

## Job Description and Selection Criteria

Job title	One Postdoctoral Research Assistants in Artificial Intelligence (deep learning, machine learning, image processing) for urban studies.
Division	RiSE-group
Location	Universidad EAFIT. Carrera 49 N° 7 Sur-50, Medellín (Colombia)
Salary	6.171.980 COP - Senior Researcher I
Hours	Full time
Contract type	3 years (subject to a 9 month probationary period)
Reporting to	Dr. Juan Carlos Duque
Vacancy reference	PEAK-EAFIT-001
Additional information	This position is a 3 year post, with a probationary period.  This position is funded by RCUK grant 'PEAK', and is available from April 16th 2018 (or as soon as possible thereafter, see below fordetails)  This is a full-time position that cannot be held concurrently with any other substantive contract without the explicit permission of Dr. Juan C. Duque.  PLEASE NOTE: Applicants are responsible for contacting their referees and making sure that their letters are received by the closing date)

## The Appointment

We invite applications for 1 Postdoctoral Research Assistant position, funded by RCUK GCRF 'PEAK Urban' grant to work with Dr. Juan C. Duque at the RiSE-group, Universidad EAFIT. This is a three-year post subject to confirmation of funding via an external RCUK grant review at 12 months. Hence, this is a fixed-term post for 12 months in the first instance, and funding beyond this point to 36 months is dependent on a successful RCUK grant review in Autumn 2018. This post is available from Apri 16<sup>th</sup> 2018 (there may be some flexibility in the start date, but no later than June 1<sup>st</sup> 2018).

The post-holder will join an international cohort of postdoctoral scholars within the PEAK Urban project, a 4-year, international, multidisciplinary GCRF program involving Oxford researchers at Anthropology (COMPAS), the Mathematical Institute, Geography (Transport Studies Unit) and

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Medicine (George Institute), along with universities in China (Peking University), South Africa (University of Cape Town), India (Indian Institute for Human Settlements) and Colombia (Universidad EAFIT).

Working across borders and disciplines, this is a unique opportunity to develop and apply tools and techniques from Artificial Intelligence (deep learning, machine learning, image processing) to generate innovative solutions to the challenges faced by rapidly expanding cities. Through our research, we want to help these cities achieve the Sustainable Development Goals set by the United Nations. Using a range of techniques in deep learning, machine learning, and image processing, as well as interfacing with a variety of analysis tools from geography and spatial economics, we will study the dynamics of urban economies, and their relation to space on multiple scales. We will take advantage of a range of data sources, from administrative micro data on employees, to telecoms, commuting and remote sensing data.

The researcher will collaborate directly with academics and policy-makers in Colombia, and possibly Oxford, South Africa, India and/or China, to maximize relevance and impact. The postholder will also attend an annual summer school with other postdoctoral researchers from around the world, and will have an opportunity to spend time within a partner research institution (Oxford, Cape Town, Bangalore or Beijing) as appropriate to their research project.

## Responsibilities/duties

The successful candidate will be expected to:

- To develop new research methodologies, reviewing and refining theories as appropriate, at the interface between mathematics, data science, economics, geography and urban policy;
- Develop ideas for new research projects alongside Dr. Duque and other participants in the PEAK Urban project, and for generating research income;
- Manage own academic research and administrative activities. This involves small scale project management, to co-ordinate multiple aspects of work to meet deadlines;
- Fully participate in the activities of Dr. Duque's research group, including mentoring of students and project supervision where appropriate;
- Collaborate with a network of international academics, and link with policy-makers based in both governmental and non-governmental organizations;
- Collaborate in the preparation of research publications, book chapters, and policy reports;
- Present papers at conferences or public meetings;
- Travel periodically to work alongside international colleagues as appropriate, attend conferences, and participate in annual global project meetings ('summer schools').

#### Selection criteria

- A PhD awarded, or a Master's degree and PhD submitted (at the time of taking up the position) in mathematics, computer science, cognitive systems or a related discipline. A candidate with a PhD in social science with a significant data-science component, or postdoctoral experience in this field, may also be considered;
- A research background in deep learning, machine learning, image processing;

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- A good research and publication record, judged by the candidate's career stage;
- Excellent computational skills (e.g., highly proficient at coding in chosen language(s), preferably Python, and handling large datasets);
- Excellent communication, inter-personal and writing skills;
- The ability to work independently, including decision-making, problem-solving, planning and organizing;
- Enthusiasm and willingness to work with international collaborators, and travel regularly.

#### Desirable selection criteria

- A proven ability to communicate research with policy makers and with non-mathematical (other sciences and social sciences) and non-academic audiences;
- Experience in international and/or cross-disciplinary academic collaboration;
- Experience of working with socioeconomic data;
- Experience of working on deep learning, machine learning, image processing applied to urban contexts.

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#### About the Universidad EAFIT

### **EAFIT Inspires, Creates, Transforms**

EAFIT is a university that inspires the current generations to embark on a life project that maximizes their potential. It is an institution that both conveys and generates knowledge, thus fulfilling its role as a teaching and research university. It transforms society.

A university that is constantly growing, transcending regional and national boundaries and connecting with the world, today's EAFIT is a place where quality, pertinence and values are encapsulated in our institutional mission to form better women and better men who contribute to the country's social, economic and scientific progress.

