

ENHAnCE

Featuring Engineering

Report on Personal Career Development Plans (PCDP)

Project Acronym: ENHAnCE	
Project full title: European training Network in intelligent prognostics and Health mAnagement in Composite structurEs	
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 859957.

1 Introduction

The Career Development Plan of every Early Stage Researcher (ESR) is part of the action implementation in line with the European Charter for Researchers. According to this, a specific career development strategy for researchers should be provided at all stages of their career. Supervisors should be involved in providing support and guidance for the personal and professional development of researchers, thus motivating them and contributing to reducing any insecurity in their professional future. The value of geographical, intersectoral, inter/trans-disciplinary and virtual mobility, as well as mobility between the public and private sector, should be highlighted as an important means of enhancing scientific knowledge and professional development at any stage of a researcher's career.

The Personal Career Development Plan (PCPD) aims to achieve a realistic and well-defined set of objectives in terms of career advancement to develop and significantly widen the competences of the researcher, particularly in terms of multi/interdisciplinary expertise, inter-sectoral experience and transferable skills.

2 PCDP at ENHAnCE project

Mentoring bodies: the Tutoring, Training and Research Committees

Within the ENHAnCE project, the training program will ensure that the ESRs will develop the scientific and technical background and support to successfully carry out their research projects and complete their PhD thesis. The program will also target a personal career development through specific social and economic training modules whose purpose is to prepare the ESRs for high-level positions in the public or private sector, academy and industry. All ENHAnCE fellows will be exposed to academic and industrial environments while receiving training of an intensely international and multidisciplinary background. A Tutoring and Training Committee (TTC) and Research Committee (RC) will continuously monitor the progress of the ESRs' training and research, respectively. ENHAnCE will develop the new generation of European iPHM researchers, by reducing the fragmentation and supporting cross-pollination between the involved research disciplines.

The ESRs will celebrate periodical meetings (weekly) with their main supervisor and co-supervisors not only for technical advice and monitor the progress of the project, but also for mentoring and exploring career prospects. Signed records of these supervision meetings will be kept and shared with the Training and Tutoring Committee (TTC) through the secured webspace of ENHAnCE.

Evaluations

The PCDP of each ESR will be evaluated twice a year by at least three people from the TTC: (1) the supervisor, (2) co-supervisor/s, and (3) the TTC Chair (who acts as training mentor) in order to:

- Ensure a sound academic/industrial feedback provision to the ESRs;
- Maintain high research standards for the award of a PhD to the ESRs;



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- Identify any conflicts between academic assumptions and industrial applicability;
- Identify project risks (including those affecting fellow's personal performance).
- Should any risks, complications or conflicts might appear, the TTC chair will provide support delivering optimal solutions in terms of training and research prospective for the ESR.

Besides, a local advisor has been identified for those partner organisations hosting ESRs during secondments. The progress of the fellow during these periods will be also monitored by the supervisors of the host institution through video conferencing at least once a month. To ensure a harmonic amalgamation, the supervisors from the hosting and secondment institutions will hold regular (monthly) discussions themselves over the phone, to meet additionally during the Training Weeks (TWs).

Research Program

The research program is structured aiming at maximizing the integration among the ESR individual projects and the beneficiaries. This will allow for intense multidisciplinary interactions that will work as an accelerator of the fellows' subsequent careers. For the fellows that will pursue an academic career, the acquired knowledge will not only allow them to exploit the synergies with complementary methods but also to steer their research in a direction that addresses contemporary issues in the industry and the society at large.

In addition to this, the fellows will also receive training on transferrable skills, critical problem solving, advanced communication skills as well as exposure to a pioneering industrial environment. This combination of formal training, scientific work and industrial engagement will provide an unrivalled experience that will equip the researchers with the knowledge and skills required to pursue a career in the academia as well as in the European technological sector.

The development of knowledge and skills will be monitored for each fellow through continuous assessment and updating of her/his Personal Career Development Plan (PCDP). At the end of their fellowships, the benefits induced by the programme to the subsequent career evolution of the ESRs will be monitored through a follow-up survey at 12 months and 24 months through a Fellow Feedback Questionnaire.

The WP 6 (ESR Training) deals with the training aspects of the network, which includes delivering and coordination of high-quality training (individually tailored for each ESR), supervising the training aspects during the ESRs secondments and monitoring the Personal Career Development Plans (PCDP), among other actions.

Reports on PCDP

Periodic and final reports are contractual deliverables for the REA to monitor the implementation of the project. When preparing these documents, the Supervisory Board (SB) will oversee the dissemination of best practice between the network participants and status reports from all beneficiaries. It will support all partners to:



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- Update well-structured career development plans for each researcher;
- Monitor research results obtained and deviations according to the milestones;
- Update the dissemination plan for workshop, conference talks and presentations;
- Provide the researchers with a certain independence in carrying out their research projects;
- Submit the scientific highlights and achievements to open access repositories and journals, according to the recommendations of the EC on open access material;
- Strengthen the intersectoral and multidisciplinary collaboration within the network.

