CIMNE

Master of Science in Computational Mechanics

ACCEPTANCE OF INTERNSHIP WORK PLAN

Name of the student	PRADEEP KUMAR BAL

Company/Institution/ Department	IBEC, Barcelona
Name of the external supervisor	Professor Marino Arroyo
Start and end dates	11/06/2018-18/09/2018
Total number of hours	280

Topic: Modeling actin flow mediated cell polarity dynamics

Main tasks:

1. Formulate the governing equations for advection-diffusion of polarity markers coupled with the flow of active viscoelastic actomyosin cortex based on Onsager's variational principle.
2. Develop, implement, and validate the discretized formulation in the computational framework of the in-house High Performance Library of Finite Elements (HiPerLiFE).
3. Perform tests using the model to produce preliminary results on the coupling between retrograde cortical flow and cell polarity.

Additional remarks:

Any change in the information contained in the internship agreement must be authorized by the local master coordinator.

Date: 11/06/2018

Student's signature

Pradeep Ku. Bal

External
supervisor'signature

Josep Sarrate