The research at Universidad EAFIT is an institutional decision, as well as explicitly in its purposes. EAFIT generates and transmits knowledge to solve problems that transcend the national level. The budget allocated to this area has increased over time and enabled EAFIT to achieve a range of objectives, including recognition by Colciencias of 44 research groups, the registration of 30 patents, and the participation of more than 900 students in research incubators.

Therefore, with the implementation of scientific and applied research processes, in permanent interaction with the business, government and academic sectors, the Institution aspires to be recognized nationally and internationally for its academic and research achievements, for this, it promotes, among other things, the scientific and innovative production that contributes to the resolution of problems that transcend borders.

To fulfill this purpose, our system is articulated through the research communities represented by their research groups and seedbeds that, through the realization of activities and projects, will contribute to institutional academic strengthening. All this contemplated under the framework of the policies, objectives and provisions of Law 1286 of 2009 on Science, Technology and Innovation.

For more information please visit http://www.eafit.edu.co/

### The RiSE group

The RiSE group seeks to provide innovative solutions to the challenges faced by rapidly expanding cities. These solutions have as central axis the strategic management of the urban space, current and future, to achieve greater prosperity and an inclusive and sustainable growth.

As a multidisciplinary research group we are dedicated to the development of new quantitative methods for spatial analysis and the exploration of new ways of measuring socioeconomic variables through social networks or remote sensing. Our methods are published in leading international journals and many of our methods are distributed free of charge through open source software.

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Among the techniques we use are spatial econometrics, neural networks, machine learning, and optimization.

RiSE has a long research trajectory that place it in the highest category (A1) according to the national ranking published by Colombian Administrative Department of Science (Colciencias).

Our funding mainly comes from Universidad EAFIT and organizations such as Research Councils UK (RCUK), UN-Habitat, Inter-American Development Bank, The World Bank, Development Bank of Latin America, among others.

# How to Apply

To apply, please send the following materials to jduquec1@eafit.edu.co:

- Cover letter addressing your qualifications and research interests. The letter should describe how you meet the selection criteria outlined in the job description;
- Curriculum vitae;
- Details of two referees, one should include the applicant's current or most recent employer.

  NOTE: referees letters must be received from your referees by the closing date for your application to be complete;
- Also provide a representative publication or recent working paper.

Please upload all documents as **PDF files** with your name and the document type in the filename.

Applicants should ask their referees to send their letters of reference DIRECTLY to: jduquec1@eafit.edu.co

All applications must be received by 12:00 noon (EST) on March 24th, 2018.

### **Equality of Opportunity**

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria, which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

# Benefits of working at the University

# **Community Wellbeing**

The wellbeing of members of the EAFIT community is achieved through sporting activities, artistic events, and access to spaces on campus where they can pursue healthy lifestyles.

Above and beyond the academic and scientific aspects, the university concerns itself with nurturing the multifaceted development of all members of the EAFIT community. In this regard, the Human Development-University Wellbeing Division promotes the wellbeing of everyone on campus: students, faculty and administrative staff, alumni, and retirees. This division also seeks to promote

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its members' future prospects, self-improvement, and personal and professional growth based on a philosophy of mutual care and concern.

### • Sports

The Sports and Recreation Department's overarching mission is to promote healthy lifestyles that translate into a balance between mental and physical health. Both students and employees benefit from a sports offering that includes swimming, men's and women's soccer, tennis, track and field, taekwondo, chess, ultimate, volleyball, basketball, indoor soccer, softball, karate, table tennis, ecological walks, and water aerobics.

### • Artistic Development

Offering a range of activities involving creation and artistic expression, this department – located in a house in the La Aguacatala neighborhood - responds to the institution's mission to promote artistic activities for the use of free time. Its portfolio of services is intended for students, employees and families, sometimes for people from outside.

Courses on a variety of subjects are open to the community, including jewelry making, painting for children, adolescents, and adults; photography (digital camera), photography (studio lighting), photography (Street Photography), dance, jewelry, analogous illustration, Amigurumis, self makeup, and lettering. Other offerings include the children's choir, university choir, the Al Compás ballroom dancing group, the Ecléctico music group, the Movimiento Danza urban dance group, the Contradanza folkloric dance group, the Letras literary group, the La Colombina folk music group, information can visit: http://www.eafit.edu.co/bienestaryou universitario/desarrollo-artistico/talleres-artisticos/Paginas/talleres-artisticos.aspx

#### • Health Services

The Medical Service and Occupational Health Department helps foster prevention and mutual care among the university community. Its services include first aid, general medical check-ups, dental services (under an agreement with CES), nutritional consults (under agreements with third parties), health prevention and promotion activities such as the Health Fair, vaccination and blood drives, and a health services directory.

### • Employee Wellbeing

The Employee Development and Benefits and Compensation departments look after the professional and personal wellbeing of everyone who contributes on a daily basis to the university's Mission and Vision.

In that regard, both departments promote excellent working conditions for EAFIT faculty and staff and access to services that promote their development and improve their quality of life and that of their families.

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### Other offers on the university campus:

#### **Cultural Life**

Culture is a key source of inspiration on campus, since EAFIT firmly believes it is an essential part of the preparation of well-rounded professionals.

The EAFIT campus is a space where the creation, support for, and dissemination of different artistic disciplines fosters the multifaceted development of the university community and the general public. The activities held throughout the year include exhibitions, concerts, recitals, film cycles, theatrical works, and literary colloquiums.

## **Sports and Fitness Areas**

### • Athletic Facilities

EAFIT makes a broad range of competitive sport and recreational facilities available to the university community and the general public, including an artificial turf field, a natural grass field, a tennis court, two multi-sport fields, and a swimming pool.