2 Personal Career Development Plans for each ESR

Each ESR has produced a PCDP at the start of their research fellowship. It is composed of an individual training plan and a plan for the research objectives, with details about:

- The targeted developments of principal scientific expertise, multi-disciplinary capabilities and complementary skills;
- The required activities (training-through-research, workshops, courses, secondments, special topics, etc.) to achieve the desired expertise;
- The career plans after the end of the ITN. The section Research objectives can describe the scientific goals, how they relate to the project/theme(s) in which he/she participates, and a list of milestones.

The ESRs have written their PCPD in agreement with their main supervisor and shared this document with the consortium to ensure the coherence within the network and with the training needs of both industry and academia. The ESRs will revise their PCDP once a year based on the progress made, the changing needs of the research and the suggestions from their supervisors and mentoring bodies.

The ESR positions emitting their PCDP along with their supervisor and secondment locations are included in the following table:

Table 1. ESR positions of the project ENHAnCE

ESR NAME		HOST INSTITUTION		SUPERVISORS	PLANNED SECONDMENT	
ESR 1	Shankar Galiana	German Aerospace Center (DLR)	Germany	Peter Wierach (DLR), Dr. Dimitrios Zarouchas (TUDELFT) and Dr. Daniel Smidth (DLR)	Fidamc (FID)	Spain
ESR 2	Aravind Balaji	Cenaero (CEN)	Belgium	Ir. David Dumas (CEN), Dr. Claudio Sbarufatti (POLIMI), Dr. Ingrid Lepot (CEN)	Politecnico di Milano (POLIMI)	Italy
ESR 3	Amond Sarr Allouko	List CEA Tech (CEA)	France	Prof. Alain Lhemery (CEA), Dr. Maria Rodriguez (FID), Dr. Vahan Baronian (CEA)	University of Nottingham (UNOTT)	UK



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ESR NAME		HOST INSTITUTION		SUPERVISORS	PLANNED SECONDMENT	
ESR 4	Tasdeeq Sofi	Fidamc (FID)	Spain	Dr. María Rodríguez (FID), Prof. Peter Wierach (DLR), Dr. Diego Sáez del Castillo (FID)	List CEA Tech (CEA)	France
ESR 5	Morteza Moradi	Delft University of Technology (TUDELFT)	Netherlands	Dr. Dimitrios Zarouchas (TUDELFT), Prof. Francisco Herrera (UGR), Prof. Rinze Benedictus (TUDELFT)	German Aerospace Center (DLR)	Germany
ESR 6	Tianzi-Li	Politecnico di Milano (POLIMI)	Italy	Dr. Claudio Sbarufatti (POLIMI), Ir. David Dumas (CEN), Dr. Francesco Cadini (POLIMI)	Cenaero (CEN)	Belgium
ESR 7	Javier Contreras Lopez	University of Strathclyde (STRATH)	Glasgow, UK	Prof. Athanasios Kolios (STRATH), Dr. Manuel Chiachío (UGR), Dr. Juan Chiachío (STRATH)	Universidad de Granada (UGR)	Spain
ESR 8	Wen Wu	University of Nottingham (UNOTT)	Nottingham, UK	Dr. Dimitrios Chronopoulos (UNOTT), Prof. Alain Lhemery (CEA), Prof. John Andrews (UNOTT)	Universidad de Granada (UGR)	Spain
ESR 9	Juan Fernández	Universidad de Granada (UGR)	Spain	Francisco Herrera (UGR), Prof. Athanasios Kolios (STRATH), Dr. Juan Chiachío (STRATH)	Delft University of Technology (TUDELFT)	Netherlands
ESR 10	Ali Saleh	Universidad de Granada (UGR)	Spain	Dr. Manuel Chiachío (UGR), Dr. Dimitrios Chronopoulos (UNOTT), Prof. John Andrews (UNOTT)	University of Strathclyde (STRATH)	UK



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Appendix: Personal Career Developments

Note: Signatures of the PCDP can be found in some of them, although at this stage they are not needed and only needed after the first ESR internal review assessment period.



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Appendix: Personal Career Development Plans



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ESR1: Shankar Galiana

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Shankar Galiana	Reviewer:	Prof. Peter Wierach
Job Title:	ESR1 ENHAnCE Fellow	School/Department/Institute/Company:	DLR, Institute of Composite Structures and Adaptive Systems
Job Level:	PhD Student	Review Period and Date of Review:	Period: 01/12/2020 – 17/12/2020 Date: 11 December 2020

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the "Comments and Outcome" section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
Literature study of the state of the art of SHM sensor and networks	In progress, the literature study is ongoing
Definition of technological approaches (concept), requirements and work plan	In progress, definition on the technological approaches, requirements and work plan has started.
Manufacturing trials and performance analysis, mechanical tests of thermoplastic based SHM arrays	Due to Shankar Galiana has started his work at 12.2020 it was not possible to start the work, yet.
Integration of SHM arrays into a representative structure, Development of an integration process, Manufacturing trials	
Mechanical tests and investigation of the interface layers of the SHM arrays	

SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
Working within an international Team	No comments since the project just start. Future reviews will come.
Presentation of technical approaches incl. discussion	No comments since the project just start. Future reviews will come.
Definition of working topic and development of hypotheses/approaches and methods/technologies	No comments since the project just start. Future reviews will come.
Development of risks and mitigations regarding the working topic and its approaches	No comments since the project just start. Future reviews will come.

