSK, in: Conference Proceedings European DSP Education & Research Symposium, Austin, TX: Texas Instruments 2004
27. Quint, F.: A Software-Radio Approach for a Radio-Monitoring System, in Proceedings of the Symposium Electronic Warfare in the Information Age, Oslo, 2000.
28. Kückenwaitz, M., Quint, F., Reichert, J.: A Robust Baud Rate Estimator for Noncooperative Demodulation, in Proceedings of the MILCOM 2000, Los Angeles.
29. Quint, F., Reichert, J., Roos, H.: Emitter Detection and Tracking Algorithm for a Wide Band Multichannel Direction-Finding System in the HF-Band, in Proceedings of the MILCOM'99, Atlantic City.
30. Kreuzberger, J., Reichert, J., Quint, F.: Detection of Speech Modulated SSB and AM Signals in the HF-Band, in Proceedings of the MILCOM'99, Atlantic City.
31. Quint, F.: The role of GIS-based models in aerial image understanding, in Krupnik, A. (Hrsg.), Theoretical and Practical Aspects of Surface Reconstruction and 3-D Object Extraction, International Archives of Photogrammetry and Remote Sensing, 32(3-2W3):120-126, 1997.
32. Quint, F.: Recognition of structured objects in monocular aerial images using context information, in Leberl, F., Kalliany, R., Gruber, M. (Hrsg.), Mapping Buildings, Roads and other Man-Made Structures from Images, S.~213-228, Oldenburg, Wien, 1997.
33. Quint, F., Sties, M.: Evaluating model fidelity in an aerial image analysis system, in ISPRS, XVIIIth Congress, International Archives of Photogrammetry and Remote Sensing, 31(B3):669--674, 1996
34. Quint, F., Landes, S.: Colour aerial image segmentation using a Bayesian homogeneity predicate and map knowledge, in ISPRS, XVIIIth Congress, International Archives of Photogrammetry and Remote Sensing, 31(B3):663--668, 1996.
35. Quint, F.: Aerial image understanding using digital map based semantic models, in Euroconference GIS, ENSG Paris, 1995.
36. Bähr, H.-P., Quint, F., Stilla, U.: Modellbasierte Verfahren der Luftbildanalyse zur Kartenfortführung, Zeitschrift für Photogrammetrie und Fernerkundung, 63(6):224-234, 1995
37. Quint, F.: Kartengestützte Bildauswertung, in List, F. (Hrsg.), 14. Wissenschaftlich-Technische Jahrestagung der DGPF, Publikationen der DGPF, Bd. 3, S. 21-27, Berlin, 1995.
38. Quint, F. Bähr, H.-P.: Feature extraction for map based image interpretation, in Shi, X., Du, D., Gao, W. (Hrsg.), Third International Colloquium of LIESMARS: Integration, Automation and Intelligence in Photogrammetry, Remote Sensing and GIS, S. 1-8, Wuhan, China, 1994.
39. Quint, F., Korn, A.: Kombination von Bildauswerteverfahren und neuronalen Netzen für die sichtsystemgestützte Oberflächenprüfung, Mitteilungen aus dem Fraunhofer-Institut für Informations und Datenverarbeitung (IITB) Karlsruhe, S. 15--21, 1993.

40. König, A., Korn, A., Quint, F, Glesner, M.: Two neural models for fast category learning – neural associative memories and the restricted coulomb energy model, in Gielen, S., Kappen, B. (Hrsg.), Proceedings of the ICANN'93, Amsterdam, Springer, 1993.
41. König, A., Quint, F. et. al.: A generic dynamic inspection system for visual object inspection and industrial quality control, in Proceedings of the International Joint Conference on Neural Networks IJCNN'93, Bd. II, S. 1243-1246, Nagoya, Japan, IEEE, 1993.
42. Korn, A., Quint, F., Winkler, G.: Merkmalextraktion für die Sichtprüfung mit neuronalen Netzen, in van~der Meer, M. (Hrsg.), Statusseminar Neuroinformatik des BMFT, Berlin, 1992.

#### **Patents:**

1. J. Kreuzberger, F. Quint et al. : „Detektor für sprachmodulierte Sendungen“, DE19960161C2
2. C. Krimmer, F. Quint, et al.: „Pegel- und Peilwinkel-basierte Detektion und Segmentierung von Sendungen im HF-Bereich“, DE19925580A1



# *International Cooperation*

Cooperation between

**Politehnica University Timisoara (UPT)**

and

**Karlsruhe University of Applied Sciences**

**(HsKA)**



## 1. Overview

The cooperation between UPT and HsKA dates back to the year 2008. In May 2008, a delegation of HsKA consisting of Prof. Guntram Schultz, by then dean of the Faculty of Electrical Engineering and Information Technology of HsKA, Dr. Joachim Lembach, Director of the International Office of HsKA and Prof. Dr. Franz Quint, professor at the Faculty of Electrical Engineering and Information Technology, visited UPT. The visit was initiated by Prof. Quint, who was student at UPT in the years 1984–1986.

