



19 September 2017

Re: **Brynmor Haskell – Habilitation**

Cardiff University
Queen's Buildings
5 The Parade
Cardiff CF24 3AA
Wales UK

Tel Ffon +44(0)29 2087 4458
Fax Ffacs +44(0)29 2087 4056
www.astro.cardiff.ac.uk/

Prifysgol Caerdydd
Adeladau'r Frenhines
5 Y Pared
Caerdydd CF24 3YB
Cymru Y Deymas Gyfunol

To Whom It May Concern:

I hereby declare that in the publication B.Haskell, R.Ciolfi, F.Pannarale, L.Rezzolla, "*On the universality of I-Love-Q relations in magnetized neutron stars*," 2014, MNRAS Letters 438, L71 my contribution was to calculate models of magnetized neutron stars with the code LORENE and assist with the preparation of the manuscript. I estimate the share of my contribution to this publication to be 15%.

If you have any further questions, please do not hesitate to contact me.

Yours sincerely,

Dr. Francesco Pannarale

+44 (0)29 2068 9836

Francesco.Pannarale@astro.cf.ac.uk



Universiteit Leiden

Leiden Observatory

Neils Bohrweg 2
Huygens Laboratory
2333CA Leiden
The Netherlands

T +31 (0)71 527 5737
F +31 (0)71 527 5819
www.strw.leidenuniv.nl

Date 8/12/2017

E-mail: patruno@strw.leidenuniv.nl

DECLARATION:

Dr Alessandro Patruno
Leiden Observatory, Leiden University
[Niels Bohrweg 2, 2333 CA Leiden](#)
[The Netherlands](#)

I declare that in the publication:

B. Haskell & A. Patruno, "Spin Equilibrium with or without Gravitational Wave Emission: The Case of XTE J1814-338 and SAX J1808.4-3658", 2011, The Astrophysical Journal Letters 738, L14

my contribution was to analyse the observational data for XTE J1814-338 and analyse the accretion and propeller torques. I also assisted in the preparation of the manuscript. I estimate the share of my contribution to this publication to be 30%.

I also declare that in the publication

B.Haskell & A. Patruno "Are Gravitational Waves Spinning Down PSR J 1023 +0038?", 2017, Physical Review Letters 119, 1103

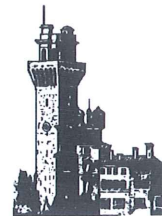
my contribution was to discuss the observational data, analyse the accretion torques, and contribute to the preparation of the manuscript. I estimate the share of my contribution to this publication to be 20%.

Dr. Alessandro Patruno
Leiden Observatory,
Leiden University



ISTITUTO NAZIONALE DI ASTROFISICA
NATIONAL INSTITUTE FOR ASTROPHYSICS

OSSERVATORIO ASTRONOMICO DI PADOVA



Dr Riccardo Ciolfi
INAF, Osservatorio Astronomico di Padova
Padova, Italy

To whom it may concern,

I declare that in the publication:

B. Haskell, R. Ciolfi, F. Pannarale, L. Rezzolla, "On the universality of I-Love-Q relations in magnetized neutron stars", 2014, MNRAS Letters 438, L71

my contribution was to calculate models of magnetized neutron stars with mixed poloidal and toroidal fields, using a code that I developed. I also assisted with the preparation of the manuscript. I estimate the share of my contribution to this publication to be 15%.

Padova 19.09.2017

Riccardo Ciolfi



INAF - Osservatorio Astronomico di Padova

Vicolo dell'Osservatorio, 5 I-35122 Padova, Italy Tel.: 049 829 3411 Fax: 049 8759840

Cod. Fisc. 97220210583 - P.IVA 06895721006

www.oapd.inaf.it

Dr. Andrea Passamonti
INAF Osservatorio Astronomico di Roma,
Via Frascati 44
I-00040 Monteporzio Catone
Roma, Italy

I declare that in the publication:

1) B. Haskell, N. Andersson, A. Passamonti, "r modes and mutual friction in rapidly rotating superfluid neutron stars", 2009, MNRAS 397, 1464

my contribution was to contribute to the preparation of the manuscript and test a particular result of this paper with a different code that I developed to study superfluid neutron stars. For this publication I estimate the share of my contribution to be 5%.

For the publication:

2) A. Passamonti, B. Haskell, N. Andersson, "Oscillations of rapidly rotating superfluid stars", 2009, MNRAS 369, 951

I declare that my contribution was to build the numerical code, try different system of equations to get stable simulations, study the results, prepare the manuscript. I estimate the share of my contribution for this publication to be 80%.

Rome 02/09/2017

Dr. Andrea Passamonti



INSTITUT FÜR THEORETISCHE PHYSIK (ITP)
INSTITUTE FOR THEORETICAL PHYSICS (ITP)

Max-von-Laue Str. 1, D-60348 Frankfurt am Main, Germany



Prof. Dr. Luciano Rezzolla
Director, Institute for Theoretical Physics
Chair of Theoretical Astrophysics, Institute for Theoretical Physics
Senior Fellow, Frankfurt Institute for Advanced Studies,
Max-von-Laue Str. 1, D-60348
Frankfurt am Main, Germany

Brynmor Haskell
Centrum Astronomiczne im. Mikołaja Kopernika PAN
ul. Bartycka 18
00-716 Warszawa
Poland

Frankfurt, September 19, 2017

To whom it may concern

I hereby declare that in the publication:

B. Haskell, R. Ciolfi, F. Pannarale, L. Rezzolla, "*On the universality of I-Love-Q relations in magnetized neutron stars*", 2014, MNRAS Letters 438, L71

my contribution was to provide the theoretical motivation for the project, guide the discussion of the results and assist with writing the manuscript. I estimate the share of my contribution to this publication to be 10%.

