



MEMORANDUM OF UNDERSTANDING

between



**Czech Technical University in Prague, Faculty of Electrical
Engineering, Prague, Czech Republic**
and

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai, India

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India and Czech Technical University in Prague – Faculty of Electrical Engineering, Czech Republic (jointly hereinafter only the "parties") agree that the encouragement and development of cooperation and exchange in all areas of mutual academic interest is desirable. Both parties, therefore, wish to expand the basis for a friendship and cooperative educational exchange and have set forth the following agreement.

Cooperation between the two parties shall be carried out by the approval of both parties and on the basis of a mutual consideration through a variety of activities such as:

- exchange of academic staff for the purposes of teaching and research and staff placement,
- exchange/study abroad programs for students,
- participation in joint seminars, lectures, training and academic meetings,
- exchange of research materials in fields of mutual interest,
- research/consulting contracts.

This memorandum shall be valid for five (5) years from the date of signing. It shall be reviewed by both parties six (6) months prior to the expiry and may be renewed for a further term by a mutual agreement.

This memorandum may be terminated by either party at any time provided the terminating party gives a minimum of six (6) months ahead notice in writing.

As witness to their consent to this memorandum, the appropriate authorities hereunto provide their signatures.

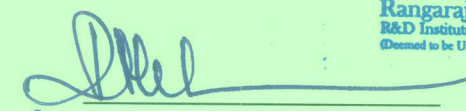
On behalf of:

Vel Tech Rangarajan Dr. Sagunthala
R&D Institute of Science
and Technology

Date: 03 JUN 2019

Col.Prof.Vel.Dr.R.Rangarajan
Founder Chancellor & President

Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University End. up to UGC Act, 1956)


Col. Prof. Vel. Dr. R. Rangarajan
Founder President

On behalf of:

Czech Technical University in Prague
Faculty of Electrical Engineering

Date: 23 -05- 2019


České vysoké učení technické v Praze
FAKULTA ELEKTROTECHNICKÁ
166 27 Praha 6, Technická 2 (1)
Prof. Ing. Pavel Ripka, CSc.
Dean



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University) Estd. in 3 of TGC Act, 1956

Czech Technical University in Prague (CTU), Faculty of Electrical Engineering, Czech Republic

Name of the Research Institute/University/ Organization	Country	Duration of the Agreement	Academic Year	Date of Signing	Date of Expiry	Purpose/Activities
Czech Technical University in Prague (CTU), Faculty of Electrical Engineering	Czech Republic	5 Years	2019-20	03.06.2019	02.06.2024	Exchange of academic staff for the purpose of teaching and research and staff placement; exchange/study abroad programs for students; Participation in joint seminars, lectures, training and academic meetings; Exchange of research materials in fields of mutual interest; research/consulting contracts

Actual Activities with Czech Technical University in Prague (CTU), Faculty of Electrical Engineering, Czech Republic	
A.Y. 2018-19	Faculty Mobility (Incoming - Short Courses) - 1

MoU Coordinator

Dean - International Relations



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University) Estd. in 3 of TGC Act, 1956

Dr. P. Suresh
Dean - International Relations

STUDENT EXCHANGE AGREEMENT



České vysoké učení technické v Praze
FAKULTA ELEKTROTECHNICKÁ
166 27 Praha 6, Technická 2, (I)

between

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India
and

Czech Technical University in Prague, Faculty of Electrical Engineering, Czech Republic

The above universities hereby enter into a Student Exchange Agreement based on the Memorandum of Understanding signed between Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai, India (hereinafter only the, "Vel Tech") and the Czech Technical University in Prague, Faculty of Electrical Engineering, Prague, Czech Republic (hereinafter only the "CTU FEE") on 03 JUN 2019.

1. Number of Students

Each participating university will send its students to the other institution for the purpose of studying and acquiring academic credits. The students will normally be exchanged for one semester or for two semesters. The number of exchange students per academic year will not exceed 20 students for each university. The number of students per semester should be balanced, and any imbalances lasting more than one academic year must be agreed by the host university.