During the visit, meetings of the German delegation with the Rectorate and with the boards of the Faculty of Electronics and Telecommunication and the Faculty of Electrical and Power Engineering took place. As a result, an Erasmus student and staff exchange agreement and a bilateral agreement between the two higher education institutions has been signed. These agreements have been renewed in 2014.

Since then, counting both exchange directions:

- 180 students participated in project based learning in the project ProKaTim (Signal Processing Karlsruhe Timisoara);
- 48 students spent one semester at the partner institution for an Erasmus study semester abroad;
- 9 students spent three months in an Erasmus training stage at the partner institution;
- 9 research assistants spent research stages up to eighteen months at the partner institution;
- 4 research assistants have acquired their doctoral degree with the participation of professors from both institutions;
- 20 scientific papers have been published in cooperation between researchers of both universities;
- 29 teaching staff exchanges took place;
- 7 non-teaching staff exchanges took place;
- the cooperation employs 6 faculties from UPT, 4 faculties from HsKA and is strongly supported by the International Offices and the Rectorates of both Universities.

## 2. Project ProKaTim

In 2012, Prof. Quint acquired from the Baden-Württemberg Foundation in Stuttgart funding in an amount of 140.000 Euro for the project ProKaTim (Signal Processing Karlsruhe Timisoara). The idea of the project is to provide international experience and teaching/training in the field of signal processing to students of UPT and HsKA.



A group of 20 students visits for one week at the beginning of a semester the partner university. There, the students are instructed together with 20 colleagues from the partner university in digital signal processing and digital signal processors. Teaching is done by Prof. Quint. At the end of the week, mixed project teams of two German and two Romanian students are built and projects are assigned to the teams. The students implement the projects during the semester and are supported by Prof. Quint from HsKA and by Prof. Otesteanu, Prof. Alexa and Assoc. Prof. Pazsitka from UPT.

At the end of the semester the students travel to the other university to finish the projects and to present them in a student's conference. They are accompanied by 20 new students to start the ProKaTim-project for the next semester.

During the ProKaTim-week, besides teaching also social events, visits to companies, to the city hall and a one-day excursion to touristic attractions nearby are organized.

The project has received considerable attention in the Romanian and German mass media and in the local political institutions of the twin cities Timisoara and Karlsruhe.

Funding of the project completely covers all expenses (transport, meals, accommodation, excursions etc.) of both Romanian and German students and staff.

The project has up to now been carried out for six semesters and 180 students from UPT and HsKA benefited from the international experience. As a side result of the project, several friendships between students emerged.

Plans are to continue the project with either funding from Baden-Württemberg Foundation (request is under way) or from German-Romanian companies.

The project is carried by the Faculty of Electronics and Telecommunication of UPT and the Faculty of Electrical Engineering and Information Technology of HsKA

### **3. Erasmus study semester abroad**

Students exchange for a study semester abroad was the first cooperation action to start between UPT and HsKA.

After signing the exchange agreement in 2008, already in 2009 the first students moved for a study semester to the partner university. Since then, in average more than 3 students each semester take the opportunity to study one semester abroad, resulting in a total of 48 students within 7 years.

The majority (30) of the German students attended the English-language bachelor and master courses of the Faculty of Electronics and Telecommunication of UPT, but there has been also one student of Mechatronics at the Faculty for Mechanical Engineering at UPT.

Romanian students coming to Karlsruhe are from the faculties of Electronics and Telecommunication, Mechanical Engineering, Automation and Computers and Architecture of UPT.

The students are advised from professional point of view at UPT by Prof. Dr. Dan Stoiciu and Prof. Dr. Florin Alexa and at HsKA by Prof. Quint. Social and administrative issues are handled in a very good cooperation between the international offices of both universities under the head of Prof. Dr. Lia Dolga and Dr. Joachim Lembach.

#### **4. Erasmus training stage for students**

At HsKA, bachelor courses are given in German language only. Thus, for Romanian students it is tougher to spend a course-related semester at HsKA compared to German students, who can attend courses taught in English at UPT. For non-German-speaking UPT students, HsKA offers Erasmus training stages at their laboratories.

