Vacancy Name: ZZ007544 - Senior Research Associate

Candidate Id: 10228074

Personal Details

Title:	Dr
Forename(s):	Juha-Matti
Surname / Family name:	Huusko
Preferred Name:	Juha-Matti
National Insurance number:	NI 11111111Z
Teachers Pensions Number (existing teaching staff):	N/A
Number/Street:	Yliopistokatu 7
Post Town:	Joensuu
Postcode:	80100
Country:	Finland
Preferred Telephone Number:	+358405282815
Mobile Phone Number:	
Home Email Address:	juha-matti.huusko@uef.fi
Work Telephone Number:	
Work Email Address:	
Where did you see the post advertised?:	Recommended by friend/family

Right to Work

This page requests information to ascertain your right to work in the UK. It is split into four parts and any questions marked with an asterisk '*' are mandatory and will require an answer.

1. Are you a British National?:	No

*If you have answered 'Yes' to Q1, you are not required to answer the questions relating to international workers. Please proceed to the next section, Personal Details.***For non UK/Irish nationals**

2. Are you an EEA/EU or Swiss National who holds Settled or Pre-Settled Status under the EU Settlement?:	No
3.Do you currently have the right to work in the UK?:	No
If Yes please indicate your current immigration status::	
i)What is the expiry date of your visa (information found on vignette in passport or on Biometric Residence Permit Card)::	

If No: The post you are applying for must meet the requirements for a skilled worker visa. If the role does not meet the skills and salary requirements as set out by UKVI, we will not be able to appoint you to this post. To confirm if the role is eligible for sponsorship, job codes, salary and criteria can be found here.

4.Do you have any conditions attached to your right to work?:	No

ii)E.g. A Tier 4 student visa holder can only work up to 20 hours in term-time, full-time in vacation.

If yes, please provide the exact wording of those restrictions::	

If you have answered yes, please scan your visa and passport documentation and attach to this page as supporting evidence.

Employment Details

Post held:	university teacher
Date appointed:	01/06/2022
Notice period:	1 month
Salary:	3000€
Other benefits:	office, printing, library, healthcare
Name and address of employer:	University of Eastern Finland Yliopistokatu 7, 80100 Joensuu, Finland
Postcode:	
Brief details of main duties / responsibilities of your post, including reasons for wishing to leave:	Main duties: preparing course curricula for new engineering fields starting in August 2023. Reasons for wishing to leave: to get international experience from UK and to work in complex analysis.

Previous Employment

Date From:	
Date To:	
Employer's Name and Address:	University of Eastern Finland Yliopistokatu 7, 80100 Joensuu, Finland
Post held:	postdoctoral researcher
Reason for Leaving:	fixed-term contract
Main Function:	Arranging a seminar and studying in detail a paper about Nevanlinna theory (Katsutoshi Yamanoi, Zeros of higher derivatives of meromorphic functions in the complex plane, Proc. London Math. Soc. (3) 106 (2013) 703–780, C e 2012 London Mathematical Society, doi:10.1112/plms/pds051)

Date From:	Jul-2020
Date To:	Jul-2020
Employer's Name and Address:	University of Eastern Finland Yliopistokatu 7, 80100 Joensuu, Finland
Post held:	university teacher
Reason for Leaving:	fixed-term contract
Main Function:	Preparing online course materials in Differential calculus, Integral calculus and Basics of Mathematics

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Date From:	Jun-2021
Date To:	May-2022
Employer's Name and Address:	University of Eastern Finland Yliopistokatu 7, 80100 Joensuu, Finland
Post held:	university teacher
Reason for Leaving:	fixed-term contract

Main Function:	Preparing online course materials in Linear Algebra and for a Matlab course.