2. Study

The students will register as full-time students in programs that have been agreed upon by the student, the home university and the host university. The host university will be responsible for both the academic supervision and the assessment of a student. A transcript of each student's results will be sent to the home university after the study period.

3. Academic Standard

The home university will be responsible for the selection of participant students, and for their academic and linguistic preparation. The host university reserves the right to decline a student on academic grounds, or if other conditions within this agreement are not met. Exchange students who will study in English language are required to have at least B2 skills in English, as certified by the International Office of the student's home university or by an adequate certificate, or through an English test or interview by the host university.

4. Credit Transfer

Credits awarded by the host university will be transferred and recognized towards the Student's degree at the home university. The host university will send the university transcripts of the study results to the home university after the student has completed the study stay at the host university.

5. Tuition and Fees

The CTU FEE tuition fee is not charged in the following cases:

- for incoming exchange Vel Tech students joining for course work,
- if any student wants to join CTU FEE by contacting the faculty members directly, for doing a project work.

In case of imbalance in the number of students joining for course work the CTU FEE charges a tuition fee. Prior to the date of commencement of each semester according to the schedule of the respective academic year at CTU FEE, the student from Vel Tech is obliged to pay the tuition fee to the bank account of CTU FEE using the following payment details:

Bank:	Komerční banka, a.s., Praha 6
Account No.:	19-5504540257
Bank Code:	0100
IBAN:	CZ9401000000195504540257
SWIFT/BIC:	KOMB CZ PP
Payment identification:	92
Variable symbol:	855500
Specific symbol:	

The standard tuition fee for a bachelor study program is CZK 55,000 (approximately EUR 2,200) per semester and for a master study program it is CZK 66,000 (approximately EUR 2,600) per semester. However, there is a special discount of 25 % for the Vel Tech students. The discounted tuition fee for Vel Tech is, therefore, only CZK 41, 250 per semester for a bachelor study program and CZK 49, 500 for a master study program.

The tuition fees do not comprise of costs of accommodation, food, insurance of students, and the like. Such expenses have to be carried out by the students themselves. The tuition fees are subject to change.

Vel Tech tuition fee is not charged in the following cases:

- for incoming exchange CTU FEE students joining for course work,
- if any student wants to join Vel Tech by contacting the faculty members directly, for doing a project work.

In case of imbalance in the number of students joining for course work Vel Tech charges a tuition fee. Prior to the date of commencement of each semester according to the schedule of the respective academic year at Vel Tech, the student from CTU FEE is obliged to pay the tuition fee to the bank account of Vel Tech. Bank account details will be provided at the time of payment.

Vel Tech may, on case by case basis, try to subsidize the living costs.

6. Rules and Regulations

Exchange students are subject to the rules and regulations of the host university. Exchange students should, where possible have the same privileges and duties as the students of the home university.

7. Visa

The students will be responsible for obtaining visas as required. The universities will provide assistance.

8. Health Insurance

The student is fully responsible for acquiring appropriate accident and medical insurance, according to the regulations of the host university.

9. Accommodation

The students will be responsible for their own living costs, travel costs, health and personal liability insurance unless other arrangements have been agreed upon. The host university will assist in obtaining on-campus accommodation for the pre-agreed number of students.

10. Other Arrangements

Detailed procedures for implementing the exchange program not prescribed in this agreement will be discussed and decided upon by both universities at the appropriate time. Any disagreements or disputes

arising while implementing this agreement will be discussed and settled by the representatives of both universities.

11. Revision

The clauses of this agreement may be revised or changed only upon consent of both parties. The proposed alterations shall be presented by the parties and signed by the presidents of both universities.

12. Enforcement

This agreement comes into force on the date of its signature by the representatives of both parties, and is valid until either party requests to terminate it. Termination of the agreement will not affect the students already participating in the exchange.

