



EXIT REPORT PRESENTATION

BSP AWARDEE

Engr. Vicente E. DyReyes

FIELD

Aerospace Engineering & Space Technology

HOST INSTITUTIONS

**FEATI University
National Universty**

DURATION

Sept. 1, 2020 to Oct. 2, 2021



Engr. VICENTE E. DYREYES

DOST Balik Scientist 2018

Adjunct Professor, FEATI University

Education

BS Civil Engineering, National University (1962)

MS Engineering, New Jersey Institute of Technology (1967)

MS Applied Mathematics, Stevens Institute of Technology (1972)

Doctoral Units in Applied Mechanics, Polytechnic Institute of New York (1979)

Aerospace Industry Experience (47 years)

Aerospace Engineer, Northrop Grumman Corporation (1974-2007)

Contract Engineer, Material Science Corporation (2007)

Contract Engineer, Northrop Grumman Corporation (2008-2010)

Contract Engineer, Lockheed Martin Space and Aerospace Corporation (2011-2012)

Contract Engineer, Bombardier Aerospace (2012-2013)

Consulting Engineer, Strand Aerospace Malaysia (2013-2015)

Major Research Projects

NASTRAN Software (1999-2007)

UAV Global Hawk Aircraft (2008-2010)

NASA Orion Space Program (2011-2012)

Significant Contribution

(1) Established FEIP (Finite Element Institute of Philippines)

FEIP is an organization formed for scientific, social and civic service, aid in development goal of the country, for public good & service.

It aims to promote the latest technology in terms of finite element analysis or simulations and upgrade skills to be globally competitive with the use of simulation to aid in research.

FEIP visualizes its organization to propose industry-based solutions for the betterment of the society.

JOIN US TODAY!

Both for professionals and non-professionals

Register at <https://forms.gle/hoGRTPbSCj6yqksu5>.

ANNUAL MEMBERSHIP FEE for students: PHP 300.00 | for professionals: PHP 500.00



**FINITE ELEMENT INSTITUTE
OF THE PHILIPPINES (FEIP)**



Dr. Ria Liza Centeno-Canlas

PRESIDENT

Office of Research Asst. Director, Program Director of Finite Element Technology, FEATI University
National University



Engr. Vicente E. DyReyes

VICE PRESIDENT

Program Director of Finite Element Technology, FEATI University
DOST Medium Term Balik Scientist



Engr. John Gabriel G. Decena

SECRETARY

Program Head of Aeronautical Engineering, FEATI University



Dr. Custer C. Deocaris

TREASURER

former Research Management Division Chief, CHED
Phil. Nuclear Research Institute

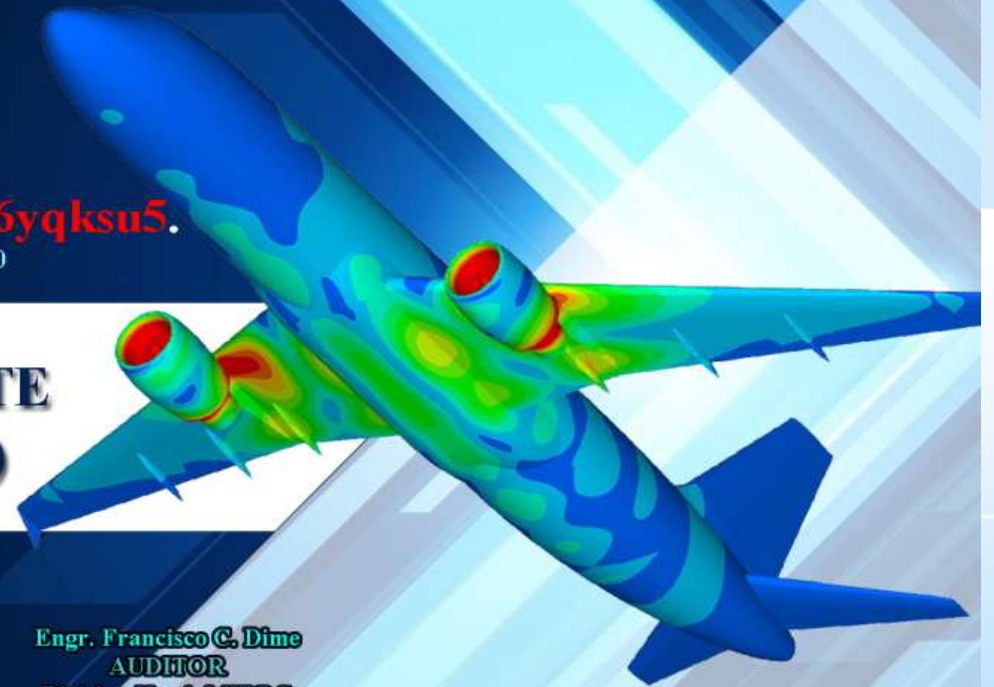
Engr. Francisco C. Dime
AUDITOR
Division Head, MIRDC

MEMBERS

Jose Paolo Centeno
Estelito Garcia Perello

For inquiries, send us a message

 Finite Element Institute of the Philippines



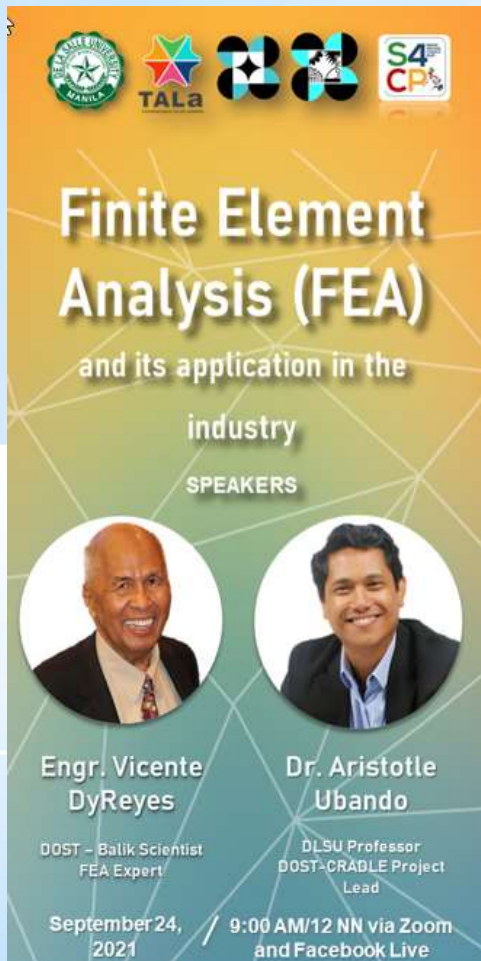
Significant Contribution

(2) Established DOST-Academe-Industry Collaboration




Significant Contribution


(3) Conducted Webinars for Faculty, Students, & Industry (DLSU)



