Kratek opis usposabljanja mladega raziskovalca (*Short description of the Young Researcher's training*)

1. Raziskovalna organizacija (*Research organisation*):

0381: Univerza v Ljubljani, Medicinska fakulteta

2. Ime, priimek in elektronski naslov mentorja (*Mentor's name, surname and email*):

Matjaž Bunc	mbuncek@yahoo.com

3. Šifra in naziv raziskovalnega področja (*Research field*):

3. Medicina 3.03 Neurobiology

4. Kratek opis usposabljanja mladega raziskovalca (*Short description of the Young Researcher's training*):

Navedite tudi morebitne druge zahteve, vezane na usposabljanje mladega raziskovalca (npr. znanje tujih jezikov, izkušnje z laboratorijskim delom, potrebne licence za usposabljanje…).

slo:

Doktorski študij mladega raziskovalca /raziskovalke bo usmerjen v proučevanje funkcije in morfologije kardiovaskularnega in centralnega živčnega sistema z uporabo naprednih slikanj na osnovi magnetne resonance (MRI in fMRI). Kandidat(ka) bo v času doktorskega študija sodeloval(a) tudi s KU Leuven in Medicinsko Univerzo v Gradcu s katerima imamo skupen EU twinning projekt COGDEC.

Prvo leto bo usmerjeno v uspešno opravljanje obveznih študijskih vsebin podiplomskega doktorskega študija Biomedicina / smer Medicina in uvajanju v zajemanje slik z uporabo MR tomografije. Hkrati bo potekalo tudi uvajanje v analizo podatkov strukturnega in funkcijskega MR slikanja. Glede na predhodno izobrazbo bomo pričeli tudi s spoznavanjem ali morfologije in fiziologije kardiovaskulanega in centralnega živčnega sistema, ali osnovami analize slike ali s fizikalnimi osnovami MRI.

V drugem letu bo poudarek na uspešnem zaključku obveznih vsebin 2. letnika podiplomskega študija Biomedicina in pripravi preliminarnih meritev na osnovi katerih bo izdelan predlog doktorske teme.

Tretje leto bo posvečeno raziskovalnemu delu na področju doktorske teme, pisanju osnotka publikacije in na pripravi na izdelavo doktorske naloge.

V četrtem letu bo poudarek na pisanju publikacij, izdelavi doktorske teme, na morebitnih dodatnih meritvah ter zaključku študija z uspešnim zagovorom doktorske teme.

Predvidevamo, da bo kandidat(ka) v času doktorskega študija objavil(a) vsaj dva do tri članke v revijah z IF.

Od kandidata / kandidatke pričakujemo uspešno zaključen magistrski študij ene od smeri, ki so povezane z medicino ali analizo slike ali statističnimi metodami ali slikanjem z MR ali s kognitivno znanostjo. Kandidatov morajo imeti dobre osnove na vsaj enem od omenjenih področij, da lahko študij zaključijo v predvidenem roku.

eng:

PhD study of the young researcher will focus on the study of structure and physiology of the cardiovascular and/or central nervous system by use of the advanced magnetic resonance imaging methods. During the course of the study the candidate is supposed to spend several months in the collaborating laboratories at the KU Leuven and MUG Graz as our centre is involved in the joint EU twinning project COGDEC with those institutions.

First year will be devoted to regular theoretical study activities of the doctoral study »Biomedicine« and to the introduction to MR imaging. The candidate will also start to learn the use of analysis tools used in MRI and fMRI. Based on previous education and lack of knowledge on other related fields the candidate will also acquire missing knowledge of either morphology and function of nervous and cardiovascular system, image analysis, and physical basis of magnetic resonance imaging.

In the second year the student will have to finish all obligations of the »biomedicine« and will start preliminary studies. The results of the studies will be the basis for the final detailed selection of the study for the proposal of the doctoral thesis.

The third year will be entirely devoted to the research and simultaneous data analysis and writing drafts of manuscripts.

In the fourth year the student will finish the measurements, perform final analysis and write the doctoral thesis and successfully finish the doctoral study. The goal of the study is also to publish at least 2 to 3 papers in journals with high IF.

The candidate should have a master's degree and good knowledge on one of the fields closely related to either medicine, image analysis, statistic approaches to image analysis/math, MR image acquisition/physics or cognitive sciences to be able to finish the study within the dedicated time of four years.