



**INTERNSHIP PLAN** (Must be filled before Internship 1 (using word processing) and returned to your training supervisor.)

**STUDENT**

Name	Alexey Tukalo
Student Number	67687

**EMPLOYER**

Organisation	<b>Karlsruhe Institute of Technology (KIT)</b> Institute for Data Processing and Electronics
Address	Hermann-von-Helmholtz-Platz 1
Post Code and Place	D- 76344 Eggenstein-Leopoldshafen
Field of Business	Education and research
Contact Person	Dr. Torsten Hopp
Phone	+49 721 608 2 5990
E-mail	torsten.hopp@kit.edu

**INTERNSHIP**

Time	07. 07. 2015 - 31. 11. 2015
Number of weeks	Total of 19 weeks
Working hours	760
How does the coming internship <u>strengthen</u> my curriculum and career planning?	The work placement will help me to improve my knowledge in object-oriented and functional programming and get an experience in field of digital image processing which is also very interesting for me.
Characteristics and knowhow required at the chosen field of business.	I will be a part of team responsible for visualization of the information collected by the 3D USCT. The visualization will be made via ImageJ framework with different image processing technics for 3D and 4D visualization.
I have the following characteristics and knowhow relevant to my field.	I studied object-oriented at Java, MATLAB and digital signal processing during last two years at University. My dream is career of Data Sciences and visualisation is one of the fields related with this specialisation. So, I also have spent a lot of my spare time for learning of a basics of visualization technics and I think that the work placement will help me to improve my knowledges at the area.
I have the following <u>shortcomings</u> in the characteristics and knowhow relevant to my field.	I have no experience with ImageJ framework and my knowledge of MATLAB is not excellent, so hope that I will significantly improve it.
The main learning objectives for this internship period.	1.Object-oriented programming and Java 2.Functional programming and MATLAB 3.ImageJ framework 4.Digital image processing



	5.Visualisation technics
	6.Experience in development of medical equipment

Date and Place

22,06,2015

Student's Signature

Jyken



## INTERNSHIP CONTRACT

to be drawn up in three copies

### STUDENT AND INSTITUTION

Surname	Given Names	Social Security Number
Tukalo	Alexey	210794-291U

#### Address

Taivaanpankontie 14 A 14/1, 70200, Kuopio, Finland

Telephone	Email	Group code
+79535441714	<a href="mailto:alexey.a.tukalo@edu.savonia.fi">alexey.a.tukalo@edu.savonia.fi</a> (must be used during the work placement period)	EFA12SF

Degree Programme	Completed Credits	Degree
Information Technology	181 cr	Bachelor of Engineering

Supervising Teacher	Telephone and Email
Arto Toppinen	+358447856222 <a href="mailto:Arto.Toppinen@savonia.fi">Arto.Toppinen@savonia.fi</a>

### EMPLOYER

Name of the Company	Business ID
Karlsruhe Institute of Technology (KIT) Institute for Data Processing and Electronics	

Address, Postal Code	Telephone
Hermann-von-Helmholtz-Platz 1 D- 76344 Eggenstein-Leopoldshafen	+49 721 608 2 2027

Supervisor	Telephone and Email
Dr. Torsten Hopp	+49 721 608 2 5990 <a href="mailto:torsten.hopp@kit.edu">torsten.hopp@kit.edu</a>

Contact Person (if not the same as above)	Telephone and Email

### INTERNSHIP

#### Aims

- Get an experience of object-oriented and functional programming in real-life project
- Improve knowledge of image and sensor signal processing
- Take part in the development of the medical device

#### Duties



- Literature research for 3D/4D visualization techniques and supporting software packages for Java and/or MATLAB
- Development of prototypes for combined 3D USCT volume data visualization
- Development of prototypes for 4D information visualization
- Implementation of the data visualization in our customized DICOM viewer including the data handling and user interface design.
- Evaluation in cooperation with radiologists

**Validity of Contract and the amount of Study Credits**

**Working Hours**

/ 200 - / 200	5 month or 19 week or 760h
How many study credits student will get after this internship period (will be marked by the supervising teacher) ?	

Pay excluded

☐

Pay included

☒

Amount 511 euros /month

**The Student has presented the Aims and Objectives of a BSc Student's Internship (Appendix of this Contract) to the Employer.**

Yes

☒

No

☐



#### OTHER TERMS

##### Supervision of the internship:

The internship is supervised by a representative of the employer in cooperation with the tutoring teacher at Savonia University of Applied Sciences.

The trainee is covered by the accident insurance of Savonia University of Applied Sciences during working hours if the student's official place of residence is in Finland, while the employer is responsible for arranging the liability insurance during the work placement period. If case of paid traineeship, the official work contract is made between the employer and the trainee. The employer will be responsible for meeting the terms and regulations governed by the legislation (e.g. insurance) of the work placement country.

The labour law applicable in this case is \_\_\_\_\_

The employer has liability and/or accident insurance for the trainee in case of accident in the workplace or on the work business: \_\_\_\_\_

The minimum terms and conditions of employment guaranteed by the applicable law are to be observed throughout the training period. This applies e.g. working hours, health and safety but excludes regulations concerning wages and salaries.

##### Data Registration:

**Savonia Engineering and Technology has the right the register employer's contact information for the client registry and use the data for internship communication and marketing.**

14.07.2015

Tykanen  
Student

J. Hopp  
Employer's representative

Antti Toim  
Supervising Teacher