Education Details

Secondary Qualification Details

Date From:	Aug-2007
Date To:	Sep-2013
Name of Institution:	University of Eastern Finland
Qualifications including subject and grades obtained:	Please see http://integraali.com/huusko/certificates/ or contact me for details of my Master's Degree.
Date Awarded:	Sep-2013

Higher Qualification Details

Name of Institution:	University of Eastern Finland - Finland
Date From:	Oct-2013
Date To:	Jun-2017
Qualification Type:	PhD
Subject Studied:	mathematics
Grade:	Pass
Grade Status:	Obtained
Date Awarded:	Jun-2017

Training and Memberships

Training

Membership

DORA Research

The Research Title:

Significance and Contribution:

Your Personal Contribution:

The Research Title:

Significance and Contribution:

Your Personal Contribution:

The Research Title:

Significance and Contribution:

Your Personal Contribution:

Reasons for Applying

Please provide details:

Attached there is my motivation statement and my CV which includes my list of publications. For your convenience, here is my motivation and list of publications as plain text.

Motivation

In my dissertation, I studied the growth of solutions of ODEs in the unit disc of the complex plane. Especially, I studied the sufficient conditions on coefficients ensuring that all solutions belong to a function space such as the Bloch space, BMOA or the Hardy space. After my dissertation, I have done research in univalent functions and Nevanlinna theory.

Due to my experience in complex differential equations and their geometric aspects, I feel confident to apply to the position.

I am also excited that your project also involves computational aspects using CAS. This is because, besides research, I have developed online course materials for mathematics courses. Especially JSXGraph JavaScript library allows to demonstrate analytical mappings in the web browser.

List of publications

* Pesonen, H.A., J.-M. Huusko, X. Zang, A.T. Friberg, J. Turunen and T. Setälä, Partial spectral and temporal coherence of plane-wave pulse trains in second-harmonic generation, J. Opt. (2021).
* Hu, G., J.-M. Huusko, J. Long, Y. Sun, Linear differential equations with solutions lying in weighted Fock spaces, Comp. Var. Ell. Eq., Volume 66, 2021.
* Pesonen, H., A. Halder, J.-M. Huusko, A.T. Friberg, T. Setälä and J. Turunen, Spatial coherence effects in secondharmonic generation of scalar light fields, Journal of Optics, Volume 23, Number 3.
* Huusko, J.-M., T. Vesikko, On Becker's univalence criterion, Journal of Mathematical Analysis and Applications, 458 (1), 781-794.
* Huusko, J.-M., Methods for complex ODEs based on localization, integration and operator theory, Publications of the University of Eastern Finland. Dissertations in Forestry and Natural Sciences, 268 (2017).
* Gröhn, J., J-M. Huusko, J. Rättyä, Linear differential equations with slowly growing solutions, Trans. Amer. Math. Soc. 370 (2018), 7201-7227.
* Huusko, J.-M. and M. Martin, Criteria for bounded valence of harmonic mappings, Comput. Methods Funct. Theory (2017).
* Huusko, J.-M., T. Korhonen, A. Reijonen, Linear Differential Equations with Solutions in the Growth Space, Ann. Acad. Sci. Fenn. Math. 41 (2016), no. 1, 399 – 416.
* Huusko, J.-M., Localisation of Linear Differential Equations in the Unit Disc by a Conformal Map, Bull. Aust. Math. Soc. 93 (2016), 260–271.

The pdf files of my publications can be easily accessed at http://integraali.com/phpcv/order4.php

Do you have a list of publications and grants obtained?: Yes

References

If any of your referees know you by any other name, please give details:

Referee Details

Referee Type: Employer Current
Title: Professor
Forename: Risto
Surname: Korhonen

Email Address:	risto.korhonen@uef.fi
Telephone Number(inc. area code):	+358 50 442 2684
Fax number:	
Address Line 1:	Yliopistokatu 7
Address Line 2:	
Town:	Joensuu
Postcode:	80100

Referee Type:	Personal
Title:	Dr
Forename:	Janne
Surname:	Gröhn
Email Address:	janne.grohn@uef.fi
Telephone Number(inc. area code):	+358 50 439 7914
Fax number:	
Address Line 1:	Yliopistokatu 7
Address Line 2:	
Town:	Joensuu
Postcode:	80100