On behalf of

Vel Tech Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology,

Date: 03 JUN 2019

Col.Prof.Vel.Dr. R.Rangarajan
Founder Chancellor & President

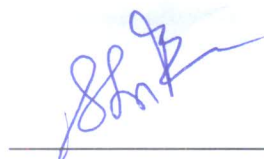


Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University) Estd. u/s 3 of UGC Act, 1956

Col. Prof. Vel. Dr. R. Rangarajan
Founder President

Witnessed by:

Date: 03 JUN 2019



Dr. S. Sivaperumal
Director International Relations

On behalf of

Czech Technical University in Prague, Faculty
of Electrical Engineering

Date: 23-05-2019



Prof. Ing. Pavel Ripka, CSc.
Dean
České vysoké učení technické v Praze
FAKULTA ELEKTROTECHNICKÁ
166 27 Praha 6, Technická 2 (1)



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

School of Electrical & Communication

Department of Electronics & Communication Engineering

Specialized one credit course on

“Video Signal Processing”

(1157EC921)

by

Prof. Dr. Honor Pavel Zahradnik

Czech Technical University Prague, Czech Republic



Held on

Date: March 12 to 15, 2019

Curriculum Vitae



Personal Information

Title, First name, Surname Prof. Dr. Prof. honor Pavel Zahradnik

Address Czech Technical University in Prague (CTU), Faculty of Electrical Engineering, Technicka 2
CZ-16627, Praha, Czech Republic

Telephone / Fax / E-mail (+420) 224352089 / (+420) 233339810 / zahradni@fel.cvut.cz
Nationality / Birth / Gender Czech / January 17th, 1963, Melnik, former Czechoslovakia / male
web <https://comtel.fel.cvut.cz/en/users/zahradni>

Work experience since 2008 Full Professor

2004 – 2008 Associate Professor

Scientific activities 1990 – 2004 Assistant Professor

Lecturing Digital Signal Processing, Digital Filter Design

Lecturing Digital Signal, Image and Video Processing, Digital Signal Processors, Microcontrollers
Seminars/Labs: Digital Signal Processing, Digital Signal Processors, Microcontrollers
Lecturing at universities: Praha, Erlangen-Nürnberg, Astana, Sankt Peterburg, Xi'An

International activities 2017 (3 months) Northwest University Xi'an city, Shaanxi, China

2000 (2 months) Fellowship DAAD (Deutscher Akademischer Austauschdienst, Bonn, Germany), Dept. of Electronics, University Erlangen-Nürnberg, Germany, research in digital signal processing and digital filter design, c/o Prof. Rolf Unbehauen

1996-1997 (24 months), Fellowship Alexander-von-Humboldt (Bonn, Germany), Dept. of Electronics, University Erlangen-Nürnberg, Germany, research in digital signal processing and digital filter design, c/o Prof. Rolf Unbehauen

1995 (2 months) Goethe Institute München, Germany

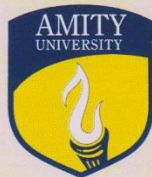
1993-1994 (9 months), Fellowship of Swiss Government, Paul Scherrer Institute, research in microwave tomography for localization of tumors

Professional interests Digital Signal, Image and Video Processing, Signal Compression, Digital Signal Processors, Microprocessor Technology, Embedded Systems
Programming Matlab, C, assembler/microcontrollers, hardware skills

Education and training 1986-1990, Ph.D. study, CTU Prague, Digital image processing
1981-1986 M.Sc. study, CTU Prague, Microelectronic systems
several training courses at Texas Instruments in digital signal processors

Languages German, English, Russian, all fluently in oral and written form

Additional information over 150 journal and conference papers
supervision of more than 100 M.Sc. Thesis, supervision of 21 Ph.D. students, 3 completed
Honorary Professor at the Amity University, Noida



AMITY UNIVERSITY

UTTAR PRADESH

on recommendation of the Executive Council

hereby bestows upon

Prof. Pavel Zahradnik

the title of

**Honorary Professor
at**

Amity Institute of Telecom Engineering & Management

with all its rights and privileges

in witness whereof the seal of the University is hereunto affixed.

