

Secondment Agreement

This agreement is made between:

Forschungsverbund Berlin e.V. for its Weierstraß-Institut für Angewandte Analysis und Stochastik (hereinafter indicated as *WIAS* or *Seconding Entity*) established in Mohrenstr. 39, 10117 Berlin, Germany

and

Math.Tec GmbH, hereinafter indicated as *Math.Tec* or *Host Entity* established Schönbrunner Straße 3/6, 1040 Wien, Austria.

Definitions:

Early stage researcher (ESR): is a researcher in the first four years (full-time equivalent) of their research activity, including the period of research training.

Secondment: means a period during which an ESR is hosted by an entity (Host Entity) other than his/her employing institution (Seconding Entity).

Secondment Plan: The detailed plan of activities to be carried by the ESR in the receiving institution. Such plan is optional but recommended and can be added to this agreement or as a part of the Career Development Plan (Attachment 5 to the Consortium Agreement)

The Seconding Entity agrees to the placement of Mr Hong Nguyen (the '*ESR*') with *Math.Tec* as a seconded *ESR* within the framework of the ROMSOC Marie Skłodowska-Curie Action: Innovative Training Network Grant Agreement 765374, *Reduced Order Modelling, Simulation and Optimization of Coupled systems*, ROMSOC, for 100% full time equivalent on the following conditions:

1. Effective Date: December 7, 2020
2. Period of agreement: August 31, 2021

3. Services

During the period of the secondment the *ESR* will perform the tasks as outlined in the attached Secondment Plan. The tasks will be carried out at the Host Entity in *Vienna, Austria* and the *ESR* will reside in that country.

The Host Entity will provide the facilities necessary for the *ESR* to perform the tasks as outlined in the attached Secondment Plan for the duration of this agreement.

4. Fees

The Host Entity will not require the payment of any fees by the *ESR*.

5. Finance arrangements

The Host Entity shall cover the costs associated with the general use of premises, infrastructure, equipment, products and consumables during the period of the agreement. In no event shall the Host Entity be responsible for the payment or waiver of any cost associated with the accommodation, board or travel expenses of the *ESR*. The *ESR* will not receive any other incomes than those received from the *WIAS* for the activities carried out in the framework of this agreement.

6. Terms and Conditions

The *ESR* shall at all times remain subject to the terms and conditions under his/her contract with the Seconding Entity. The *ESR* will be maintained on the payroll of the Seconding Entity and the Seconding Entity shall retain all rights and responsibilities in relation to its appointment of the *ESR*. Any current pension arrangements of the *ESR* will remain unchanged.

The Seconding Entity and the Host Entity will endeavour to amicably settle disputes arising out of or in connection with this Agreement. Any disputes that cannot be amicably resolved shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

The secondment is subject to the *ESR* being and remaining eligible to be appointed in the seconding country and is subject to the *ESR* obtaining a valid visa entitling them to work in the Host Entity country and compliance with the Host Entity country's immigration rules.

While the Host Entity is supporting this placement, the *ESR* shall undertake to comply with the working practices of the Host Entity and on this behalf take their instructions.

The *ESR* must devote him/herself to the tasks as outlined in the attached Secondment Plan, unless there are duly justified reasons connected to personal or family circumstances.

The Host Entity will ensure that the *ESR* enjoys the same standards of safety and occupational health as those of its employees holding a similar position, and will provide health, safety and accident insurance coverage or equivalent for the *ESR* as required by law.

The Seconding Entity shall not be liable to the Host Entity in respect of any loss or damage suffered by the Partner organisation arising out of or relating to the Services provided under this Agreement or in respect of any failure to provide the Services or arising out of or relating to the termination of the *ESR*'s appointment at the Host Entity prior to the expiry date.

The Host Entity shall indemnify the Seconding Entity against all costs, claims, liabilities and expenses of any nature (including, without limitation, all compensation for dismissal under statute or common law and all costs and expenses incurred by the Seconding Entity in settling, contesting or dealing for the same) resulting from any breach by the Host Entity of its obligations under this Agreement.

The Seconding Entity shall not be liable in respect of any loss or damage suffered by any party arising out of or relating to Host Entity's failure to fully meet its responsibilities under the relevant national health and safety laws, regulations or practice. So far as is reasonably practicable, the Host Entity will ensure that premises, plant, equipment and working environments are safe and without risk to the health and safety of the *ESR* and other persons who may also be affected. The Seconding Entity shall furthermore not be liable for any loss or damage suffered by any party arising out of or relating to the *ESR*'s failure to fully meet his/her responsibilities under the relevant national laws and/or regulations applying to the Seconding Entity.

7. Intellectual Property

Any results, including information, whether or not they can be protected, arising out of the Services provided through this agreement shall be the property of the Seconding Entity.

Nothing in this agreement shall be so construed or interpreted in any way as to confer ownership or any access rights on the Host Entity with regards to the results and information generated under the ROMSOC Project or the information, copyrights, data, documents, materials or intellectual property rights owned by the other participants in the ROMSOC Project.