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

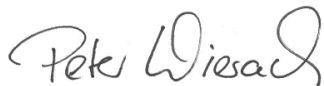
Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	Visit FIDAMC Meet other DLR departments	Visit Airbus Meet other ENHAnCE partners
Structured formal training	Dr. Schmidt SHM on composites training Prof. Peter Wierach piezo sensors training	ENHAnCE trainings Airframes assembly procedures
Informal self-directed	Piezo sensors technology Lamb wave SHM Thermoplastic composites	Integration for SHM systems on composite structures Testing performance and robustness for SHM systems on composite structures
Date for review	06/2021	12/2021


Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
Due to the recently started activity, no meaningful assessment is possible. The candidate has started his work and is working purposefully and with great commitment into the research topic.	
Reviewer's signature	
Final rating	n.a.
Date	17.12.2020

Role-holder's comments	
No comments since the project just start. Future reviews will come.	
Role-holder's signature	
Role-holder's self-rating	N/A
Date	17/12/2020

Role-holder's details

Role-holder:	Shankar Galiana	Reviewer:	Prof. Peter Wierach
Job Title:	ESR1 ENHAnCE Fellow	School/Department/Institute/Company:	DLR, Institute of Composite Structures and Adaptive Systems
Job Level:	PhD Student	Review Period and Date of Review:	Period: 01/01/2021 – 31/12/2021 Date: 11 December 2020

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Proposed Objectives	Comments from Reviewer
Initial state of the Art	In progress, initial definition of the state of the art and definition on outlook targets
Thesis plan	In progress, definition on thesis steps and scope, and its schedule
Thermoplastic embedment of DuraAct	In progress, analysis on integration simple piezo sensors in thermoplastic composite structures
Thermoplastic embedment of DuraAct arrays	In progress, analysis on integration of piezo sensors arrays in thermoplastic composite structures
Performance tests for embedded DuraAct arrays	In progress, analysis of the performance of the different strategies for the piezo sensor arrays embedment



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ESR2: Aravind Bajali

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Mr. Aravind Balaji	Reviewer:	Mr. Ir. David Dumas
Job Title:	PhD Candidate, Research Engineer	School/Department/Institute/Company:	Cenaero, A.S.B.L.
Job Level:	Early-Stage Researcher	Review Period and Date of Review:	2021

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the "Comments and Outcome" section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
Sufficient level of understanding and good level of use of Morfeo/Crack, C++ programming in Cenaero environment & following of software/project quality procedures	Support from CMSD team, documentation and use cases for damage mechanics (To start in 2021)
Developments of orthotropic material behavior & criteria for Thick Level-Set methods	Support from O. Pierard & D. Dumas at Cenaero (To start in 2021)
Use of composite process simulation for initial conditions in Composites processing	Support from D. Dumas & A. Parmentier at Cenaero (To start in 2021)
Bibliographical review of composites failure prognosis & damage mechanics	(To start as a soon as possible)
Regular interactions with project ESRs to identify inputs/outputs & follow ups for ESR	(To start in 2021)

SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
Understanding the field of research and extend to which the contribution of the ESR will be critical	Clear view of what is at stake internally (Cenaero) and externally (ENHANCe project & partners, research field) to find purpose in contribution of ESR
Communicating internally with colleagues & POLIMI on objectives and information required to get PhD work started	Use different means of communication and follow up to ensure that ESR is on track
Develop a methodical approach to work planning, updating, and reviewing milestones	Support for communicating and measuring progress
Work on a first journal paper for conference and/or journal with first results	Interact with colleagues' contributions to ensure that the level is sufficient for publication

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	Get to know more about SHM & composite process monitoring Get to know about different tools and laboratory equipment used at Cenaero for numerical and experimental analysis Get to know about the ENHANCe project in depth and attend the project seminars in the future	Establish the schedule to conduct research for 3 months at the Institute in POLIMI
Structured formal training	Writing articles, damage mechanics, numerical methods in general	Mechanical engineering expertise applied to complex & orthotropic materials
Informal self-directed	Programming, Experimentation	Project management, quality, project setup, learning French language
Date for review	End 2021	End 2023



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ESR3: Amond Sarr Allouko

Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	AMOND ALLOUKO	Reviewer:	ALAIN LHEMERY
Job Title:	Doctoral candidate	School/Department/Institute/Company:	CEA LIST/ Université Paris-Saclay
Job Level:	Junior	Review Period and Date of Review:	2020-2021 17/12/2020