Finite Element Analysis (FEA)
and its application in the
industry

SPEAKERS


Engr. Vicente DyReyes
DOST - Balik Scientist
FEA Expert


Dr. Aristotle Ubando
DLSU Professor
DOST-CRADLE Project Lead

September 24, 2021 / 9:00 AM/12 NN via Zoom and Facebook Live



Finite Element Analysis (FEA)
and its application to the industry

September 17 & 24, 2021 / 9:00 AM/12 NN via Zoom and Facebook Live



For Students: Online Webinar
Introduction to Finite Element Analysis (FEA)

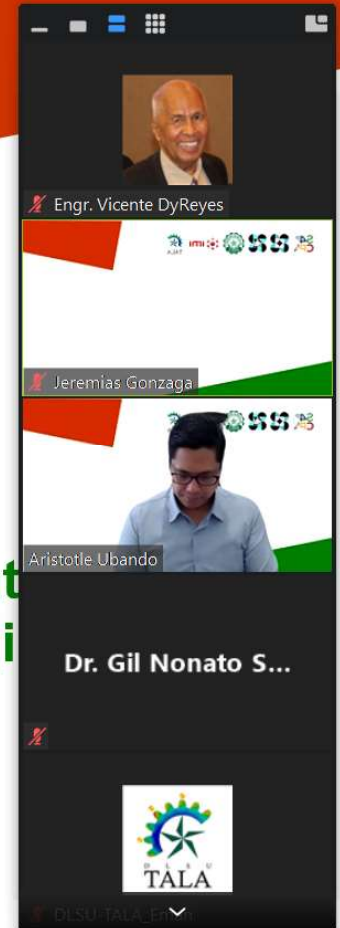


PROJECT LAUNCHING

**DOST Collaborative Research and Development
to Leverage Philippine Economy (CRADLE)
Year 2 Project**

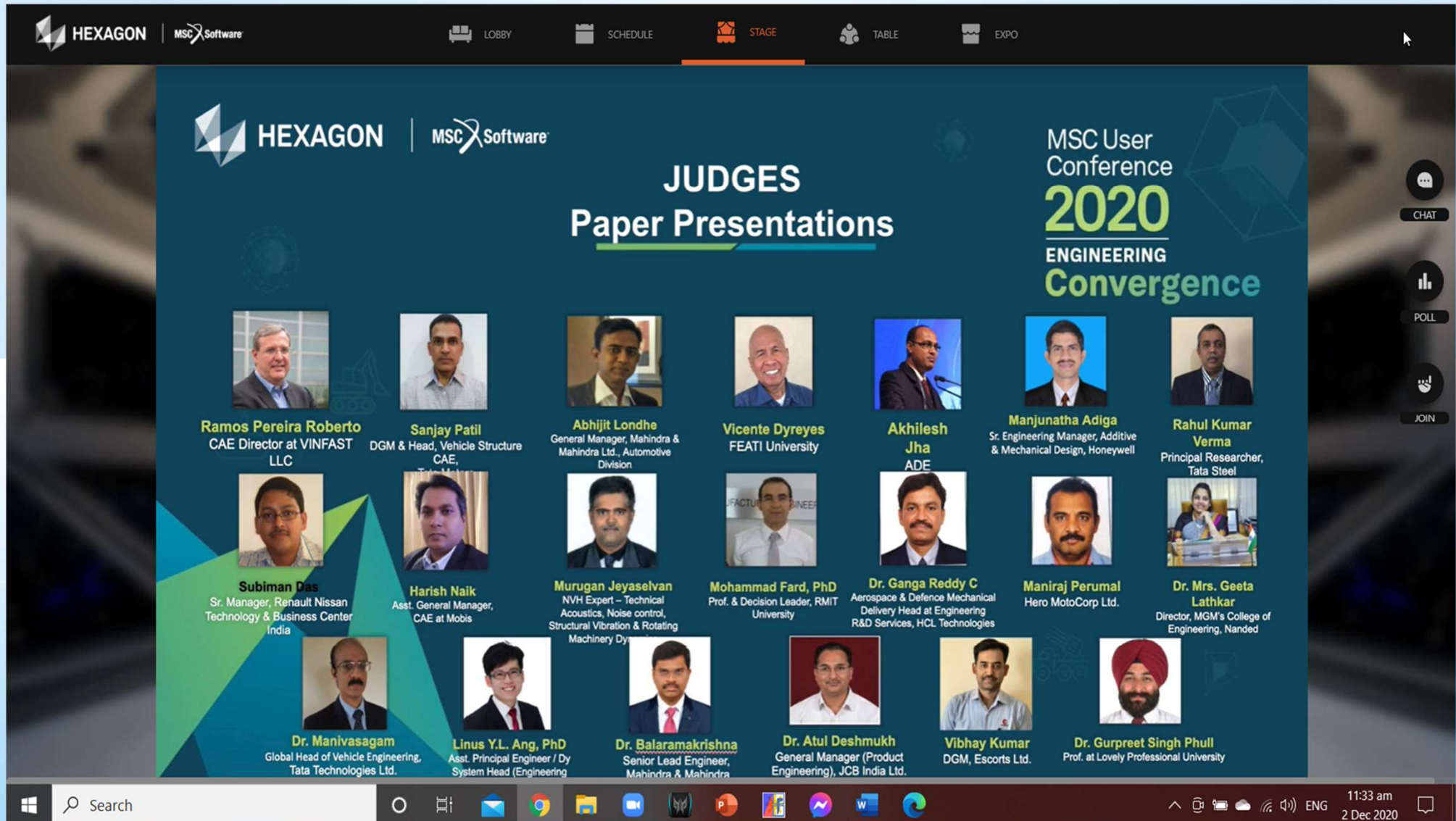
**Development of a Design Guideline Using Finite Element
Analysis (FEA) for Semiconductor and Electronics Packagi
Systems for Automotive Applications
Funded by DOST GIA**

**De La Salle University
Laguna Campus**



Significant Contribution

(4) Nominated to be Judge for technical paper presentations for MSC























The screenshot displays the 'JUDGES Paper Presentations' page for the MSC User Conference 2020, themed 'ENGINEERING Convergence'. The page features a grid of 18 judges, each with a portrait photo and their name and title. The top navigation bar includes links for LOBBY, SCHEDULE, STAGE, TABLE, and EXPO. The bottom of the image shows a Windows taskbar with various application icons and a system clock indicating 11:33 am on 2 Dec 2020.