Given on this 11th day of August, 2017



Vice Chancellor

Chancellor

Title: Video Signal Processing

Duration: 15 Hrs

FIR Digital Filter Design, Advanced Approximations

FIR Filter Design Based on Windowed Fourier Series, Computer-Aided Design of Digital Filters, Design of FIR Filters with Least-Mean-Square Error, Constrained Least-Square Design of FIR Digital Filters, Analytical Design Methods of FIR Filters

Two-dimensional Signals and Systems

Representation of 2-D signals in the Space and Frequency Domains, Representation of 2-D Systems in the Space and Frequency Domains, Sampling of 2-D Signals, Importance of Phase, Consequences

Two-dimensional Transforms, Design of Two-dimensional Filters

2-D DFT, 2-D DFT, Design of 2-D FIR Filters, Frequency Transformations, McClellan Design Method, Contour Approximation

Digital Image Compression

Spatial Redundancy, Spatial Decorrelation, JPEG Compression, JPEG2000 Compression

Digital Video Compression

Temporal Redundancy, Temporal Decorrelation, MPEG-4 Compression, H.264 Compression

DA/8590
14/11/18

DINT/11-18/016
VT/ECE/2018-19/DA248

IR-396



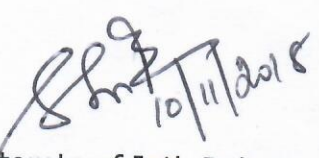
Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Directorate of International Relations
Visiting Professor Programmes

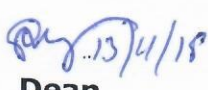
Details of Professor & Course:

Name of the Professor	Prof. Dr. Prof. honor Pavel Zahradnik (CV Attached)
University & Country	Czech Technical University Prague, Czech Republic
Title of the Course	Video Signal Processing
Department	Electronics and Communication Engineering
Dates of the Course	March 12 to 15, 2019
Total No. of Hours	15
No. of Credits	1
Course Content	Attached

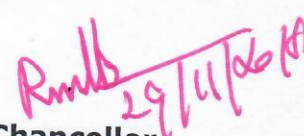
Prepared by: 
Coordinator – Directorate of Intl. Relations

Forwarded by: 
Director – Directorate of Intl. Relations


HoD
Dr. G. Vairavel
Head of the Department
Electronics and Communication Engineering


Dean
Prof. Dr. V. Jayasankar
Dean SoEC


Director (Academic)
Prof. Dr. techn. Koteswara Rao Anna
Director Academics


Vice Chancellor

Vel Tech
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R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Course code: 1157EC921

SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Subject_PassFail	Stu_Grade
1	VtU7001	BATCHU TEJA GUPTHA	B.Tech	ECE	1157EC921	Video Signal Processing	NE	NE
2	VtU7094	GALLA SRAMIKA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
3	VTU6355	GADDE REDDILATHA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
4	VtU7359	PEDDINTI POOJA SREE	B.Tech	ECE	1157EC921	Video Signal Processing	NE	NE
5	VtU7362	UPPALAPATI MALLIKARJUNA REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
6	VtU7430	SUNKARA SAHITH VARDHAN	B.Tech	ECE	1157EC921	Video Signal Processing	NE	NE
7	VtU7433	CHEEMALAPENTA VAZEED	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
8	VtU7373	YARASI CHANDRA SEKHAR REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
9	VTU6546	ERLA SREE LATHA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
10	VTU6137	DOMMARAJU BHAVANA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
11	VtU7340	CHERUKURU KAMAKSHAIAH	B.Tech	ECE	1157EC921	Video Signal Processing	NE	NE
12	VtU7613	DONGA LOKESH	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
13	VtU7769	MEDAGAM RAMANA REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
14	VtU7783	GURRAM PAWAN KUMAR	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
15	VtU7848	KOPPOLU GOPINATH REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
16	VtU8268	CHITTIPROLU MANIKANTA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
17	VtU7884	CHAMMIREDDY SAI NAVEEN KUMAR REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
18	VtU7890	DEVAREDDY VAMSI	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
19	VtU7910	BOGIREDDY MAHENDRA REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
20	VtU7397	GURRAM HASWANTH	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
21	VtU7428	MOOLA SAMBA SIVA REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
22	VtU7435	MANNURU HARSHA VARDHAN REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
23	VtU7436	KOLLI SAI KRISHNA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
24	VtU7447	KOTHAPALLI PARANDHAMAIAH CHARISHMA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
25	VtU8086	CHALLA AVINASH REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
26	VtU7453	SALE JYOTHIR MAI	B.Tech	ECE	1157EC921	Video Signal Processing	NE	NE
27	VtU8097	AMPOLU MANOHAR	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
28	VtU8103	KARRA RAVI KIRAN	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
29	VtU8147	BOMMA ARAVIND	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
30	VtU9234	KALLEPALLI SATYANARAYANA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
31	VtU9241	JANAGANI SURYATEJA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
32	VtU9270	GOGULA DHEERAJ	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
33	VtU10202	KOTHAPALLI CHANDAN SAI	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
34	VtU10238	VEDULLA TARUN	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
35	VtU10244	KOPPAKA SRINIVAS	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
36	VtU10245	KOPPAKA RATHANRAM	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
37	VtU10249	CHAMA KETHAN REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
38	VtU8651	SANAGALA VENKATA SUMANTH REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA

SNo	Stu_Id	Stu_Name	Stu_Degree	Stu_Branch	Stu_Test_SubjectCode	Stu_Test_SubjectName	Stu_Subject_PassFail	Stu_Grade
39	VtU8658	SUNKARA BALA VAISHNAVI	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
40	VtU8659	CHALAMALA SPOORTHIMAI	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
41	VtU8899	PASUMARTHI NAVYA SANTOSHI PRABHA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
42	VtU9299	GANGISETTY TEJASWI	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
43	VtU9306	PAVANI SAI KRISHNA VAMSI	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
44	VtU9383	MUNNANGI VISHNU SAI PAVAN REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
45	VtU9551	CHILUKURI ABHINAV SAI CHOUDARY	B.Tech	ECE	1157EC921	Video Signal Processing	NE	NE
46	VtU8947	B S SEVANANDA KUMAR REDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
47	VtU9023	KAMEPALLI JAYA SAI TEJA	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
48	VtU9182	KOLIPARTHI PAVAN KUMAR	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA
49	VtU10575	BISHWAJIT KUMAR BHAGAT	B.Tech	ECE	1157EC921	Video Signal Processing	NE	NE
50	VtU9834	PULI SAMBIREDDY	B.Tech	ECE	1157EC921	Video Signal Processing	RA	RA



DINT/12019/730
DINT/03-19/037
PR-396

Vel Tech

Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Established by UGC Act, 1956)

Our Ref. No: 2018-2019/VF 156

Your Ref. No:

Submitted for the Approval:

Name of the Professor: Prof. Dr. honor Pavel Zahradnik,

University & Country : Czech Technical University Prague, Czech Republic

Course Title: Video Signal Processing

No. of Hours: 15 (Under Industry/ Higher Institute learning)

Department: Electronics and Communication Engineering

Program date: March 11-15, 2019

No. of students: 2015-2019- 03 Students
2016-2020- 26 students
2017-2021- 21 students
Total Registered: 50 students
Total Attended: 44 students

Sl. No	Description	Amount in INR	Amount in CZK
1	Course Honorarium (Tax Free) (15 hrs * INR 3000)	45000	14828
2	Flight ticket Reimbursement (256.85USD as on 19.11.2019)	18293	6028
Total		63293	20856

(Rupees Sixty three thousand two hundred and ninety three only)

In this regard, I request your approval for transferring the amount in Czech Koruna (CZK) to the following Account,

Name : Pavel Zahradnik

Bank Name: Air Bank a.s.

Acc. No: 1626056019/3030

Bank Code: 3030

Branch: Evropská 2690/17, 160 00 Praha 6

SWIFT Code: AIRACZPP

IBAN: CZ80 3030 0000 0016 2605 6019

Thank You,

S. Sivaperumal

26/7
Entered in Budget Register

PS-30, SI-87

Colthocan
23/3/19