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the "Comments and Outcome" section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
State of art in SHM using waveguide with elastic modes.	For Amond Allouko's knowledge (well documented in lab) – in progress
Understanding of the pencil method. Use of the Matlab script for the pencil method.	Pencil model: recently developed at CEA, one of the basis of the subject. – completed Matlab implementation of the pencil model at CEA: the code is to be used and further developed in the framework of the PhD work. – in progress
Scalar 2D acoustic implementation of incident plane wave modelling with PM coupled with the HSM method in order to perform the understanding of the hybridization and all the drawbacks to take in account in the final 3D elastic case.	Way of testing a simple way the strategy of hybridization to be developed for the elastic case to be treated in the PhD – in progress
Understanding and optimization of the HSM 3D elastic case.	HSM is the other basis for the hybridization (PhD main goal). First implementation in C++ needs huge optimization, to be adapted for hybridization – starting
Report of the entire annual Job with figures and discussion.	Reporting is essential – frequent informal reporting but annual report to do

An article of the scalar 2D improvement of the HSM (to be discussed).	Paper to be prepared: testing the strategy of hybridization in the simple case and validating it shall constitute a good first paper – to do.
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SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
Scientific speech during meeting.	Not a problem but improvements are always welcome
More self-confidence during presentation	I'm confident this will improve very fast and easily
High level scientific report	Specifically, a formation for learning how to write good scientific papers is to be followed

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	<ul style="list-style-type: none">- Writing a scientific article.- Advanced programming training.	<ul style="list-style-type: none">- Scientific presentation in English.- Startup opportunities for PhD.
Structured formal training	<ul style="list-style-type: none">- Methodology for writing a scientific article.- Advanced Matlab & C++ training- Training for toeic test.	<ul style="list-style-type: none">- ENHAnCE Monthly meeting.- Conferences.- Entrepreneurial opportunity for a PhD student
Informal self-directed	<ul style="list-style-type: none">- Machine learning (Moocs)- Deep learning (Moocs)	<ul style="list-style-type: none">- Personal development training- Increase visibility through the social network.
Date for review	November 2021	November 2022

Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
Reviewer's signature	
Final rating	
Date	

Role-holder's comments	
Role-holder's signature	
Role-holder's self-rating	
Date	

Role-holder's details

Role-holder:		Reviewer:	
Job Title:		School/Department/Institute/Company:	
Job Level:		Review Period and Date of Review:	

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Proposed Objectives	Comments from Reviewer



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ESR4: Tasdeeq Sofi

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Tasdeeq Sofi	Reviewer:	Dr. María Rodríguez Dr. Diego Saenz Del Castillo
Job Title:	ENHAnCE early stage researcher	School/Department/Institute/Company:	FIDAMC
Job Level:	Researcher	Review Period and Date of Review:	Dec. 2020- June 2021 18-12-2020

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the "Comments and Outcome" section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
N/A	
N/A	
N/A	

SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
Communication with co-supervisor and other ESRs, especially with ESR1, as a key aspect of his work.	Communication within the network is essential. Tasdeeq's job is directly related to ESR1, so they should keep continuous communication.
Writing technical documents	Even though the writing skills of Tasdeeq have been proved to the very good so far, they are essential for the PhD, scientific papers and further career development.

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	Laboratory training Thermoplastic manufacturing technology Signal acquisition and processing	Development of skills for handling laboratories or workshops and expertise in composite manufacturing technology
Structured formal training	It will be defined following the requirements of the PhD program	
Informal self-directed	Project management Time management	To be able to handle a project and deliver the require results in time
Date for review	01-06-2021	


Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
Tasdeeq has just joined FIDAMC (November 2020). Up to know, he is being very proactive in the work plan definition and showing a very good commitment level with the project. The state of the art is progressing according to the schedule and the contact with ESR1 and co-supervisor has been established.	
Reviewer's signature	
Final rating	Positive
Date	18-12-2020

Role-holder's comments	
<p>So far it has been a very nice experience to work with my supervisors (Maria and Diego) here at FIDAMC. The goals and objectives that were set and that I planned to achieve during the starting months are in progress and going in right direction.</p> <p>Until this time I am satisfied with myself and I hope to keep it up and perform even better in the coming period.</p>	
Role-holder's signature	
Role-holder's self-rating	
Date	18-12-2020

Role-holder's details

Role-holder:	Tasdeeq Sofi	Reviewer:	Dr. María Rodríguez Dr. Diego Saenz Del Castillo
Job Title:	ENHAnCE Early stage researcher	School/Department/Institute/Company:	FIDAMC
Job Level:	Researcher	Review Period and Date of Review:	Dec. 2020-June 2021 18-12-2020

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Proposed Objectives	Comments from Reviewer
Review of the state of the art [Q1 2021] Contribute to deliverable D2.1 [M9, delayed] and maybe convert into a review paper with ESR1 and ESR2 [No timeline]	
Detailed description of the thesis and project work plan [Q1 2021]	
Develop experimental plan for testing the integration and survivability of the DuraAct sensors [Q1 2021] First trails with Thermoplastic material using vacuum bagging and oven curing [Q2 2021]	



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 859957.