HEXAGON | MSC Software

JUDGES
Paper Presentations

MSC User Conference 2020
ENGINEERING Convergence

 Ramos Pereira Roberto CAE Director at VINFAST LLC	 Sanjay Patil DGM & Head, Vehicle Structure CAE, Tata Motors	 Abhijit Londhe General Manager, Mahindra & Mahindra Ltd., Automotive Division	 Vicente Dyreyes FEATI University	 Akhilesh Jha ADE	 Manjunatha Adiga Sr. Engineering Manager, Additive & Mechanical Design, Honeywell	 Rahul Kumar Verma Principal Researcher, Tata Steel
 Subiman Das Sr. Manager, Renault Nissan Technology & Business Center India	 Harish Naik Asst. General Manager, CAE at Mobis	 Murugan Jeyaselvan NVH Expert – Technical Acoustics, Noise control, Structural Vibration & Rotating Machinery Dynamics	 Mohammad Fard, PhD Prof. & Decision Leader, RMIT University	 Dr. Ganga Reddy C Aerospace & Defence Mechanical Delivery Head at Engineering R&D Services, HCL Technologies	 Maniraj Perumal Hero MotoCorp Ltd.	 Dr. Mrs. Geeta Lathkar Director, MGM's College of Engineering, Nanded
 Dr. Manivasagam Global Head of Vehicle Engineering, Tata Technologies Ltd.	 Linus Y.L. Ang, PhD Asst. Principal Engineer / Dy System Head (Engineering)	 Dr. Balaramakrishna Senior Lead Engineer, Mahindra & Mahindra	 Dr. Atul Deshmukh General Manager (Product Engineering), JCB India Ltd.	 Vibhay Kumar DGM, Escorts Ltd.	 Dr. Gurpreet Singh Phull Prof. at Lovely Professional University	

Windows taskbar: Search, File Explorer, Chrome, Edge, Word, PowerPoint, Teams, Zoom, OneDrive, ENG, 11:33 am, 2 Dec 2020

(5) Conducted Innovation Seminar for NU faculty/industry



**NATIONAL UNIVERSITY
CENTER FOR INNOVATION
AND ENTREPRENEURSHIP**

2nd NU Innovation and Entrepreneurship Day

*Theme: Building a Leading Innovation Culture during the
New Normal*

Hosted by: Center for Innovation and Entrepreneurship

February 17, 2021 (Wednesday) 09:00 AM - 05:00 PM

Lectured theory and application to faculty/industry for almost 80 hours producing technical papers and process for innovation

Significant Contribution

Zoom Meeting

Recording

View

CHED Chairman De V...

Vicente Dyreyes

IPOPHL DITTB Dir ...

NU RachelRoxas

R H Ermita

Editha Hechanova...

Ria Liza Canlas

Fortunato T. de la ...

Noli G. Valera

Tech Committee 2

Federico Gonzalez

BDO-Mario Deriq...

Tech Committee 1

IPOPHL-Fred Cala...

Fireflies.ai Note...

AJ Exito - NU Cent...

Amelou Lim

Joseph Retumban

AJ Exito - Panublix

Unmute

Stop

Stop Video (Alt+V)

Participants 19

Chat 3

Share Screen

Record

Reactions

Leave



BSP-NU EVENT

Balik-Scientist Program
SERIES 3

NASTRAN-PATRAN Introduction

RESOURCE SPEAKER:

ENGR. VICENTE DYREYES

NU Alumnus, BS Civil Engineering

Date 03.24.21

Time 10:30AM


Venue MS Teams




NATIONAL UNIVERSITY
CENTER FOR INNOVATION
AND ENTREPRENEURSHIP



(6) Lectured for FEATI Aeronautical Interns in collaboration with PhilSA



Republic of the Philippines
Office of the President
Philippine Space Agency




OFFICE OF THE DIRECTOR GENERAL

15 March 2021

Program name:	Development of Corner Reflectors for Synthetic Aperture Radar (SAR)-based Research
Duties and responsibilities of the students:	<ol style="list-style-type: none">1. Perform RRL about corner reflectors and its applications with SAR2. Create 3D Models of corner reflectors3. Perform structural and flow analysis of proposed corner reflectors<ol style="list-style-type: none">a. CFDb. FEAc. Fatigue Analysis4. Generate 3D models of identified prototypes using 3D

Significant Contribution

MSC Software Solutions for Space



- Design & Sizing**
 - ✓ CAD cleaning
 - ✓ Parts & Assembly based modelling
 - ✓ Structural performance analysis
 - ✓ System dynamics
- Manufacturing Process Simulation**
 - ✓ Additive Manufacturing
 - ✓ Joining, Assembly
- Multibody Dynamics**
- Structural Integrity during mission**
 - Entry Configuration
 - Boat Configuration
 - Structural Composites and Quantum Engineering
- Satellite separation**
- Vibro Acoustic Analyses**
 - ✓ Payload survival
 - ✓ Fatigue
 - ✓ Launch Loads
 - ✓ Virtual Testing
- Advanced Materials**
 - ✓ Virtual allowables
 - ✓ Effect of defects
 - ✓ Mechanical and thermal properties of metal & composite microstructures
 - ✓ Light weighting
 - ✓ Material Life Cycle Management
- Orbital Heating**
 - ✓ Thermal Radiation
 - ✓ Thermal analysis
- Electronics**
 - Thermal Management

People

Currently in this meeting (16)

VD	Vicente DyReyes (Guest)	✕
AN	Arvin Ng (Guest)	✕
EV	Edgar Paolo Violan (PhilSA) (...)	✕
G	Gab (Guest)	✕
JL	John Labrador	✕
JB	Julie Ann Banatao (Guest)	✕
KT	KM Trinitorinigo Organizer	✕
KP	KUMAR Prem	✕
MR	Manu Del Rosario (Guest)	✕
MA	MORA Akhil	