The *ESR* has the same rights and will comply with the same obligations as the *Seconding Entity* with regards to the ROMSOC Grant Agreement Article 36.

In the case that Host Entity wishes to protect the confidentiality of any data, documents or other material made available to the *ESR* within the context of this agreement, the Host Entity will enter into a separate Non Disclosure Agreement (NDA) with the *ESR*. In the case that confidential information is intended to form part of the thesis, dissertation, publication or poster of the *ESR*, this NDA will include specific provisions to ensure that the confidential information remains protected.

In the case that the *ESR* enjoys access rights to results and information generated within the ROMSOC Project or information, copyrights, data, documents, materials or IPR owned by the other Project participants, the *ESR* will ensure that the rights of the respective owner(s) are upheld in accordance with the ROMSOC Grant Agreement and the ROMSOC Consortium Agreement. For the avoidance of doubt, in the absence of a written agreement between the Host Entity and the respective owner(s) granting access rights, the *ESR* will treat all such information, results, copyrights, data, documents, materials or IPR as 'confidential information' in accordance with the terms of the ROMSOC Grant Agreement Article 36.

The *ESR* shall inform the *Seconding Entity* and the Host Entity as soon as possible of circumstances likely to have an effect on the Intellectual Property provisions of this agreement.

The *ESR* shall inform the *Seconding Entity* as soon as possible of circumstances likely to have an effect on the Intellectual Property provisions of the ROMSOC Grant Agreement or the ROMSOC Consortium Agreement.

8. Additional Remarks

Nothing in this agreement shall be construed in any way as to diminish or alter the rights of the European Commission as set out in the ROMSOC Grant Agreement.

Nothing in this agreement shall be construed in any way as to alter any other agreements or the associated terms and conditions of the appointment held by the *ESR* at the *Seconding Entity*.

The period of this agreement remains subject to review at any time by either the *Seconding Entity* or the Host Entity (see 'Termination' below).

Any proposed changes to the terms of this agreement shall be discussed and agreed in writing by the responsible authority of the *Seconding Entity* and Host Entity prior to initiation or amendment.

9. Termination

This Agreement shall be terminated if the *ESR's* appointment by the *Seconding Entity* is terminated for whatever reason.

Either the *Seconding Entity* or the Host Entity may terminate this agreement before the end of the period with two week's notice in writing to the other party.

At the end of the Agreement the scientist in charge will resume the full duties of the post of the ESR for the Research Group *Nonsmooth Variational Problems and Operator Equations* at the Seconding Entity.

10. Signatures

This agreement shall be executed in three (3) counterparts, one of which shall be kept by the Seconding Entity and one by the Host Entity, the third being kept by the ESR.

Signed.....

Prof. Dr. Michael Hintermüller

Director WIAS



Weierstraß-Institut für Angewandte Analysis und Stochastik
Leibniz-Institut im Forschungsverbund Berlin e. V.,
Mohrenstr. 39 · 10117 Berlin

Date: 9.10.2020 Stamp:

Signed.....

Dr. Manuela Urban

Managing Director Forschungsverbund Berlin e.V.

gez. VK

Date: 23.10.2020 Stamp:

FORSCHUNGSVERBUND BERLIN E.V.
Gemeinsame Verwaltung
Rudower Chaussee 17 · 12489 Berlin Adlershof

For and on behalf of Forschungsverbund Berlin e.V. for its Weierstraß-Institut für Angewandte Analysis und Stochastik (WIAS), Mohrenstr. 39, 10117 Berlin, Germany

Signed.....

Dr. Karl Knall

Geschäftsführung

Date: 17.01.20 Stamp:

For and on behalf of the Math.Tec GmbH, Schönbrunner Straße 3/6, 1040 Wien, Austria

Read and agreed:

Signed.....

Hong Nguyen

ESR

Date: 8.10.2020

Secondment Plan – Description of activities carried out by the ESR in the Host Entity:

- Preparation of reports for deliverable D5.3 (benchmark cases) and deliverable D5.4 (reports, data and web presentation of model hierarchies for the use in training courses).
- Further work on shape optimization in general and in particular for fluids relying on established literature as Delfour/Zolesio, Shapes and geometries. Metrics, analysis, differential calculus, and optimization) and Mohammadi/Pironneau (Applied shape optimization for fluids) as well as recent contributions in the field.
- Deeper understanding of numerical solvers for fluid dynamical problems: Finite volume methods, methods for non-stationary equations, mesh generation.
- Detailed derivation of the adjoint equation and the shape gradient for the Navier-Stokes equation, study differences between a discrete adjoint approach and a continuous adjoint approach.
- Deeper understanding of turbulence modeling for high Reynolds numbers, in particular the Smagorinsky and k/ϵ turbulence model taking into account aspects from engineering and mathematical sides.

- Maintaining and further development of the OpenFOAM/STARCCM+ package for solving these problems.
- Implementing of the continuous adjoint and a suitable turbulence model without using commercial tools as STAR-CCM+.
- Testing and development of relevant examples; possibly getting in touch with Martin Kanitsar (former developer of the code) to discuss open problems in the software.
- Participation in training activities and meetings provided by ROMSOC.