# • Vivo Physical Conditioning Center

The university encourages physical activity and healthy lifestyles among its students, employees and their families, alumni, and retirees and their families, providing them a space equipped with state-of-the-art technology and staffed at all times with qualified fitness instructors.

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Teléfono: (57) (6) 3214157



## Job Description and Selection Criteria

Job title	One Postdoctoral Research Assistants in Remote Sensing and GIS (image feature extraction, image classification, spatial data analysis) for urban studies.
Division	RiSE-group
Location	Universidad EAFIT. Carrera 49 N° 7 Sur-50, Medellín (Colombia)
Salary	6.171.980 COP - Senior Researcher I
Hours	Full time
Contract type	3 years (subject to a 9 month probationary period)
Reporting to	Dr. Juan Carlos Duque
Vacancy reference	PEAK-EAFIT-002
Additional information	This position is a 3 year post, with a probationary period.  This position is funded by RCUK grant 'PEAK', and is available from April 1st 2018 (or as soon as possible thereafter, see below for details)  This is a full-time position that cannot be held concurrently with any other substantive contract without the explicit permission of Dr. Juan C. Duque.  (PLEASE NOTE: Applicants are responsible for contacting their referees and making sure that their letters are received by the closing date)

# The Appointment

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The post-holder will join an international cohort of postdoctoral scholars within the PEAK Urban project, a 4-year, international, multidisciplinary GCRF program involving Oxford researchers at

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EAFIT Bogotá
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Anthropology (COMPAS), the Mathematical Institute, Geography (Transport Studies Unit) and Medicine (George Institute), along with universities in China (Peking University), South Africa (University of Cape Town), India (Indian Institute for Human Settlements) and Colombia (Universidad EAFIT).

Working across borders and disciplines, this is a unique opportunity to develop and apply tools and techniques from Remote Sensing image processing and Geographic Information Science (image classification, image feature extraction, spatial data analysis) to generate innovative solutions to the challenges faced by rapidly expanding cities. Through our research, we want to help these cities achieve the Sustainable Development Goals set by the United Nations. Using a range of techniques in remote sensing image processing, feature extraction, and spatial data analysis, as well as interfacing with a variety of analysis tools from geography and spatial economics, we will study the dynamics of urban economies, and their relation to space on multiple scales. We will take advantage of a range of data sources, from administrative micro data on employees, to telecoms, commuting and remote sensing data.

The researcher will collaborate directly with academics and policy-makers in Colombia, and possibly Oxford, South Africa, India and/or China, to maximize relevance and impact. The post-holder will also attend an annual summer school with other postdoctoral researchers from around the world, and will have an opportunity to spend time within a partner research institution (Oxford, Cape Town, Bangalore or Beijing) as appropriate to their research project.

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experience in this field, may also be considered;

- A research background in geographic data science, urban applications of remote sensing, image processing;
- A good research and publication record, judged by the candidate's career stage;
- Excellent computational skills (e.g., highly proficient at digital remote sensing image processing, and handling large datasets);
- Excellent communication, inter-personal and writing skills;
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- A proven ability to communicate research with policy makers and with non-mathematical (other sciences and social sciences) and non-academic audiences;
- Experience in transferring research outcomes to multilateral organizations and governments through consulting projects.
- Experience in international and/or cross-disciplinary academic collaboration;
- Experience of working with socioeconomic data;
- Experience of working on geographic datasets, remote sensing, VHR imagery, image feature extraction and classification applied to urban contexts;
- Ability to process spatial and image datasets programmatically in Python, R, or other open source languages.
- Proficiency in working with open source software for image and spatial data analysis:
   QGIS, OTB, SNAP STEP, etc.
- Experience in teaching GIS and Remote Sensing at undergraduate and postgraduate levels.

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All applications must be received by 12:00 noon (EST) on Feburary 28th, 2018.

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### Other offers on the university campus:

#### **Cultural Life**

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## **Sports and Fitness Areas**

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## Job Description and Selection Criteria

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Division	RiSE-group
Location	Universidad EAFIT. Carrera 49 N° 7 Sur-50, Medellín (Colombia)
Salary	6.171.980 COP - Senior Researcher I
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Working across borders and disciplines, this is a unique opportunity to develop and apply tools and techniques from Urban Economics and Regional Science to generate innovative solutions to the challenges faced by rapidly expanding cities. Through our research, we want to help these cities achieve the Sustainable Development Goals set by the United Nations. Using a range of techniques in econometrics, we will study the dynamics of urban economies, and their relation to space on multiple scales. We will take advantage of a range of data sources, from administrative micro data on employees, to telecoms, commuting and remote sensing data.

The researcher will collaborate directly with academics and policy-makers in Colombia, and possibly Oxford, South Africa, India and/or China, to maximize relevance and impact. The post-holder will also attend an annual summer school with other postdoctoral researchers from around the world, and will have an opportunity to spend time within a partner research institution (Oxford, Cape Town, Bangalore or Beijing) as appropriate to their research project.