35 © 2019, MSC Software Corporation
Satellite Image Credit: Andrey

38:46

Request control

(7) Active Participation in DOST Technical Panel

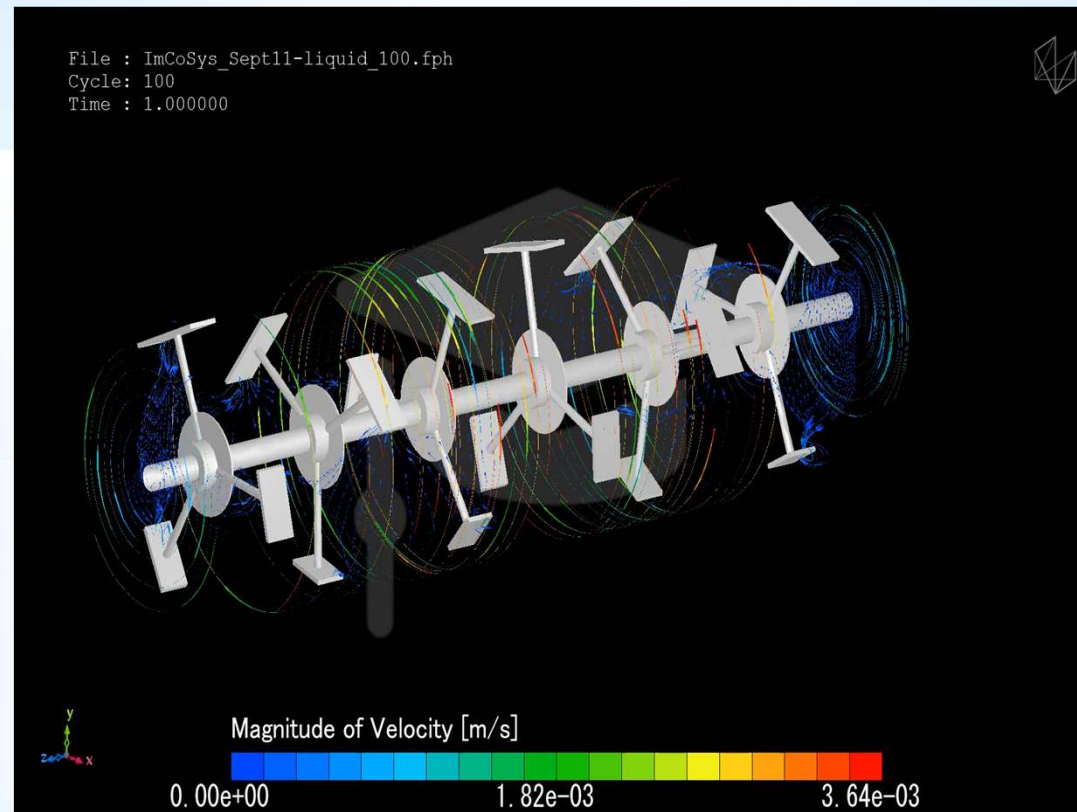
TP AWARDS: SUKI AWARDEES



				
ENGR. VICENTE E. DYREYES	DR. MANOLO G. MENA	DR. BLESSIE A. BASILIA	DR. JOCELYN M. SALES	MR. JACINTO M. ASUNCION JR.-
Environment Sector	Advanced Materials	Food, Transportation, Disaster Risk Reduction, Nanotechnology, Process,	Food, Process Sector	Technology Transfer Sector/ Technology Business Incubator

(8) FEA Consultant for Project at ITDI

FORM NO.	Republic of the Philippines MATERIALS SCIENCE DIVISION INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE DOST Compound, Bicutan, Taguig, Metro Manila	ACCOMPLISHMENT REPORT	DATE MAY 31, 2021
PROJECT: IN-VESSEL COMPOSTING MACHINE			



(9) UVC Air Purifier in Combatting Covid-19: A Project Proposal

Issues to be resolved

- (1) Challenge to verify and validate both medically and degrading of house
- (2) Instrument needed to validate (UVC meter)
- (3) Expertise needed and question to resolved
 - a) Material Scientist to design the housing of UVC
 - b) Medical doctor specialize in spread of covid-19 (to validate the effectivity of UVC)
 - c) CFD expert in MSC simulation
 - d) time of covid-19 exposure that will destroy completely there DNA and lesser time to just make them weak that cant be destructive human
 - e) method of mass production



The importance of ventilation in social gatherings

Explore the role of ventilation
in this dinner simulation





(10) UP SIBOL-CLIC Seminar

UP SIBOL Quarterly Grand CLIC

18 March 2021, 9:00-11:00 am

9:00- 9:10	Opening remarks and introduction to CLIC	Edward HM Wang, MD UP-SIBOL Program Lead
9:10-9:30	Presentation of previous projects of Computer Vision Machine Intelligence Group (CVMIG)	Prospero Naval Jr., PhD, CVMIG Head
B U T I L		
9:30-9:40	Air purification with UV <i>The proposed technology will employ finite element analysis in designing and optimizing the use of UV for purification of air circulating in a confined space indoors that can be operated even in the presence of users in the room, which is not possible for current UV disinfection technologies.</i>	Vicente Dyreyes, PhD (Balik Scientist) Meynard Berana, PhD (Mechanical Engineer)
9:40-9:45	Q and A	
9:45-9:55	Hand gestures for OR imaging <i>The technology hopes to improve manipulation of radiographic imaging in the operating room to facilitate efficiency in performing difficult surgeries</i>	Dr. Czar Louie Gaston, MD (Orthopedic oncologist)
9:55-10:00	Q and A	

Significant Contribution

Recording



Conversations Leading to Innovation and Collaboration

Encouraging birth of new ideas and innovations to address issues and concerns in technologies for healthcare



Open minded ka ba? C.L.I.C mo na 'yan!
Join us on MARCH 18, 2021 at 9:00AM
Register at bit.ly/2lsibolclic or contact us at upsibolclic@gmail.com

If you have the heart and mind of an innovator but you don't know who can help and where to start, join our...

Conversations Leading to Innovation and Collaboration (CLIC)



Edward HM Wang, MD MSc
UPM College of Medicine



Nats Orillaza



vicente dyreyes



Edward Wang



Roxanne De Leon



Rom Lunar

Type here to search

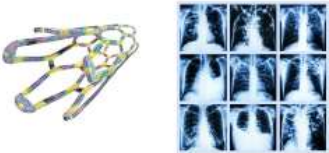


9:09 am
18 Mar 2021

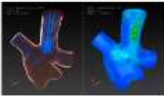
(11) Seminar on CFD for the Medical Profession

Focus Area for 2021
Computer Aided Medicine (CAM)


Cardio-Thoracic



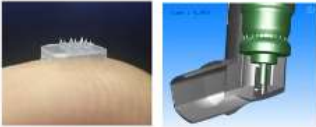
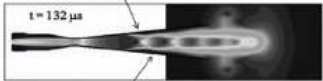
Blood Flow