Sincerely,

Departamento de Física,
Universidad de Murcia,
Campus Espinardo (Edificio CIOyN)
E-30100 Murcia, Spain

UNIVERSIDAD DE
MURCIA



Subject:
Authorship declaration

Dr. Kostas Glampedakis

Tel : +34-868-888669

fax: +34-868-88

Email: kostas@um.es

07/09/2017

To whom it may concern:

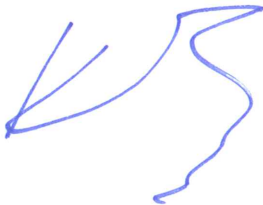
I declare that in the publication:

B.Haskell, K.Glampedakis, N.Andersson, "A new mechanism for saturating unstable r modes in neutron stars", 2014, MNRAS 441, 1662

my contribution was to assist in the theoretical analysis of the results and discuss the astrophysical implications. I also assisted with the preparation of the manuscript.

I estimate the share of my contribution to this publication to be 25%.

Kostas Glampedakis

A handwritten signature in blue ink, consisting of stylized initials and a surname.

DECLARATION 1/9/17:

I declare that in the publication:

B. Haskell, N. Andersson, A. Passamonti, "r modes and mutual friction in rapidly rotating superfluid neutron stars", 2009, MNRAS 397, 1464

my contribution was to provide a theoretical motivation for the project, as well as to guide the discussion and analysis of the results, and contribute to the preparation of the manuscript. I estimate the share of my contribution to this publication to be 15%.

I also declare that in the publication:

A. Passamonti, B. Haskell, N. Andersson, "Oscillations of rapidly rotating superfluid stars", 2009, MNRAS 369, 951

my contribution was to provide a theoretical motivation for the project and to assist in the development of the code, and preparation of the manuscript. I estimate the share of my contribution to this publication to be 5%.

I also declare that in the publication:

B. Haskell, N. Andersson, "Superfluid hyperon bulk viscosity and the r-mode instability of rotating neutron stars", 2010, MNRAS 408, 1897

my contribution was to assist in the discussion and analysis of the results and with the preparation of the manuscript. I estimate the share of my contribution to this publication to be 20%.

I also declare that in the publication:

B.Haskell, K.Glampedakis, N.Andersson, "A new mechanism for saturating unstable r modes in neutron stars", 2014, MNRAS 441, 1662

my contribution was to provide the theoretical framework, assist in the discussion and analysis of the results and to contribute to the preparation of the manuscript. I estimate the share of my contribution to this publication to be 10%



N Andersson



Anton Pannekoek Institute for Astronomy

Dr. Brynmor Haskell
Centrum Astronomiczne im. Mikolaja
Kopernika PAN
ul Bartycka 18
00-728 Warszawa
Poland

Science Park 904
1098 XH Amsterdam
P.O. box 94249
1090 GE Amsterdam
The Netherlands

T 020 525 7491
F 020 525 7484
www.astro.uva.nl

Date
30 August 2017

Contact person
N. Degenaar

Subject
Declaration of author contribution

Your reference

Telephone
+31-20-5253994

Our reference

E-mail
n.d.degenaar@uva.nl

To whom it may concern,

I declare that in the publication:

B.Haskell, N.Degenaar, W.C.G.Ho, " Constraining the physics of the r-mode instability in neutron stars with X-ray and ultraviolet observations", 2012, MNRAS 424, 93

my contribution was to provide and analyse observational data to determine the surface temperature of neutron stars in Low Mass X-ray Binaries. I also assisted with the preparation of the manuscript. I estimate the share of my contribution to this publication to be 15%.

With best regards,

Nathalie Degenaar

Astronomical Institute "Anton Pannekoek"
University of Amsterdam
Postbus 94249
1090 GE Amsterdam, Netherlands

University of Southampton

Wynn Ho
Mathematical Sciences and Physics & Astronomy
University of Southampton
Southampton, SO17 1BJ, United Kingdom

Tel: +44 2380 593685
Fax: +44 2380 595147
wynn.ho@soton.ac.uk

3 September 2017

Dear Sir or Madam:

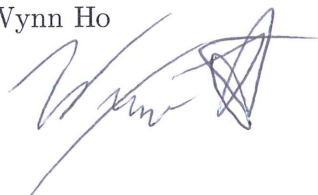
I declare that in the publication:

B. Haskell, N. Degenaar, W.C.G. Ho, "Constraining the physics of the r-mode instability in neutron stars with X-ray and ultraviolet observations", 2012, *Mon. Not. R. Astron. Soc.* 424, 93–103

my contribution was to estimate the theoretical internal temperature of neutron stars with unstable r-modes, using a code developed by myself and my collaborators, and compare the results with observations. I also assisted with the preparation of the manuscript. I estimate the share of my contribution to this publication to be 15%.

Please contact me (email: wynn.ho@soton.ac.uk; phone: +44-2380-593685) if I can be of further assistance. Thank you for your attention.

Wynn Ho

A handwritten signature in blue ink, appearing to be 'Wynn Ho', followed by a stylized, abstract scribble or flourish.