# Responsibilities/duties

The successful candidate will be expected to:

- To develop new research methodologies, reviewing and refining theories as appropriate, at the interface between mathematics, data science, economics, geography and urban policy;
- Develop ideas for new research projects alongside Dr. Duque and other participants in the PEAK Urban project, and for generating research income;
- Manage own academic research and administrative activities. This involves small scale project management, to co-ordinate multiple aspects of work to meet deadlines;
- Fully participate in the activities of Dr. Duque's research group, including mentoring of students and project supervision where appropriate;
- Collaborate with a network of international academics, and link with policy-makers based in both governmental and non-governmental organizations;
- Collaborate in the preparation of research publications, book chapters, and policy reports;
- Present papers at conferences or public meetings;
- Travel periodically to work alongside international colleagues as appropriate, attend conferences, and participate in annual global project meetings ('summer schools').

#### Selection criteria

- A PhD awarded, or a Master's degree and PhD submitted (at the time of taking up the position) in Economics, Regional Science or a related discipline;
- A research background in urban applications;
- A good research and publication record, judged by the candidate's career stage;
- Excellent computational skills (e.g., highly proficient at micro-econometrics, spatial econometrics, and handling large datasets);

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- Excellent communication, inter-personal and writing skills;
- The ability to work independently, including decision-making, problem-solving, planning and organizing;
- Enthusiasm and willingness to work with international collaborators, and travel regularly.

### Desirable selection criteria

- Knowledge of Bayesian econometrics and/or spatial econometrics.
- Computational skills and proficiency in the use of Python.
- Computational skills and proficiency in the use of R and Stata.
- A proven ability to communicate research with policy makers and with non-mathematical (other sciences and social sciences) and non-academic audiences;
- Experience in international and/or cross-disciplinary academic collaboration;
- Previous experience with data science projects.

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#### About the Universidad EAFIT

### **EAFIT Inspires, Creates, Transforms**

EAFIT is a university that inspires the current generations to embark on a life project that maximizes their potential. It is an institution that both conveys and generates knowledge, thus fulfilling its role as a teaching and research university. It transforms society.

A university that is constantly growing, transcending regional and national boundaries and connecting with the world, today's EAFIT is a place where quality, pertinence and values are encapsulated in our institutional mission to form better women and better men who contribute to the country's social, economic and scientific progress.

The research at Universidad EAFIT is an institutional decision, as well as explicitly in its purposes. EAFIT generates and transmits knowledge to solve problems that transcend the national level. The budget allocated to this area has increased over time and enabled EAFIT to achieve a range of objectives, including recognition by Colciencias of 44 research groups, the registration of 30 patents, and the participation of more than 900 students in research incubators.

Therefore, with the implementation of scientific and applied research processes, in permanent interaction with the business, government and academic sectors, the Institution aspires to be recognized nationally and internationally for its academic and research achievements, for this, it promotes, among other things, the scientific and innovative production that contributes to the resolution of problems that transcend borders.

To fulfill this purpose, our system is articulated through the research communities represented by their research groups and seedbeds that, through the realization of activities and projects, will contribute to institutional academic strengthening. All this contemplated under the framework of the policies, objectives and provisions of Law 1286 of 2009 on Science, Technology and Innovation.

For more information please visit http://www.eafit.edu.co/

### The RiSE group

The RiSE group seeks to provide innovative solutions to the challenges faced by rapidly expanding cities. These solutions have as central axis the strategic management of the urban space, current and future, to achieve greater prosperity and an inclusive and sustainable growth.

As a multidisciplinary research group we are dedicated to the development of new quantitative methods for spatial analysis and the exploration of new ways of measuring socioeconomic variables through social networks or remote sensing. Our methods are published in leading international journals and many of our methods are distributed free of charge through open source software.

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Among the techniques we use are spatial econometrics, neural networks, machine learning, and optimization.

RiSE has a long research trajectory that place it in the highest category (A1) according to the national ranking published by Colombian Administrative Department of Science (Colciencias).

Our funding mainly comes from Universidad EAFIT and organizations such as Research Councils UK (RCUK), UN-Habitat, Inter-American Development Bank, The World Bank, Development Bank of Latin America, among others.

## How to Apply

To apply, please send the following materials to jduquec1@eafit.edu.co:

- Cover letter addressing your qualifications and research interests. The letter should describe how you meet the selection criteria outlined in the job description;
- Curriculum vitae;
- Details of two referees, one should include the applicant's current or most recent employer.

  NOTE: referees letters must be received from your referees by the closing date for your application to be complete;
- Also provide a representative publication or recent working paper.

Please upload all documents as **PDF files** with your name and the document type in the filename.

Applicants should ask their referees to send their letters of reference DIRECTLY to: jduquec1@eafit.edu.co

All applications must be received by 12:00 noon (EST) on March 24th, 2018.

### **Equality of Opportunity**

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria, which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

## Benefits of working at the University

### **Community Wellbeing**

The wellbeing of members of the EAFIT community is achieved through sporting activities, artistic events, and access to spaces on campus where they can pursue healthy lifestyles.

Above and beyond the academic and scientific aspects, the university concerns itself with nurturing the multifaceted development of all members of the EAFIT community. In this regard, the Human Development-University Wellbeing Division promotes the wellbeing of everyone on campus: students, faculty and administrative staff, alumni, and retirees. This division also seeks to promote

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its members' future prospects, self-improvement, and personal and professional growth based on a philosophy of mutual care and concern.

### • Sports

The Sports and Recreation Department's overarching mission is to promote healthy lifestyles that translate into a balance between mental and physical health. Both students and employees benefit from a sports offering that includes swimming, men's and women's soccer, tennis, track and field, taekwondo, chess, ultimate, volleyball, basketball, indoor soccer, softball, karate, table tennis, ecological walks, and water aerobics.