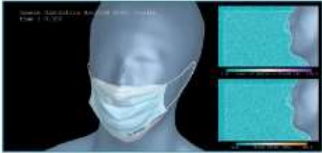
3D Tomography



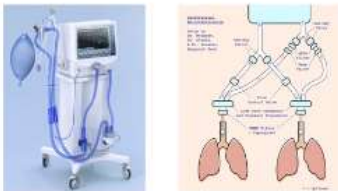
Advanced Drug Delivery




Particle Dynamics



Medical Instrumentations



Biomechanics



46 | hexagon.com | mscsoftware.com

02:23:14

Request control

SUNDARRAJ Karthik

+3 PG GP WT SK

ganesh pawar Warissara Tang (Guest) SUNDARRAJ Karthik

People

Share invite

Currently in this meeting (8)

- VD vicente dyreyes (Guest)
- "Stephen Alcaraz (Computre...
- BZ BIN IBRAHIM MD Kemarol Z... Organizer
- GP ganesh pawar
- PG Prabhakaran Gnanasekaran (...)
- P praphulmenon
- SK **SUNDARRAJ Karthik**
- WT Warissara Tang (Guest)

(12) Introduction of FEA to other academic institutions

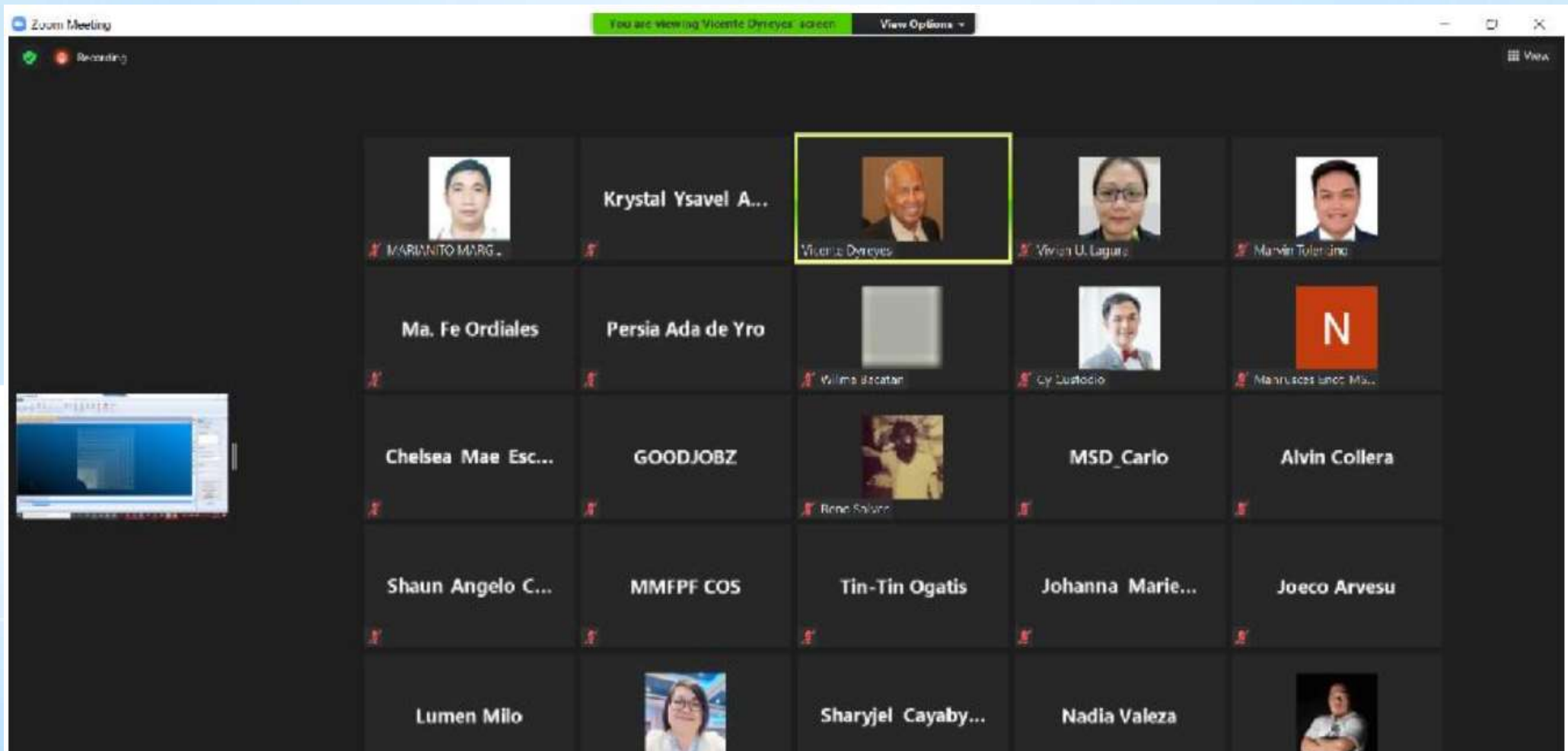
Meeting with UP Dean:
Proposed FEA in Engineering Courses

**Revolution from Academic to
Research and Innovation
Thru FE Simulation**

Vicente DyReyes
May 18, 2021

Significant Contribution

(13) Workshop on FEA for DOST-ITDI



FEIP is an organization formed for scientific, social and civic service, aid in development goal of the country, for public good & service.

It aims to promote the latest technology in terms of finite element analysis or simulations and upgrade skills to be globally competitive with the use of simulation to aid in research.

FEIP visualizes its organization to propose industry-based solutions for the betterment of the society.

JOIN US TODAY!

Both for professionals and non-professionals

Register at <https://forms.gle/hoGRTpbSCj6yqksu5>.

ANNUAL MEMBERSHIP FEE for students: PHP 300.00 | for professionals: PHP 500.00



**FINITE ELEMENT INSTITUTE
OF THE PHILIPPINES (FEIP)**



Dr. Ria Liza Centeno-Canlas
PRESIDENT
Office of Research Asst. Director,
National University



Engr. Vicente E. DyReyes
VICE PRESIDENT
Program Director of Finite Element
Technology, FEAT University
DOST Medium Term Bulk Scientist



Engr. John Gabriel G. Decena
SECRETARY
Program Head of Aeronautical
Engineering, FEAT University



Dr. Custer C. Deocariz
TREASURER
former Research Management
Division Chief, CHED
Phil. Nuclear Research Institute

Engr. Francisco C. Dime
AUDITOR
Division Head, MIRDG

MEMBERS
Jose Paolo Centeno
Estelito Garcia Perello

For inquiries, send us a message at:
f Finite Element Institute of the Philippines

Establishment of FEIP

PROGRAMME PLANNING SESSION

Time	Topic	Facilitator
9:15 - 9:45	Opening Prayer	Ria
	Call to Order	Ria
	Leveling and Setting of Expectations	All
9:45 - 12:00	Planning Proper	All
1:00 - 1:30	VBAM	
	Core Values	
	5 Years Strategic Development Plan	
	Strategic Intent	
	SWOT Analysis	
	Institutional Objectives, Key Result Areas and Performance Indicators	
	Action Plan	
	Commitments	
3:30 - 4:00	Wrap-up	