ESR5: Morteza Moradi

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Morteza Moradi	Reviewer:	Dr. Dimitrios Zarouchas
Job Title:	Prognostic signatures based on data-fusion techniques from Lamb-wave and acoustic emission in real-world FRP laminates subjected to random fatigue damage	School/Department/Institute/Company:	Delft University of Technology (TU Delft), Faculty of Aerospace Engineering, Structural Integrity & Composites (SI&C)
Job Level:	PhD program	Review Period and Date of Review:	4 months (September 1 to) and December 15, 2020

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc. as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the “Comments and Outcome” section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
Experimental activities	The aim in the first steps has been to become familiar with the inspection equipment (such as Acoustic Emission (AE), Digital Image correlation (DIC), Optical fibers, Thermography, etc.), loading machines like fatigue, and generally the environment and circumstances in where samples are probably tested. This part is well done in order to be familiarized with the aforementioned items. In the next steps regarding this objective, working with different systems and equipment in detail and practical will be considered.
Conceptual overview	Understanding the road map of the project to determine the steps that are necessary to consider and take in the future in order to achieve the final target in the best manner. This objective has been almost obtained.
Literate Review	Start to review the important subjects related to the required steps of the project, including signal processing to de-noise the data, feature extraction, feature fusion, feature selection, and finally applying criteria in order to distinguish and verify the prognostic parameters. The first actions to start have been done, and the review should be continued until achieving the last goal.
Go/No-Go meeting	One of the most significant activities for the role-holder is the planning for the Go/No-Go meeting to determine the level of progress of the PhD candidate by the supervisors and the committee. He has nine months from the beginning date (1 st of September, 2020) to prepare for this meeting, in which he has to provide and prove the motivation of the project, to present the relevant literature review, and report his achievements to that date. Thus, most of the role-holder's efforts have been and will be in the direction towards this objective in order to demonstrate his quality and competence for the defined project.

SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
Team working	This skill is not only required for this project, but also for any other project. Therefore, in all steps, the behavior of teamwork and also its enhancement should be considered. So far this objective has been well followed by role-holders.
Communications	Good communication can help to work in a team and even be convenient in the workspace. So far the role-holder has communicated correctly with his peers.
Training in Lab	Work in the laboratory practically has its own problems and challenges. The role-holder should therefore be trained in the laboratory, and he has begun to do so. The result was acceptable.
English language	The role-holder would like to improve his English-language skills in order to present his results and accomplishments more appropriately in formal and significant events such as international conferences. This goal is also effective when writing high-quality articles and books.

SECTION C **Personal Development Plan**

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	<ul style="list-style-type: none"> - Teamwork and group dynamics - Collaboration with researchers and colleagues of the current project, and organizing to publish journal papers in the future - Teaching - Supervising MSc students - Advanced English academic writing - Speaking the English language more fluent 	<ul style="list-style-type: none"> - Leadership and Teamwork - Supervising MSc students - Working with industrial partners and having experience in practical activities tied to industry
Structured formal training	<p>There are some useful formal courses in the below which are presented in TU Delft:</p> <ul style="list-style-type: none"> - Brain Management - The Art of Presenting Science - Time Management <p>The role-holder would like to take some of them to improve his skills.</p>	<p>There are some useful formal courses in the below which are presented in TU Delft:</p> <ul style="list-style-type: none"> - Leadership, teamwork and group dynamics - Analytic Storytelling - Career Development <p>The role-holder would like to take some of them to develop his proficiencies.</p>
Informal self-directed	<ul style="list-style-type: none"> - Studying different cultures to make better communications - Learning and improving English language 	<ul style="list-style-type: none"> - Collaboration with other researchers and colleagues outside the current project - Learning Dutch language - Making educational movies and media - Studying different cultures to make better communications
Date for review	15/12/2020	15/12/2020


Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
Reviewer's signature	
Final rating	
Date	

Role-holder's comments	
<p>The role-holder offers a broad range of skills to learn, but due to time constraints, it seems to be demanding. If implemented, the items mentioned in the plan seem to be perfect, but it should be considered that not all of them will be achieved in the timeframe specified.</p>	
Role-holder's signature	 Morteza Moradi
Role-holder's self-rating	2
Date	15/12/2020

PCDP Appendix Objectives for Upcoming Reporting Year

Role-holder's details

Role-holder:	Morteza Moradi	Reviewer:	Dr. Dimitrios Zarouchas
Job Title:	Prognostic signatures based on data-fusion techniques from Lamb-wave and acoustic emission in real-world FRP laminates subjected to random fatigue damage	School/Department/Institute/Company:	Delft University of Technology (TU Delft), Faculty of Aerospace Engineering, Structural Integrity & Composites (SI&C)
Job Level:	PhD program	Review Period and Date of Review:	

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Proposed Objectives	Comments from Reviewer



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 859957.