### • Artistic Development

Offering a range of activities involving creation and artistic expression, this department – located in a house in the La Aguacatala neighborhood – responds to the institution's mission to promote artistic activities for the use of free time. Its portfolio of services is intended for students, employees and families, sometimes for people from outside.

Courses on a variety of subjects are open to the community, including jewelry making, painting for children, adolescents, and adults; photography (digital camera), photography (studio lighting), photography (Street Photography), dance, jewelry, analogous illustration, Amigurumis, self makeup, and lettering. Other offerings include the children's choir, university choir, the Al Compás ballroom dancing group, the Ecléctico music group, the Movimiento Danza urban dance group, the Contradanza folkloric dance group, the Letras literary group, the La Colombina folk music group, information can visit: http://www.eafit.edu.co/bienestaryou universitario/desarrollo-artistico/talleres-artisticos/Paginas/talleres-artisticos.aspx

#### • Health Services

The Medical Service and Occupational Health Department helps foster prevention and mutual care among the university community. Its services include first aid, general medical check-ups, dental services (under an agreement with CES), nutritional consults (under agreements with third parties), health prevention and promotion activities such as the Health Fair, vaccination and blood drives, and a health services directory.

### • Employee Wellbeing

The Employee Development and Benefits and Compensation departments look after the professional and personal wellbeing of everyone who contributes on a daily basis to the university's Mission and Vision.

In that regard, both departments promote excellent working conditions for EAFIT faculty and staff and access to services that promote their development and improve their quality of life and that of their families.

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### Other offers on the university campus:

#### **Cultural Life**

Culture is a key source of inspiration on campus, since EAFIT firmly believes it is an essential part of the preparation of well-rounded professionals.

The EAFIT campus is a space where the creation, support for, and dissemination of different artistic disciplines fosters the multifaceted development of the university community and the general public. The activities held throughout the year include exhibitions, concerts, recitals, film cycles, theatrical works, and literary colloquiums.

## **Sports and Fitness Areas**

### • Athletic Facilities

EAFIT makes a broad range of competitive sport and recreational facilities available to the university community and the general public, including an artificial turf field, a natural grass field, a tennis court, two multi-sport fields, and a swimming pool.

# • Vivo Physical Conditioning Center

The university encourages physical activity and healthy lifestyles among its students, employees and their families, alumni, and retirees and their families, providing them a space equipped with state-of-the-art technology and staffed at all times with qualified fitness instructors.

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## Job Description and Selection Criteria

Job title	One Postdoctoral Research Assistant in comparative research on policies, planning and practices in relation to spatial segregation and urban studies.
Division	urbam research group
Location	Universidad EAFIT. Carrera 49 N° 7 Sur-50, Medellín (Colombia)
Salary	6.171.980 COP - Senior Researcher I
Hours	Full time
Contract type	3 years (subject to a 9 month probationary period)
Reporting to	Alejandro Echeverri
Vacancy reference	PEAK-EAFIT-004
Additional information	This position is a 3 year post, with a probationary period.  This position is funded by RCUK grant 'PEAK', and is available from April 16th 2018 (or as soon as possible thereafter, see below for details)  This is a full-time position that cannot be held concurrently with any other substantive contract without the explicit permission of Alejandro Echeverri.  (PLEASE NOTE: Applicants are responsible for contacting their referees and making sure that their letters are received by the closing date)

# The Appointment

We invite applications for 1 Postdoctoral Research Assistant position, funded by RCUK GCRF 'PEAK Urban' grant to work with the urbam research group at Universidad EAFIT. This is a three-year post subject to confirmation of funding via an external RCUK grant review at 12 months. Hence, this is a fixed-term post for 12 months in the first instance, and funding beyond this point to 36 months is dependent on a successful RCUK grant review in Autumn 2018. This post is available from April 16<sup>th</sup> 2018 (there may be some flexibility in the start date, but no later than June 1<sup>st</sup> 2018).

The post-holder will join an international cohort of postdoctoral scholars within the PEAK Urban project, a 4-year, international, multidisciplinary GCRF programme involving Oxford researchers at Anthropology (COMPAS), the Mathematical Institute, Geography (Transport Studies Unit) and

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Medicine (George Institute), along with universities in China (Peking University), South Africa (University of Cape Town), India (Indian Institute for Human Settlements) and Colombia (Universidad EAFIT).

This appointment will allow for cross-cutting research on the fields of urban planning, urban environmental performance, public policies, spatial segregation and related fields. In will be focused on exploring, testing, and creating solutions to the most pressing problems in future cities, considering the context of the Sustainable Development Goals set by the United Nations and the multiple global discussions targeting sustainable development.

The researcher will collaborate directly with academics and policy-makers in Colombia, and possibly Oxford, South Africa, India and/or China, to maximize relevance and impact. The post-holder will also attend an annual summer school with other postdoctoral researchers from around the world, and will have an opportunity to spend time within a partner research institution (Oxford, Cape Town, Bangalore or Beijing) as appropriate to their research project.

## Responsibilities/duties

The successful candidate will be expected to:

- To develop new research methodologies, reviewing and refining theories as appropriate, at the interface between urban and environmental fields.
- Develop ideas for new research projects alongside the urbam research group and other participants in the PEAK Urban project, and for generating research income;
- Manage his/her own academic research and administrative activities. This involves small scale project management, to co-ordinate multiple aspects of work to meet deadlines;
- Fully participate in the activities of urbam's research group, including teaching, mentoring of students, and project supervision where appropriate;
- Collaborate with a network of international academics, and link with policy-makers based in both governmental and non-governmental organizations;
- Collaborate in the preparation of research publications, book chapters, and policy reports;
- Present papers at conferences or public meetings;
- Travel periodically to work alongside international colleagues as appropriate, attend conferences, and participate in annual global project meetings ('summer schools').