COMMITTEES:

1. Ways and Means Committee (include training, sponsorship, fund-raising – novelty products) - Vic
2. Membership Committee - Francis
3. Events Committee - Gab
4. External Affairs Committee - Ria
5. Outreach Program Committee - Estelito / Paolo
6. Research Committee - Custer

Participants (8)

- Vicente Dyreves (MC)
- Ria Liza Canlas (Host)
- Lito
- Alyssa Nicole Villamarin
- Custer Deocariz
- Francis Dime
- John Gabriel Decena
- Jopao

RATIONALE IN PUTTING-UP THE ORGANIZATION

Participants (8)

- Vicente Dyreves (MC)
- Ria Liza Canlas (Host)
- Lito
- Alyssa Nicole Villamarin
- Custer Deocariz
- Francis Dime
- John Gabriel Decena
- Jopao

DOST-PCIEERD Technical Panel Member



Department of Science and Technology
Philippine Council for Industry, Energy and Emerging Technology
Research and Development

ADVANCED MATERIALS TECHNICAL PANEL MEETING

02 February 2021, Tuesday, 09:00 AM
via Zoom Web Conferencing

TENTATIVE AGENDA

- I. Call to Order
- II. Presentation and Review of Completed Projects
 - A. **Generalized Automated Microfluidics and Micro-actuator Assembly (GAMMA)**
Dr. Giovanni A. Tapang
National Institute of Physics, University of the Philippines Diliman
 - B. **DOST-JSPS: Development of Novel Materials as Emitters and Detectors for (Sub)-Terahertz Time-Domain Spectroscopy Carrier Dynamic Studies**
Dr. Alvin Karlo G. Tapia
University of the Philippines Los Baños
 - C. **CRADLE: Development of a Design Guideline Using Finite Element Analysis (FEA) for Semiconductor Packages**
Dr. Aristotle T. Ubando
De La Salle University
- III. Adjournment

Advanced Materials and Nanotechnology Sector Consultative Meeting on Call for Proposals

Dr. Enrico C. Paringit
Executive Director, DOST-PCIEERD

11 February 2021
Sectoral Focal Group Discussion



INNOVATION COUNCIL
FOR INDUSTRY, ENERGY AND EMERGING TECHNOLOGIES (DOST-PCIEERD)



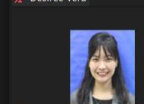
Vicente Dyreyes



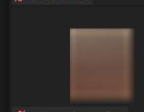
Enrico Paringit



Desiree Vera



Ye Valdez-Liu



Rose Marie Mendoza

Validation of the static and dynamic analyses of the In-Vessel Composting Machine Project of the DOST-ITDI




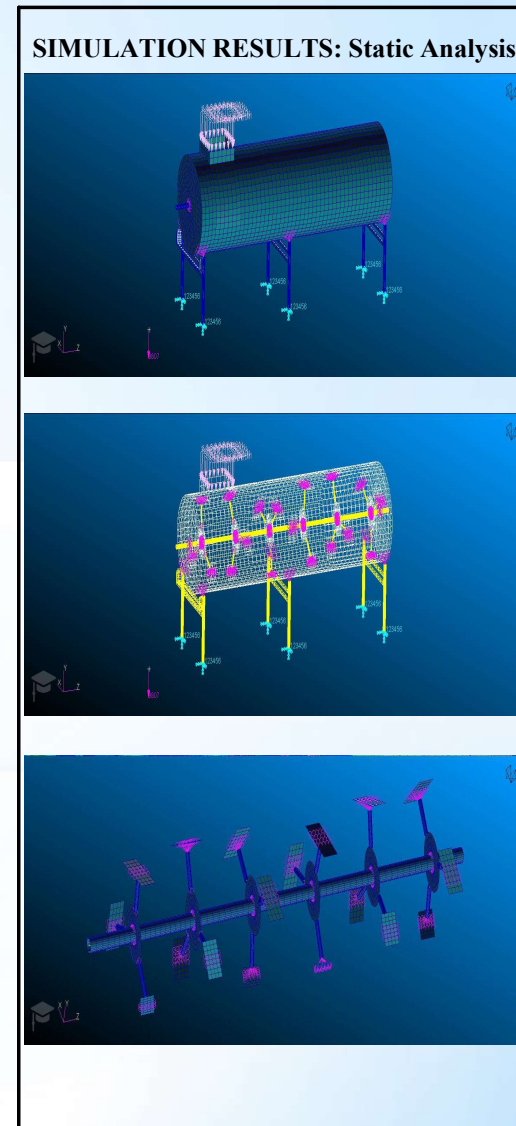
 <p>Republic of the Philippines Department of Science and Technology INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE DOST Compound, General Santos Ave., Bicutan, Taguig City Tel. Nos.: 8837-2071 to 82 (DOST Trunklines) Telefax No.: 8837-3167 / 8837-6150 www.itdi.dost.gov.ph</p>  <p>Management System ISO 9001:2015 www.tuv.com ID 910863715</p> 		
<p>Republic of the Philippines MATERIALS SCIENCE DIVISION INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE DOST Compound, Bicutan, Taguig, Metro Manila</p>	<p>PROGRESS REPORT</p>	<p>DATE July 16, 2021</p>
<p>PROJECT: IN-VESEL COMPOSTING MACHINE</p>		
<p>PERFORMANCE OUTPUT</p>		
<p>✓ This is to report that Engr. Vicente DyReyes and I checked the validation of the static analysis of the In-Vessel Composting Machine and is currently in the progress of simulating and checking criteria for the dynamic analysis produced in MSC Patran-Nastran.</p> <p>✓ The data I have incorporated for the assembly loadings and material properties are all from the generated values though SolidWorks. Units used in simulation are all in Inches and pounds.</p>		
<p>Material:</p>	<p>Stainless Steel (AISI 304)</p>	
<p>Elastic Modulus:</p>	<p>27557170.16 psi (190000 N/mm²)</p>	
<p>Poisson's Ratio:</p>	<p>0.29</p>	
<p>Thickness of Material:</p>	<p>0.07874 inches (2 mm)</p>	
<p>Yield Strength:</p>	<p>29994.81941 psi (206.807 N/mm²)</p>	