ESR6: Tian-zhi Li

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Tianzhi Li	Reviewer:	Claudio Sbarufatti
Job Title:	ESR 6	School/Department/Institute/Company:	Politecnico di Milano
Job Level:	PhD student	Review Period and Date of Review:	1 st year, end 1 st semester, 18-12-2020

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the "Comments and Outcome" section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
Collect experimental data for application of prognostic methods	In progress After acquiring adequate knowledge and skill about the Lamb wave experiments, experimental data should be collected before June 2021
To submit one or two peer-reviewed papers	In progress The topics of the two manuscripts should be a new damage localization and prognosis framework as well as adaptive measurement equation respectively. The first one should be submitted by Feb, while the second one might be submitted by June depending on the experimental data availability.
To make a presentation at international conference	In progress An abstract has been submitted to https://2021.compdyn.org/ , which should be held in June as planned.
To take the courses in Polimi	In progress

SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
Scientific communication	Especially, I will focus on the presentation skill in different presentation scenarios.
manuscript writing skill	
Cooperation skill	I would like to acknowledge the cooperation that we will have with other ESRs, as cooperation is one important skill as a researcher.

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	To learn and implement several frequently-used modelling techniques in current practices, because they should be used in the second manuscript	As agreed with the supervisors, I will continue to focus on producing good papers within two research topics: new modelling strategy and new particle filter.
Structured formal training		To summarize the three types of modifications for particle filter in current practices, i.e., mitigation for particle impoverishment, mitigation for curse of dimensionality, adaptive particle filter To fulfill one of the tasks as ESR 6, i.e., to develop some fast particle filters
Informal self-directed		
Date for review		

Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
Reviewer's signature	
Final rating	
Date	

Role-holder's comments	
Role-holder's signature	
Role-holder's self-rating	
Date	

Role-holder's details

Role-holder:	Tianzhi Li	Reviewer:	
Job Title:	ESR 6	School/Department/Institute/Company:	Politecnico di Milano
Job Level:	PhD student	Review Period and Date of Review:	

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Proposed Objectives	Comments from Reviewer
<ul style="list-style-type: none">• To undertake the tasks required by ENHAnCE project• To publish good-quality papers• To make presentation at conference• To cooperate with other ESRs• To develop fast particle filters	



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ESR7: Javier Contreras Lopez

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Javier Contreras López	Reviewer:	Athanasios Kolios
Job Title:	Early Stage Researcher	School/Department/Institute/Company:	NAOME – University of Strathclyde
Job Level:		Review Period and Date of Review:	1 st Year (2020-2021) December 7, 2020

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the “Comments and Outcome” section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
1. Definition and implementation of the model of the system. Implement a functional model of the system that given a series of inputs and a number of time steps is able to reflect the behaviour of the real system. At this stage, a basic behaviour of the modules will be implemented to serve as a demonstrator of the system. Expected duration: 5 months.	Scheduled for January 2021 to end of May 2021.
2. Develop modules involved in the system. Special attention will be paid to system-level reconciliation of component-level damage and prognostic information. Expected duration: 5 months.	Scheduled for June 2021 to end of October 2021.
3. Design and implementation of decision making algorithm (optimization). Expected duration: 5 months.	Scheduled for November 2021 to end of March 2022.
4. Development of user interface. Expected duration: 4 months.	Scheduled for April 2022 to end of July 2022.

5. Final optimization and validation.	
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SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
<i>Public speaking and presentation skills.</i>	
<i>Project management</i>	

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	Collaboration papers Conferences	
Structured formal training	Data Analysis for Engineers	Techniques for Confident Professional Communication Communicating with confidence - networking skills, assertiveness and understanding personal influence Communicating with confidence - Working with nerves and developing confidence
Informal self-directed		
Date for review	December 2021	December 2021

Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
Reviewer's signature	
Final rating	
Date	

Role-holder's comments	
Role-holder's signature	
Role-holder's self-rating	
Date	

Role-holder's details

Role-holder:	Javier Contreras López	Reviewer:	Athanasios Kolios
Job Title:	Early Stage Researcher	School/Department/Institute/Company:	NAOME – University of Strathclyde
Job Level:		Review Period and Date of Review:	1 st Year (2020-2021) December 7, 2020

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Proposed Objectives	Comments from Reviewer
Detailed in the previous sections	



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 859957.

ESR8: Javier Contreras Lopez

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Wen Wu	Reviewer:	
Job Title:	Early Stage Researcher	School/Department/Institute/Company:	The University of Nottingham
Job Level:		Review Period and Date of Review:	

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the "Comments and Outcome" section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
Acquire the essential knowledge and know-how for developing the Lamb-wave-based damage identification techniques, in particular fundamentals and mechanisms of wave activation, propagation and acquisition, signal processing for feature extraction in time, frequency, and time-frequency domains.	Completed
Learn how to do monitoring experiments with guided wave on composites and metals, including wave mode selection (wave mode tuning) techniques.	In progress
Conduct appropriate signal processing, especially Wavelet Transform, which is of vital necessity and importance for correct damage identification.	In progress
Build a parameterized model to simulate wave interaction with complex damage based on Finite Element Method.	In progress
Attempt to do damage identification based on above work and experimental data.	In progress

SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
<i>Scientific Writing:</i> <i>(1) Participate in writing training;</i> <i>(2) Write one research article at the end of the first year.</i>	
<i>How to track the most cutting-edge research topics:</i> <i>(1) Read articles in TOP congresses and Journals to learn methodologies, analyze similar problems, identify new challenges and objectives;</i> <i>(2) Follow the most excent researchers's work across the world in my research area.</i>	
<i>Scientific communication:</i> <i>(1) Have project meeting with supervisors to report the project progress and discuss problems every month;</i> <i>(2) Attend one workshop/conference to make a formal presentation;</i> <i>(3) Interact more with other ESRs and try to collaborate with them.</i>	

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	Learn the practical application of guided wave monitoring in different sectors, such as aeronautics and wind engineering.	Provide innovative solutions to real-world problems.
Structured formal training	Build a framework for signal processing; Develop an efficient algorithm for damage identification.	Combine fault tree analysis and physics-informed data to predict the remaining useful life of composite structures.
Informal self-directed	Develop good research habits, including experiments record, results presentation and problem shooting; learn how to cooperate with different people.	Build rich connections with researchers from different fields.
Date for review		

Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
Reviewer's signature	
Final rating	
Date	

Role-holder's comments	
Role-holder's signature	
Role-holder's self-rating	
Date	

Role-holder's details

Role-holder:	Wen Wu	Reviewer:	
Job Title:	Early Stage Researcher	School/Department/Institute/Company:	The University of Nottingham
Job Level:		Review Period and Date of Review:	

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Proposed Objectives	Comments from Reviewer
Application of wave mode selection techniques and Wavelet Transform.	
Build a parameterized model to simulate wave interaction with complex damage based on Finite Element Method.	
Attempt to do damage identification, based on above works and experimental data.	



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 859957.

ESR9: Juan Fernández Salas

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Juan Fernández Salas	Reviewer:	Juan Chiachio/ Manuel Chiachio
Job Title:	Marie Curie Researcher	School/Department/Institute/Company:	University of Granada
Job Level:	Researcher	Review Period and Date of Review:	July-Dec 2020

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the "Comments and Outcome" section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
Write at least 1 paper and send it for publication to Q1 or D1 journal. Given that the time for the papers to be reviewed and amended is not under our control, the papers need only to be submitted for this objective to be met.	In progress
<p>Agree at least 1 research stay with an international institution, preferably Google or NASA, for a minimum of 3 months.</p> <p>This objective depends on the host institution, so it might not be possible given the current situation with the pandemic. In that case, a contingency plan should be in place to plan a stay in the following year.</p> <p>The overall objective is to accumulate a minimum of 6 months of international research stay with prestigious institutions such as NASA and Google.</p>	In progress. Some preliminary contacts with Google are done. With NASA the contact is straightforward since the previous experience of the reviewers as NASA researchers. Due to pandemic situation, the secondments might be postponed however, the plan and agreed objectives should be done at a short term period.
Teach 3 credits at University of Granada. This is subject to the researcher been granted the "Venía Docendi". In case that the "Venía Docendi" is not granted, this objective will automatically be passed onto the following year.	In progress. Permission formally request to the Faculty of Engineering.
The researcher will acquire industrial experience by getting in contact with industry leading companies and seeking collaboration with them. The researcher may need support from his host institution.	

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SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
Scientific writing – Ideally using LaTeX or similar.	
Presentations addressed to an academic audience	
Teaching techniques	

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	Collaborate with academic peers from different fields of expertise. Application of AI and Deep Learning are not restricted to engineering and therefore, this should be reflected in the work done and ultimately in the thesis.	Actively seek collaboration with industry leaders, to promote the work being undertaken and with a clear focus on maximizing the researcher employability once his PhD is completed. The aim is that this grant will have a clear impact on the researcher's career, redirecting it significantly.
Structured formal training	Formal training by the host institution on Bayes Theorem and its application to real world problems.	Meaningful training by a prestigious institution in Deep Learning, AI and Neural Networks.
Informal self-directed	Become fully integrated in the host institution and build long lasting professional relationships with academic peers in the host institution.	Create a solid network of academic professionals, both inside and outside the host institution.
Date for review	April 2021	August 2021

Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
<p>Juan has outstandingly started his research career with a productive and creative way of working. During these 5 months (excluding August due to vacations), Juan has successfully understand, implement and contribute within the Neural Network topic, even with the creation of a new way to train them, with global applications.</p>	
Reviewer's signature	Juan Chiachio Manuel Chiachio
Final rating	3
Date	30/12/2020

Role-holder's comments	
Role-holder's signature	Juan Fernández Salas
Role-holder's self-rating	
Date	30/12/2020

Role-holder's details

Role-holder:	Juan Fernández Salas	Reviewer:	Juan Chiachio/ Manuel Chiachio
Job Title:	Marie Curie Researcher	School/Department/Institute/Company:	University of Granada
Job Level:	Researcher	Review Period and Date of Review:	July 2021

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Proposed Objectives	Comments from Reviewer
Same than in Section A are objectives for the 2021 year.	



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 859957.