### Selection criteria

- A Ph.D. in Environmental, Urban or Governance fields or a related discipline.
- A research background in urban studies, environmental analysis and/ or urban governance.
- A good research and publication record, judged by the candidate's career stage;
- Experience with qualitative and quantitative research;
- Excellent computational skills;
- Excellent communication, inter-personal and writing skills;
- The ability to work independently, including decision-making, problem-solving, planning

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and organizing;

Enthusiasm and willingness to work with international collaborators, and travel regularly.

### Desirable selection criteria

- A proven ability to communicate research with policy makers and with non-mathematical (other sciences and social sciences) and non-academic audiences;
- Experience in international and/or cross-disciplinary academic collaboration;
- Living and working experience in various countries.

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The research at Universidad EAFIT is an institutional decision, as well as explicitly in its purposes. EAFIT generates and transmits knowledge to solve problems that transcend the national level. The budget allocated to this area has increased over time and enabled EAFIT to achieve a range of objectives, including recognition by Colciencias of 44 research groups, the registration of 30 patents, and the participation of more than 900 students in research incubators.

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To fulfill this purpose, our system is articulated through the research communities represented by their research groups and seedbeds that, through the realization of activities and projects, will contribute to institutional academic strengthening. All this contemplated under the framework of the policies, objectives and provisions of Law 1286 of 2009 on Science, Technology and Innovation.

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# The urbam group

The Centre for Urban and Environmental Studies –urbam– at EAFIT University leads education and research on urban and environmental issues in emergent territories of the Global South.

We aim at developing transdisciplinary approaches to urban problem solving. Thus, we are interested in articulating actions and knowledge of strategic actors stemming from public and private sectors, social organizations, communities and academia, in various dimensions, including environment, landscape, transport, governance, risk and habitat.

Some of our past work includes the Plan Director BIO 2030 for Medellín and the Aburrá Valley, a strategic territorial planning tool that defines the main bets for the consolidation of a sustainable, equitable and competitive metropolitan region. As well as the Comprehensive Municipal Plans for the Urabá region, developed for the State Government of Antioquia that allowed for the identification of detonating urban projects, oriented towards the consolidation and environmental recovery of municipalities with high urbanization dynamics. Likewise, urbam led *Civilizar las Calles*, which analyzes the interventions carried out in six streets of the city of Medellín, in which the public space has been reorganized thanks to technical, institutional and social processes that took place around it, influencing the way in which mobility flows interact and the relationship between pedestrians and the built environment. As it regards high-level international collaborations, urbam has developed jointly with the Leibniz University in Hannover, studies on landslides and informality in Medellín, published as *Rehabitar la Montaña*, which includes key contributions to anticipate future informal growth in slopes, and strategies to encourage more sustainable habitats.

### How to Apply

To apply, please send the following materials to <u>urbam@eafit.edu.co</u>

- Cover letter addressing your qualifications and research interests. The letter should describe how you meet the selection criteria outlined in the job description;
- Curriculum vitae:
- Two reference letters. **NOTE: referees' letters must be received from your referees by the closing date for your application to be complete;**
- Recent publication or working paper.

Please upload all documents as **PDF files** with your name and the document type in the filename.

Applicants should ask their referees to send their letters of reference DIRECTLY to: <a href="mailto:urbam@eafit.edu.co">urbam@eafit.edu.co</a>

All applications must be received by 12:00 noon (EST) on March 24th, 2018.

### **Equality of Opportunity**

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria, which are related to the duties of each particular

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post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

## Benefits of working at the University

### **Community Wellbeing**

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Above and beyond the academic and scientific aspects, the university concerns itself with nurturing the multifaceted development of all members of the EAFIT community. In this regard, the Human Development-University Wellbeing Division promotes the wellbeing of everyone on campus: students, faculty and administrative staff, alumni, and retirees. This division also seeks to promote its members' future prospects, self-improvement, and personal and professional growth based on a philosophy of mutual care and concern.

### Sports

The Sports and Recreation Department's overarching mission is to promote healthy lifestyles that translate into a balance between mental and physical health. Both students and employees benefit from a sports offering that includes swimming, men's and women's soccer, tennis, track and field, taekwondo, chess, ultimate, volleyball, basketball, indoor soccer, softball, karate, table tennis, ecological walks, and water aerobics.

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### • Health Services

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The Medical Service and Occupational Health Department helps foster prevention and mutual care among the university community. Its services include first aid, general medical check-ups, dental services (under an agreement with CES), nutritional consults (under agreements with third parties), health prevention and promotion activities such as the Health Fair, vaccination and blood drives, and a health services directory.

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The Employee Development and Benefits and Compensation departments look after the professional and personal wellbeing of everyone who contributes on a daily basis to the university's Mission and Vision.

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### **Sports and Fitness Areas**

### • Athletic Facilities

EAFIT makes a broad range of competitive sport and recreational facilities available to the university community and the general public, including an artificial turf field, a natural grass field, a tennis court, two multi-sport fields, and a swimming pool.