Table 1. Material Properties

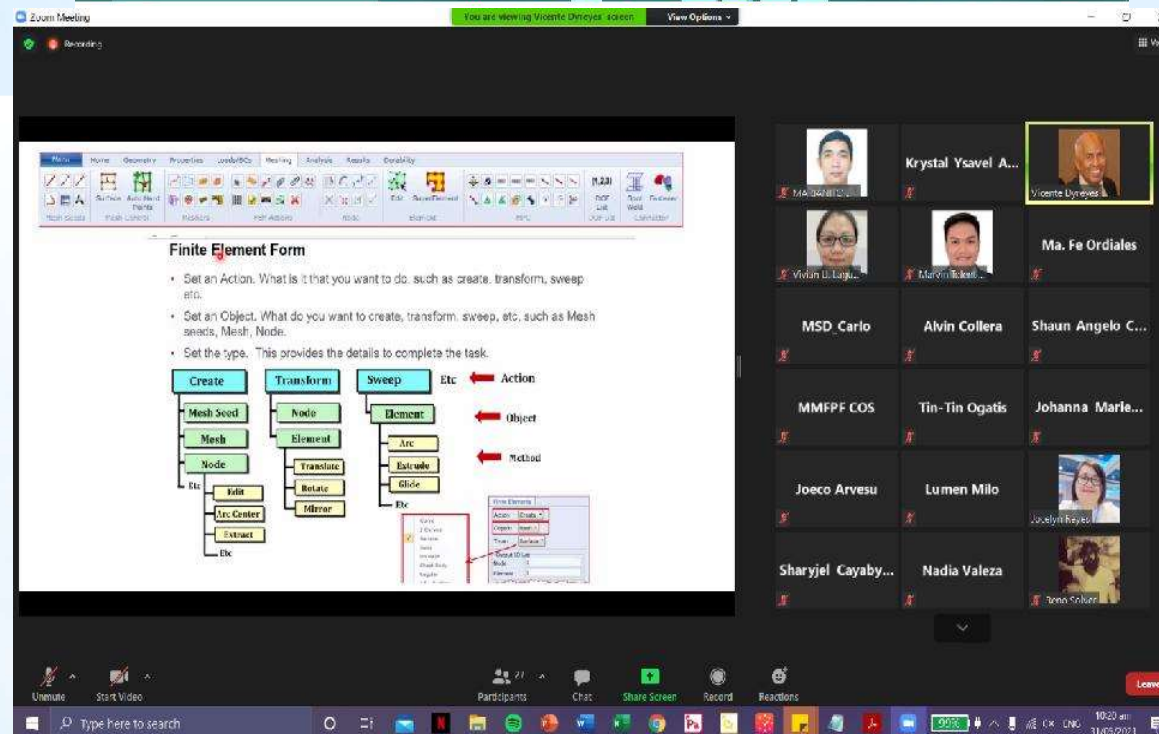


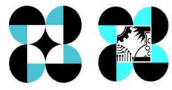
TESDA Panel Evaluator for 60 policy research proposals

The screenshot shows a Zoom meeting interface. The main window displays the title "TESDA NATIONAL TVET RESEARCH AGENDA (NTRA) 2021" and the subtitle "1st NTRA National Review Panel Meeting 16 August 2021 | 4:00PM". The top bar shows the meeting is recording and lists participants: vicente DyReyes, Tony Asper, TESDA Katherine Zarsadias, NTRA Secretariat - Dar..., and CLGUS - Rolando Bade. The right sidebar shows a list of 12 participants with their names, roles, and status icons.

Participants (12)

Name	Role	Status
vicente DyReyes (Me)		✓
NTRA Secretariat - Dara Mendo...	(Host)	✓
TESDA Katherine Zarsadias	(Co-host)	✓
jhovan herrera	(Co-host)	✓
PO-PRED_Rea	(Co-host)	✓
TESDA Maui Dulce	(Co-host)	✓
CLGUS - Rolando Bade		✓
Edward Dela Rosa		✓
PBEd-Marco Dominic De Los Reyes		✓
Rea Dalumpines		✓
TESDA_Maria Susan Dela Rama		✓
Tony Asper		✓



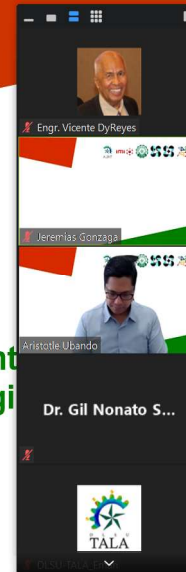


PROJECT LAUNCHING

DOST Collaborative Research and Development
to Leverage Philippine Economy (CRADLE)
Year 2 Project

Development of a Design Guideline Using Finite Element
Analysis (FEA) for Semiconductor and Electronics Packaging
Systems for Automotive Applications
Funded by DOST GIA

De La Salle University
Laguna Campus

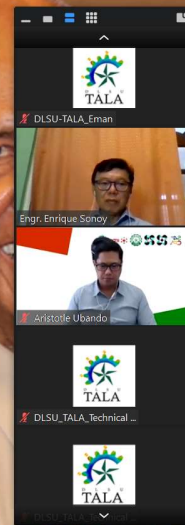






1

Finite Element Technology Lecture Series, DOST CRADLE Project

Ongoing Projects

- Project Dunong
 - Upcoming lecture series on Finite Element Technology with DOST Balik-Scientist, Engr. Vicente DyReyes in Term 2 AY 2020-2021.



For Students: Online Webinar

Introduction to Finite Element Analysis (FEA)

September 17, 2021

9:00 AM/12 NN via Zoom and Facebook Live

Webinar for Students
Introduction to Finite Element Analysis

September 17, 2021, 9:00 am-12:00 pm

Please click this URL to join: <https://zoom.us/j/99103096477?pwd=QWw0QTUrN0t6U0hGRXNybXlOOHRrdz09>

Webinar ID: 991 0309 6477

Passcode: 009176

Program

National Anthem

9:00 – 9:05 AM

Invocation

9:05 -9:10 AM

Engr. Ailene Nunez

Research Assistant
De La Salle University

Opening Remarks

9:10 - 9:20 AM

Dr. Kathleen Aviso

Incoming Dean of Gokongwei College of Engineering, De La Salle University Manila Campus

Introduction to Finite Element Analysis

9:25 – 9:45 AM

Engr. Vicente DyReyes

Balik-Scientist, DOST

Thermomechanical Analysis Laboratory

9:45-9:55 AM

Engr. Jeremias Gonzaga

Co-Project Lead/Laboratory Coordinator
Mechanical Engineering Department

Webinars for DLSU Students






Finite Element Analysis (FEA)
and its application to the industry

September 24, 2021 / 9:00 AM/12 NN via Zoom and Facebook Live



Webinar for Students
Finite Element Analysis and its Application in the Industry

September 24, 2021, 9:00 am-12:00 pm

Please click this URL to join: <https://zoom.us/j/99070250248?pwd=NEh5OVVM4TFJDVlFwTDZWOGI4QkI3dz09>