Juha-Matti Huusko
address: Yliopistokatu 7, 80100 Joensuu
email: juha-matti.huusko@uef.fi
tel: +358 40 528 2815

Motivation statement

to the position senior research associate to work on the UKRI / EPSRC funded project EP/W012251/1: Geometric Aspects of Complex Differential Equations (GACDE)

Dear Sir/Madam,

In my dissertation, I studied the growth of solutions of ODEs in the unit disc of the complex plane. Especially, I studied the sufficient conditions on coefficients ensuring that all solutions belong to a function space such as the Bloch space, BMOA or the Hardy space. After my dissertation, I have done research in univalent functions and Nevanlinna theory.

Due to my experience in complex differential equations and their geometric aspects, I feel confident to apply to the position.

I am also excited that your project also involves computational aspects using CAS. This is because, besides research, I have developed online course materials for mathematics courses. Especially JSXGraph JavaScript library allows to demonstrate analytical mappings in the web browser.

Juha-Matti Huusko
address: Yliopistokatu 7, 80100 Joensuu
email_ juha-matti.huusko@uef.fi
tel: +358 40 528 2815

Curriculum vitae

1. Full name and date
    - Huusko, Juha-Matti Aleksanteri
    - ORCID: https://orcid.org/0000-0001-8389-6436
    - gender: man
    - This document has been made 17.6.2022.
2. Date and place of birth, nationality, current residence
    - born: 20.04.1987, Kuhmo, Finland
    - nationality: Finnish
    - current residence: Yliopistokatu 7, 80100 Joensuu
3. Education and degrees awarded (certificates, transcript of credits)
    - PhD, University of Eastern Finland, mathematics, 6/2017
    - MSc, University of Eastern Finland, *teacher of mathematics and physics*, 9/2013
    - BSc, University of Eastern Finland, 2/2011
4. Other education and training, qualifications, and skills
    - BC driving license, European
    - Excellent IT skills
        1. general programming: MATLAB
        2. webpages: HTML, CSS, Javascript, PHP, Wordpress
        3. typesetting: LaTeX, MathJax, self-made MathJax-editor
        4. visualizations: JSXGraph, TikZ, Three.js (webpage)
5. Linguistic skills
    - Finnish - native
    - English - excellent
    - Swedish - mediocre
    - Bengali - mediocre
    - German – basics
6. Current position
    - university teacher, University of Eastern Finland, 6/2022-6/2023 (UpTech, developing engineering studies)
7. Previous work experience
    - university teacher, University of Eastern Finland, 6/2021-5/2022 (online course materials)
    - hourly paid teacher, University of Eastern Finland, 9/2020-5/2021
    - university teacher, University of Eastern Finland, 8/2019 – 7/2020 (online course materials)
    - postdoctoral researcher, University of Eastern Finland, 12/2018 - 7/2019
    - IT support person, University of Eastern Finland, 2/2018 – 12/2018
    - postdoctoral researcher, University of Eastern Finland, 7 - 9/2017
    - early-stage researcher, University of Eastern Finland, 10/2013 - 6/2017 (full time doctoral student, teaching 80 hours per year, funding: UEF doctoral school)
8. Research funding as well as leadership and supervision
    - second supervisor of one doctoral student 9/2021 –
    - travel grant, 2500€, Väisälä, 2019
    - University of Eastern Finland, doctoral school funding 10/2013-6/2017
    - travel grant, 1000€, Oskar Öflunds Stiftelse, CMFT-2017 participation
    -