### Vivo Physical Conditioning Center

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## Job Description and Selection Criteria

Job title	One Postdoctoral Research Assistant in informal urban growth and sustainable habitats.
Division	urbam research group
Location	Universidad EAFIT. Carrera 49 N° 7 Sur-50, Medellín (Colombia)
Salary	6.171.980 COP - Senior Researcher I
Hours	Full time
Contract type	3 years (subject to a 9 month probationary period)
Reporting to	Alejandro Echeverri
Vacancy reference	PEAK-EAFIT-005
Additional information	This position is a 3 year post, with a probationary period.  This position is funded by RCUK grant 'PEAK', and is available from April 16th 2018 (or as soon as possible thereafter, see below for details)  This is a full-time position that cannot be held concurrently with any other substantive contract without the explicit permission of Alejandro Echeverri.  (PLEASE NOTE: Applicants are responsible for contacting their referees and making sure that their letters are received by the closing date)

## The Appointment

We invite applications for 1 Postdoctoral Research Assistant position, funded by RCUK GCRF 'PEAK Urban' grant to work with the urbam research group at Universidad EAFIT. This is a three-year post subject to confirmation of funding via an external RCUK grant review at 12 months. Hence, this is a fixed-term post for 12 months in the first instance, and funding beyond this point to 36 months is dependent on a successful RCUK grant review in Autumn 2018. This post is available from April 16<sup>th</sup> 2018 (there may be some flexibility in the start date, but no later than June 1<sup>st</sup> 2018).

The post-holder will join an international cohort of postdoctoral scholars within the PEAK Urban project, a 4-year, international, multidisciplinary GCRF programme involving Oxford researchers at Anthropology (COMPAS), the Mathematical Institute, Geography (Transport Studies Unit) and Medicine (George Institute), along with universities in China (Peking

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University), South Africa



(University of Cape Town), India (Indian Institute for Human Settlements) and Colombia (Universidad EAFIT).

This appointment will allow for advanced research on housing, informality, urban migrations and sustainable habitats. In will be focused on exploring, testing, and creating solutions to the most pressing problems in future cities, considering the context of the Sustainable Development Goals set by the United Nations and the multiple global discussions targeting sustainable development.

The researcher will collaborate directly with academics and policy-makers in Colombia, and possibly Oxford, South Africa, India and/or China, to maximize relevance and impact. The post-holder will also attend an annual summer school with other postdoctoral researchers from around the world, and will have an opportunity to spend time within a partner research institution (Oxford, Cape Town, Bangalore or Beijing) as appropriate to their research project.

# Responsibilities/duties

The successful candidate will be expected to:

- To develop new research methodologies, reviewing and refining theories as appropriate, at the interface between urban and environmental fields.
- Develop ideas for new research projects alongside the urbam research group and other participants in the PEAK Urban project, and for generating research income;
- Manage his/her own academic research and administrative activities. This involves small scale project management, to co-ordinate multiple aspects of work to meet deadlines;
- Fully participate in the activities of urbam's research group, including teaching, mentoring of students, and project supervision where appropriate;
- Collaborate with a network of international academics, and link with policy-makers based in both governmental and non-governmental organizations;
- Collaborate in the preparation of research publications, book chapters, and policy reports;
- Present papers at conferences or public meetings;
- Travel periodically to work alongside international colleagues as appropriate, attend conferences, and participate in annual global project meetings ('summer schools').

#### Selection criteria

- A Ph.D. in Engineering, Architecture, Urbanism or a related discipline.
- A research background in informality, housing, urbanism, and/or sustainable habitats.
- A good research and publication record, judged by the candidate's career stage;
- Experience with qualitative and quantitative research;
- Excellent computational skills;
- Excellent communication, inter-personal and writing skills;
- The ability to work independently, including decision-making, problem-solving, planning and organizing;
- Enthusiasm and willingness to work with international collaborators, and travel regularly.

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#### Desirable selection criteria

- A proven ability to communicate research with policy makers and with non-mathematical (other sciences and social sciences) and non-academic audiences;
- Experience in international and/or cross-disciplinary academic collaboration;
- Living and working experience in various countries.

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# **EAFIT Inspires, Creates, Transforms**

EAFIT is a university that inspires the current generations to embark on a life project that maximizes their potential. It is an institution that both conveys and generates knowledge, thus fulfilling its role as a teaching and research university. It transforms society.

A university that is constantly growing, transcending regional and national boundaries and connecting with the world, today's EAFIT is a place where quality, pertinence and values are encapsulated in our institutional mission to form better women and better men who contribute to the country's social, economic and scientific progress.

The research at Universidad EAFIT is an institutional decision, as well as explicitly in its purposes. EAFIT generates and transmits knowledge to solve problems that transcend the national level. The budget allocated to this area has increased over time and enabled EAFIT to achieve a range of objectives, including recognition by Colciencias of 44 research groups, the registration of 30 patents, and the participation of more than 900 students in research incubators.

Therefore, with the implementation of scientific and applied research processes, in permanent interaction with the business, government and academic sectors, the Institution aspires to be recognized nationally and internationally for its academic and research achievements, for this, it promotes, among other things, the scientific and innovative production that contributes to the resolution of problems that transcend borders.

To fulfill this purpose, our system is articulated through the research communities represented by their research groups and seedbeds that, through the realization of activities and projects, will contribute to institutional academic strengthening. All this contemplated under the framework of the policies, objectives and provisions of Law 1286 of 2009 on Science, Technology and Innovation.

