

LIVERPOOL JOHN MOORES UNIVERSITY**Application to Register for a JMU Research Degree
(This application must be typed)**

Submitted by the School of Engineering and Technology (Astrophysics Research Institute)
for the degree of *(delete as appropriate)*:

(iii) Master of Philosophy (MPhil) with transfer possibility to Doctor of Philosophy (PhD)

Enrolment No. 779151

Mode of study: Full-time

1. The Applicant

Name: Egidijus Kukstas

Male Date of Birth: 22/10/1991

Private Address:

20 Chapel Gardens, L5 5BE, Liverpool

Present post and place of work:

Postgraduate Research Student, Astrophysics Research Institute

Particulars of any scholarship or other award held in conjunction with the proposed research programme:
LJMU PhD studentship scheme

Qualifications gained (include places[s] of higher education, courses completed, main subjects, classification of award, date and name of awarding body - see Regulations G3.3, 3.4 and 3.5):

Master in Science, Physics with Astrophysics (honours, First class), July 2016, School of Physics and Astronomy, University of Glasgow

Training and experience (include details of activities [with dates] relevant to this application, and of any research or other relevant papers, books, etc, which have been published - see Regulations G3.4 and 3.5):

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2. Academic Referees (see Regulation G3.4)

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3. Name of Collaborating Establishment (see Regulation G1.5)

-

4. The Programme of Research**4.1 Title of the proposed investigation:**

Galaxy Environments through Cross-correlations

* delete as appropriate

- 4.2 Aim of the investigation:
- Apply a new method in the characterisation of galaxy environments.
 - Use the latest data sets available in order to constrain the dominant environmental processes.
 - Gain a more refined physical description of clusters through dark-matter models.
 - Compare the findings with outputs from state-of-the art cosmological simulations and develop improvements.
- 4.3 Proposed plan of work, including its relationship to previous work, with recent key references:
(Please continue on separate sheet(s) if necessary)
- Please see attached pages.
- 4.4 Details of facilities available for the investigation (including funding and location):
- Libraries at the ARI, LJMU.
 - Access to all astrophysical journals provided by LJMU.
 - Access to galaxy, lensing, t-SZ, and X-ray data.
 - Computing cluster at ARI.
- 4.5 Relationship between work to be undertaken in the collaborating establishment and that to be undertaken at the sponsoring establishment or elsewhere (see Regulation G1.5): -
6. Is ethical approval required?
Registration will not be approved by the Research Degrees Committee until such approval has been granted where necessary (see Regulation G4.9): No

5. The Programme of Related Studies (Complete *either* 5.2 *or* 5.3)

- 5.1 Have you attended the Research Student Induction organised by the Graduate School? (see Regulation G4.10): Yes - 24th November, 2016
- 5.2 Details of programme of related studies to be undertaken (see Regulations G4.1 and 4.7):
- Seminars organised at the ARI weekly.
 - Weekly journal club with the High Performance Computing group.
 - Weekly journal club with the Extragalactic Astronomy group.
 - Monthly discussion and presentation of a broad range of fields with other research students at the ARI.
 - 3is training.
 - Training courses and tutorials available from the faculty.
- 5.3 Where an integrated programme of study is proposed, details of the course of postgraduate study on which the candidate's performance is to be formally assessed are required (see Regulation G4.4): -

6. Supervision of Programme of Work (see Regulations G6.1 to 6.6)

In the case of a PhD registration please indicate which supervisors have successfully supervised at PhD level.

Note: attendance at supervisor training is requested of all new supervisors

- 6.1 Director of Studies (include name, qualifications, post held and place of work):

Dr. Ian McCarthy,
Senior Lecturer,
Astrophysics Research Institute,
Liverpool John Moores University
146 Brownlow Hill,

Experience of supervision of *registered* research degree candidates:

*Currently supervising as Director of Studies 1 Full-Time UK university candidate.
Currently registered as 2nd / 3rd supervisor for 5 Full-Time candidates.*

Previously supervised 4 UK university/CNAA candidates (successfully completed supervision).

6.2 Second Supervisor (include name, qualifications, post held and place of work):

Dr. Andreea Font,
Senior Lecturer,
Astrophysics Research Institute,
Liverpool John Moores University
146 Brownlow Hill,

Currently supervising as Director of Studies 1 Full-Time and 1 Part-Time UK university candidates.

Currently registered as 2nd / 3rd supervisor for 0 Full-Time 0 Part-Time UK university candidates

Previously supervised 0 UK university/CNAA candidates (successfully completed supervision)

6.3 Third Supervisor, if applicable(include name, qualifications, post held and place of work):

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6.4 Details of any other person(s) who will act in an advisory capacity (name, qualifications, post held and place of work): -

7. Period of time for Completion of Programme of Work (see Regulations G5.1 and 5.2)

7.1 Expected starting date for registration purposes:
3rd October, 2016

7.2 Amount of time (hours per week average) allowed for programme (see Regulation G4.6): 35

7.3 Expected duration of programme (in years) on the above basis to MPhil: 1 and additionally to PhD: 2 (see Regulation G5.1)

8. Statement by the Applicant

I wish to apply for registration for the degree of Master of Philosophy (MPhil) with transfer possibility to Doctor of Philosophy on the basis of the proposals given in this application.

I confirm that the particulars given in Section 1 are correct.

I understand that, except with the specific permission of LJMU, I may not, during the period of my registration, be a candidate for another award of LJMU or any other University.

I understand that, except with the specific permission of LJMU, I must prepare and defend my thesis in English.

Signed
(Applicant)

Date

9. Recommendation by the Supervisors

We support this application and believe that this applicant has the potential to complete successfully the programme of work proposed.

We recommend that this applicant be registered as a candidate for an LJMU research degree.

* delete as appropriate

Signed
(Director of Studies)

Date

Signed
(Second Supervisor)

Date

Signed
(Third Supervisor - if applicable)

Date

10. Recommendation by the School

I support this application for registration as a candidate for a research degree of LJMU. I am satisfied that the necessary resources are available and that adequate facilities will be provided to enable the applicant to conduct and complete the research programme in an efficient and safe manner.

Signed
(Director of School)

Date

11. Recommendation by the Faculty Research Committee

This application has been approved on behalf of the Faculty Research Committee.

Signed
(Chair of Faculty Research Committee or nominee)

Date