ESR10: Ali Saleh

Attachment 6: Template for Personal Career Development Plans (PCDP)

Role-holder's details

Role-holder:	Ali Saleh	Reviewer:	Prof. Manuel Chiachio
Job Title:	Marie Curie fellow	School/Department/Institute/Company:	Universidad de Granada
Job Level:	Researcher	Review Period and Date of Review:	2020/2021 30-Dec-2020

SECTION A Objectives and progress towards completion

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role. These may be informed by University/Faculty/School/Department/Institute/Company/Centre strategy plans, targets if relevant. At the end of the performance year, the role-holder should complete the "Comments and Outcome" section to discuss with the reviewer at the PCPD plans review meeting. The reviewer should evaluate to what extent the goals/objectives have been met, adding comments as appropriate.

Agreed Objectives	Comments and outcome, state if they are completed or in progress
Contributing to a paper that aim for developing a method to reduce complex petri-nets (submitted before June 2021).	In progress
Contributing to review paper that will cover the current and potential maintenance strategies for composite structures (submitted before June 2021).	In progress
Learning the local language (A1 Spanish language)	In progress. A1 Spanish language course already taken and certificate completed.
Implement a supervised Q-learning method to adapt the Petri net based on maintenance policies	To be done in short-term
Contributing to a paper with the Q-learning methodology on Petri nets and stochastic Petri nets (submitted before the end of 2021).	To be done in short-term
Prepare and agree a secondment (within or without the ENHAnCE network, if more productive) before June 2021	To be done in short-term

SECTION B Ways of working

This should summarise any behavioural or soft skill objectives which aim to improve how work is delivered. At the end of the performance year, the role-holder and reviewer should discuss progress made and the reviewer should evaluate to what extent the behavioural goals have been met, adding comments as appropriate.

Areas of Focus	Comments and Outcome
<i>Improving group work and scientific communication skills by collaborating with international researchers.</i>	
<i>Improving project and time management skills.</i>	
<i>Improving the scientific writing and presenting skills.</i>	
<i>Defining and updating of research objectives within the group seminars and the project events</i>	

SECTION C Personal Development Plan

To encourage continual personal and professional development every member of staff should be encouraged to have in place a development plan. This may have a short-term focus (to learn skills relevant to current role), medium-term focus (to explore ways to develop in role to maximise personal impact) or longer-term focus (to support career planning and aspirations). In some cases, it may be used to support immediate development needs as part of corrective action due to under-performance.

Delivery Method	Short-term (immediate needs of the role)	Medium/Long-term (towards career aspirations)
Work-related opportunities	Improving programming skills. Improving scientific writing, presenting and communicating skills. Improving my English language and learning Spanish. Publishing scientific articles.	Find opportunities for future job or research. Meet other ESR's and exchange expertise in different domains. Building connections with important people.
Structured formal training	-Learning about the Bayesian approaches and its application to health monitoring of composite structures. -Taking a Spanish Language course.	- ENHAnCE trainings. - Boosting the Petri-nets paradigm
Informal self-directed	-Python programming language. -Neural network. -Machine learning and artificial intelligence approaches.	- Debugging, testing and validating our written codes.
Date for review	November 2021	November 2022

Section D Reviewer's Summary of the individual's performance at the final review

Having completed a review of the objectives the reviewer should complete the performance summary reflecting progress, achievements, areas of improvement and future focus. The performance summary should be supported by an overall rating based on the PCDP ratings below. It should be made clear that this rating does not necessarily have a direct correlation to a guaranteed pay outcome.

PCDP Ratings

1	Has performed to an exceptional level demonstrated by the fact that all or most objectives have been delivered to a standard over and above those expected for the role and level. In addition, the individual may have taken on and delivered/contributed at a high standard to activities outside the normal scope of their role. Further development may be identified to maximise the full potential of the individual.
2	Has demonstrated through review of objectives, achievements and progress against development plans that they have performed to the requirements of the role and level during the reporting period. Further development may be identified to maximise the full potential of the individual and/or fine tune the skills and behaviours required and expected across the whole role.
3	Has performed significantly below the expectation of the role during the reporting period. Has not met or has not made sufficient progress towards their objectives and the standards agreed. Demonstrating clear areas of performance which require improvement and/or personal development.

Reviewer's summary of the role-holder's performance	
<p>Mr. Ali Saleh has successfully commenced his research and training work since October 2020. During this short time, he has been able to perfectly understand the Petri Net methodology, implement it within Python language, and start the contribution to two journal papers. My recommendation is to continue with this productive path.</p>	
Reviewer's signature	DR. MANUEL CHIACHIO
Final rating	2
Date	30/12/2020

Role-holder's comments	
No comments; The project has barely started.	
Role-holder's signature	<i>Ali Saleh</i>
Role-holder's self-rating	N/A
Date	29/12/2020

Role-holder's details

Role-holder:	Ali Saleh	Reviewer:	Prof. Manuel Chiachio
Job Title:	Doctoral candidate	School/Department/Institute/Company:	Universidad de Granada
Job Level:	Junior	Review Period and Date of Review:	2020/2021 29-Dec-2020

At the beginning of each performance year, the role-holder should list the goals/objectives with quality/quantity/timescales etc as agreed with the reviewer and defined by the role.

Agreed Objectives	Comments from reviewer
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