For more information please visit <a href="http://www.eafit.edu.co/">http://www.eafit.edu.co/</a>

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## The urbam group

The Centre for Urban and Environmental Studies -urbam- at EAFIT University leads education and research on urban and environmental issues in emergent territories of the Global South.

We aim at developing transdisciplinary approaches to urban problem solving. Thus, we are interested in articulating actions and knowledge of strategic actors stemming from public and private sectors, social organizations, communities and academia, in various dimensions, including environment, landscape, transport, governance, risk and habitat.

Some of our past work includes the Plan Director BIO 2030 for Medellín and the Aburrá Valley, a strategic territorial planning tool that defines the main bets for the consolidation of a sustainable, equitable and competitive metropolitan region. As well as the Comprehensive Municipal Plans for the Urabá region, developed for the State Government of Antioquia that allowed for the identification of detonating urban projects, oriented towards the consolidation and environmental recovery of municipalities with high urbanization dynamics. Likewise, urbam led Civilizar las Calles, which analyzes the interventions carried out in six streets of the city of Medellín, in which the public space has been reorganized thanks to technical, institutional and social processes that took place around it, influencing the way in which mobility flows interact and the relationship between pedestrians and the built environment. As it regards high-level international collaborations, urbam has developed jointly with the Leibniz University in Hannover, studies on landslides and informality in Medellín, published as Rehabitar la Montaña, which includes key contributions to anticipate future informal growth in slopes, and strategies to encourage more sustainable habitats.

# How to Apply

To apply, please send the following materials to <u>urbam@eafit.edu.co</u>

- Cover letter addressing your qualifications and research interests. The letter should describe how you meet the selection criteria outlined in the job description;
- Curriculum vitae:
- Two reference letters. NOTE: referees' letters must be received from your referees by the closing date for your application to be complete;
- Recent publication or working paper.

Please upload all documents as **PDF files** with your name and the document type in the filename.

Applicants should ask their referees to send their letters of reference DIRECTLY to: urbam@eafit.edu.co

All applications must be received by 12:00 noon (EST) on March 24th, 2018.

#### **Equality of Opportunity**

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria, which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary

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consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

## Benefits of working at the University

## **Community Wellbeing**

The wellbeing of members of the EAFIT community is achieved through sporting activities, artistic events, and access to spaces on campus where they can pursue healthy lifestyles.

Above and beyond the academic and scientific aspects, the university concerns itself with nurturing the multifaceted development of all members of the EAFIT community. In this regard, the Human Development-University Wellbeing Division promotes the wellbeing of everyone on campus: students, faculty and administrative staff, alumni, and retirees. This division also seeks to promote its members' future prospects, self-improvement, and personal and professional growth based on a philosophy of mutual care and concern.

## • Sports

The Sports and Recreation Department's overarching mission is to promote healthy lifestyles that translate into a balance between mental and physical health. Both students and employees benefit from a sports offering that includes swimming, men's and women's soccer, tennis, track and field, taekwondo, chess, ultimate, volleyball, basketball, indoor soccer, softball, karate, table tennis, ecological walks, and water aerobics.

# • Artistic Development

Offering a range of activities involving creation and artistic expression, this department – located in a house in the La Aguacatala neighborhood – responds to the institution's mission to promote artistic activities for the use of free time. Its portfolio of services is intended for students, employees and families, sometimes for people from outside.

Courses on a variety of subjects are open to the community, including jewelry making, painting for children, adolescents, and adults; photography (digital camera), photography (studio lighting), photography (Street Photography), dance, jewelry, analogous illustration, Amigurumis, self makeup, and lettering. Other offerings include the children's choir, university choir, the Al Compás ballroom dancing group, the Ecléctico music group, the Movimiento Danza urban dance group, the Contradanza folkloric dance group, the Letras literary group, the La Colombina folk music group, visit: More information http://www.eafit.edu.co/bienestarstage crew. you can universitario/desarrollo-artistico/talleres-artisticos/Paginas/talleres-artisticos.aspx

### • Health Services

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The Medical Service and Occupational Health Department helps foster prevention and mutual care among the university community. Its services include first aid, general medical check-ups, dental services (under an agreement with CES), nutritional consults (under agreements with third parties), health prevention and promotion activities such as the Health Fair, vaccination and blood drives, and a health services directory.

# • Employee Wellbeing

The Employee Development and Benefits and Compensation departments look after the professional and personal wellbeing of everyone who contributes on a daily basis to the university's Mission and Vision.

In that regard, both departments promote excellent working conditions for EAFIT faculty and staff and access to services that promote their development and improve their quality of life and that of their families.

### Other offers on the university campus:

#### **Cultural Life**

Culture is a key source of inspiration on campus, since EAFIT firmly believes it is an essential part of the preparation of well-rounded professionals.

The EAFIT campus is a space where the creation, support for, and dissemination of different artistic disciplines fosters the multifaceted development of the university community and the general public. The activities held throughout the year include exhibitions, concerts, recitals, film cycles, theatrical works, and literary colloquiums.

### **Sports and Fitness Areas**

### • Athletic Facilities

EAFIT makes a broad range of competitive sport and recreational facilities available to the university community and the general public, including an artificial turf field, a natural grass field, a tennis court, two multi-sport fields, and a swimming pool.

### Vivo Physical Conditioning Center

The university encourages physical activity and healthy lifestyles among its students, employees and their families, alumni, and retirees and their families, providing them a space equipped with state-of-the-art technology and staffed at all times with qualified fitness instructors.

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