Up to now, 9 students of the Faculty of Electronics and Telecommunications and of the Faculty of Automation and Computers of UPT spent a practical training stage of three months duration at HsKA. Under the guidance of Prof. Quint they worked on signal and image processing topics.

#### **5. Research stage for assistants and post-docs**

To extend the cooperation beyond study abroad, research contacts have been established mainly between the Faculty of Electronics and Telecommunication of UPT and the Faculty of Electrical Engineering and Information Technology of HsKA. Thus, before finishing their PhD-thesis, ETC researchers Ciprian Dughir, Adrian Mihaiuti, Cosmin Dita and Gheorghe Daniel Popa worked under the supervision of Prof. Quint at HsKA. Dr. Raul Ionel stayed for several months with a post-doctoral research project at HsKA.



Besides these, also the Faculty of Management in Production and Transportation and the Faculty of Communication Sciences of UPT sent with Ms. Larisa Ivascu, Ms. Alina Radu and Ms. Adina Palea three researchers to complete their thesis work at HsKA.

The doctoral student Wolfgang Pross of HsKA visited for several times UPT to work under the guidance of Prof. Dr. Otesteanu at his PhD-thesis.

This exchange of research assistants gave rise to 20 scientific papers published in common.

## **6. Common doctorates**

Research assistant exchange and the cooperation between UPT and HsKA gave the opportunity to four research assistants to successfully obtain their doctoral degree from UPT. Two of the researchers, Georgiana Sarbu-Doaga and Gheorghe Daniel Popa have carried out most of their research at UPT, whereas the other two, Ion Cosmin Dita and Wolfgang Pross made most of their research at HsKA. For all four it was in common, that in the examination commission participated, among others, Prof. Otesteanu from UPT and Prof. Quint from HsKA.

## **7. Teaching staff exchange**

The students exchange was flanked by as much as 29 teaching periods of professors from UPT and HsKA at the partner university. From Timisoara it were professors Dan Stoiciu, Florin Alexa, Robert Pazsitka, Lia Dolga, Marius Otesteanu and Adina Palea who visited Karlsruhe and gave lectures, whereas Prof. Quint held as HsKA-representative the lectures at UPT.

## **8. Non-teaching staff exchange**

Non-teaching staff exchange comprised among others the visits of the heads of the International Offices at the partner universities, but notably also the visit of vice-rector Prof. Dr. Marius Otesteanu at HsKA and of vice-rector Prof. Dr. Dieter Höpfel at UPT. These visits contributed to the expansion of the good relations existing at faculty level to the institutional level.

## 9. Further evolution

The relations between UPT and HsKA began as cooperation between the Faculty of Electronics and Telecommunication of UPT and the Faculty of Electrical Engineering and Information Technology of HsKA. Over time, it extended over 6 faculties from UPT and 4 faculties from HsKA. In contrast to many other cooperations, which have their focus on student exchange only, the cooperation between the two universities of the twin cities comprises most of the aspects of academic life: student exchange for course-work, for practical training and for project-work, exchange of teaching and non-teaching staff as well as common research activities leading to joint scientific publications and doctorates.

As more and more faculties got engaged in the cooperation, it is to be expected that the number of exchange students will grow.

The project ProKaTim shall be continued and efforts are under way to secure the funding for the next years. Teaching and non-teaching staff exchange as well as the exchange of research assistants is established and will continue.

To further enlarge the cooperation, plans are made for a common application of the two partners (together with a third partner) for a strategic partnership project funded by the European Union in its Erasmus+ program, key action 2.





*Honorary Professor Diploma  
(copy)*

**Professor FRANZ QUINT, PhD**

Karlsruhe University of Applied Sciences  
Faculty for Electrical Engineering and  
Information Technology





POLITEHNICA UNIVERSITY OF TIMISOARA, ROMANIA AWARDS

# HONORARY PROFESSOR

TO **PROFESSOR FRANZ QUINT, PHD**  
FROM KARLSRUHE UNIVERSITY OF APPLIED SCIENCES, GERMANY,  
FOR HIS VALUABLE CONTRIBUTIONS TO THE HIGHER EDUCATION  
DEVELOPMENT, SCIENTIFIC RESEARCH AND  
GOOD COOPERATION WITH POLITEHNICA UNIVERSITY OF TIMISOARA.

TIMISOARA,  
THE 10<sup>TH</sup> OF NOVEMBER 2015

RECTOR OF  
POLITEHNICA UNIVERSITY OF TIMISOARA  
PROF. ENG. VIOREL-AUREL ȘERBAN, PHD