9. List of publications

- Pesonen, H.A., J.-M. Huusko, X. Zang, A.T. Friberg, J. Turunen and T. Setälä, Partial spectral and temporal coherence of plane-wave pulse trains in second-harmonic generation, J. Opt. (2021).
- Hu, G., J.-M. Huusko, J. Long, Y. Sun, Linear differential equations with solutions lying in weighted Fock spaces, Comp. Var. Ell. Eq., Volume 66, 2021.
- Pesonen, H., A. Halder, J.-M. Huusko, A.T. Friberg, T. Setälä and J. Turunen, Spatial coherence effects in secondharmonic generation of scalar light fields, Journal of Optics, Volume 23, Number 3.
- Huusko, J.-M., T. Vesikko, On Becker's univalence criterion, Journal of Mathematical Analysis and Applications, 458 (1), 781-794.
- Huusko, J.-M., Methods for complex ODEs based on localization, integration and operator theory, Publications of the University of Eastern Finland. Dissertations in Forestry and Natural Sciences, 268 (2017).
- Gröhn, J., J-M. Huusko, J. Rättyä, Linear differential equations with slowly growing solutions, Trans. Amer. Math. Soc. 370 (2018), 7201-7227.
- Huusko, J.-M. and M. Martin, Criteria for bounded valence of harmonic mappings, Comput. Methods Funct. Theory (2017).
- Huusko, J.-M., T. Korhonen, A. Reijonen, Linear Differential Equations with Solutions in the Growth Space, Ann. Acad. Sci. Fenn. Math. 41 (2016), no. 1, 399 – 416.
- Huusko, J.-M., Localisation of Linear Differential Equations in the Unit Disc by a Conformal Map, Bull. Aust. Math. Soc. 93 (2016), 260–271.

10. Merits in teaching and pedagogical competence
    - pedagogical studies, teacher of mathematics and physics
    - supervision and evaluation of bachelors' thesis
    - lectures and exercises, 33 ECTS in total: Introduction to Topology, Algebra a, Euclidean geometry, Measure and Integration Theory a, Basic Course in Fourier Analysis, Differential Calculus in Several Variables
    - exercises, 36 ECTS in total: Analysis III, Numerical Analysis, Topology, Complex Analysis a, Introduction to Mathematics and Primitive Analysis
    - creating online courses: Integral calculus (4 ECTS), Basics of Mathematics (5 ECTS, 80%), Linear Algebra a and b (9 ECTS), Basics of Numerical Calculations (3 ECTS), Data and Error Analysis in Natural Sciences (3 ECTS).
    - typesetting of course materials for many courses (e.g. introduction to univalent functions, 120 pages, solutions to exercises in Fourier analysis, 64 pages)
11. Other academic merits
    - Editor-in-chief, Metodologia, a peer-reviewed international journal of methodology, currently rated JUFO1, 2020-
    - Editor-in-chief, UEFDSA newspaper, 2019-
    - Mathematical reviews -reviewer
    - referee for the journal J. Math. Anal. Appl.
    - student tutor (2008, 2009, 2010), speech to new students in mathematics and physics (2015, 2016, 2017)
    - university representation for high school students in Abitour and Abidays
    - working in SciFest science festival (2011, 2012, 2013, 2018)
12. International experience
    - conferences in Joensuu: 2012, 2014, 2015 (poster), 2016, 2018 (poster)
    - mathematics research seminar in Joensuu, 2013-2+17 (5 talks)
    - Normal families, Würzburg, 5/2015 (poster)
    - Indian Statistical Institute, Chennai Centre (informal visit)

- CMFT-2017, Lublin, 7/2017 (talk)
- Analysis Near the Pole, Svalbard, 8/2018 (talk)
- Chinese-Finnish workshop in complex analysis, Beijing, 8/2017 (talk)
- New Developments in Complex Analysis and Function Theory, Heraclion 7/2018 (poster)
- International JSXGraph Conference 5.-7.10.2021 (talk)
- Finnish Mathematical Days 2022 (talk)

Academic recommendations

Risto Korhonen, professor (current supervisor)
Department of Physics and Mathematics, University of Eastern Finland, Joensuu
email. risto.korhonen@uef.fi
tel. +358 50 442 2684
https://uefconnect.uef.fi/en/person/risto.korhonen/

Janne Gröhn, university lecturer (leader of current project)
Department of Physics and Mathematics, University of Eastern Finland, Joensuu
email. janne.grohn@uef.fi
tel. +358 50 439 7914
https://uefconnect.uef.fi/en/person/janne.grohn/