Webinar ID: 990 7025 0248

Passcode: 748671

Program

National Anthem

9:00 – 9:05 AM

Invocation

9:05 -9:10 AM

Engr. Ailene Nunez

Research Assistant
De La Salle University

Opening Remarks

9:10 - 9:20 AM

Dr. Kathleen Aviso

Incoming Dean of Gokongwei College of Engineering, De La Salle University Manila Campus

Introduction to Finite Element Analysis

9:25 – 9:45 AM

Engr. Vicente DyReyes

Balik-Scientist, DOST

Thermomechanical Analysis Laboratory

9:45-9:55 AM

Engr. Jeremias Gonzaga

Co-Project Lead/Laboratory Coordinator
Mechanical Engineering Department

Help Desk Announcement <announcement@dlsu.edu.ph>

Reply-To: stc.vc@dlsu.edu.ph

Bcc: announce_university@dlsu.edu.ph

Thu, Apr 15, 2021 at 8:57 PM

Office of the Vice Chancellor for Laguna Campus

☎ (6349) 554-8900 Ext. 107

✉ stc.vc@dlsu.edu.ph

Office of the Vice Chancellor for Laguna Campus

cordially invites the members of the academic community
to a 3-day Lecture Series entitled

Finite Element Technology using MSC Software

by

Engr. Vicente E. DyReyes
Scientist

Balik Scientist Program

Department of Science and Technology of the Philippines (DOST)

on

Date	Time	Lecture Series
April 26, 2021	10:00 AM - 12:00 PM	Lecture #1: Overall Overview of FET from Academics to Research, Innovation, and Product Development
May 04, 2021	10:00 AM - 12:00 PM	Lecture #2: Theory of Mathematical Engineering FET
May 10, 2021	10:00 AM - 12:00 PM	Lecture #3: How to use Patran and Nastran

About the Speaker:

Engr. Vicente DyReyes, a former Program Director for Finite Element Technology at FEATI University, is a Consulting Scientist at the DOST for Space Satellite and other research programs. He has conducted a seminar series in Finite Element using MSC Software. As a Consulting Engineer at Strand Aerospace in Malaysia, Engr. DyReyes has taught the Theory of Finite Element Method for Aircraft Structural Analysis. He also performed Finite Element Analysis, Durability and Damage Tolerance (DaDT) Analysis for Global 7000-8000 and developed tools to calculate stress intensity for longitudinal/circumferential cracks along fuselage skin and performed DaDT analysis using NASA crack growth software Nasgro.

Lecture Series on Finite Element Technology Using MSC Software (for DLSU)

DLSU MSC Software Webinar



Simulation for Manufacturing Processes



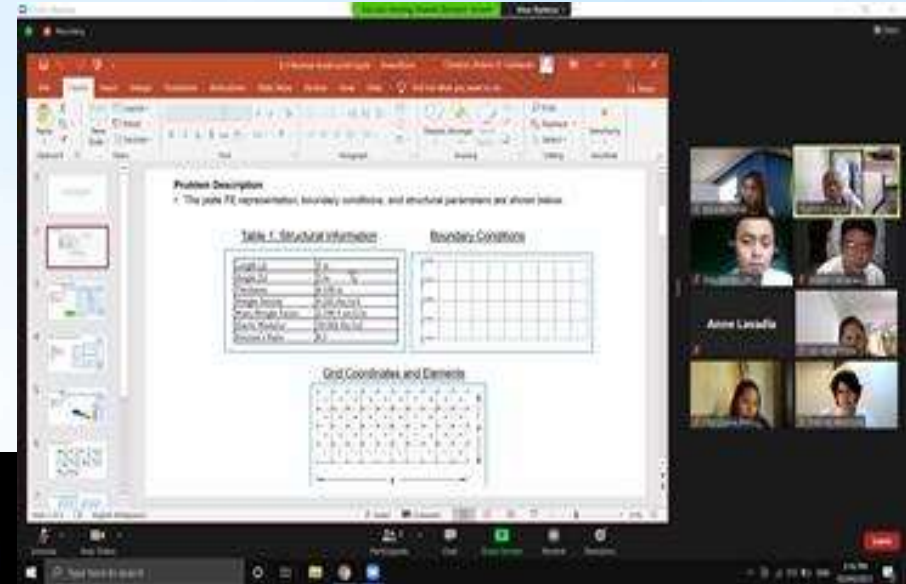
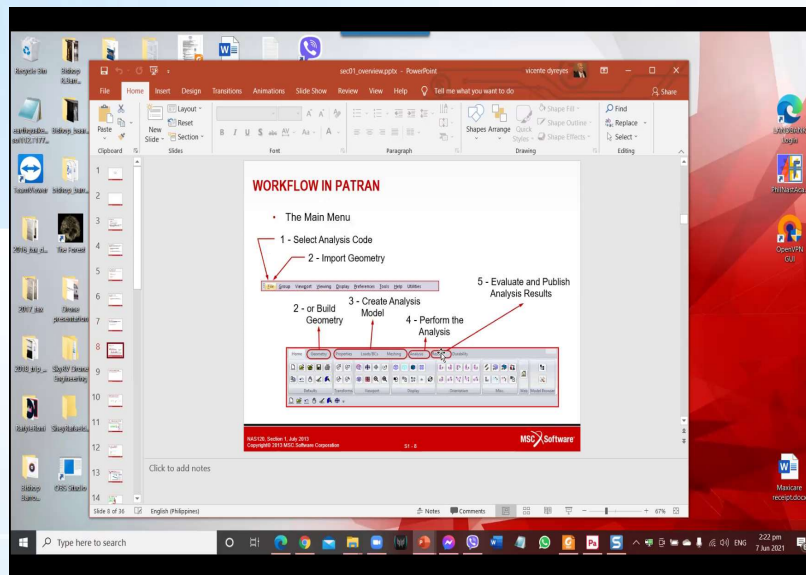
People

- vicente dyreyes (Guest)
- BP Bayu Prasetyo
- BZ BIN IBRAHIM MD Kemarol Zam... Organizer
- DB Danilo Balanon
- E ECSC_Dardi (Guest)
- FA Fajar Adi (Guest)
- FN Flexkey NIK (Guest)
- HC Hsinchi Chen (來賓)
- K kamal.rudzaman
- KT KM Trinitorinigo

MSC Simufact Manufacturing Processes Simulation

Finite Element Lecture to Aeronautics (FELA)

24 sessions completed



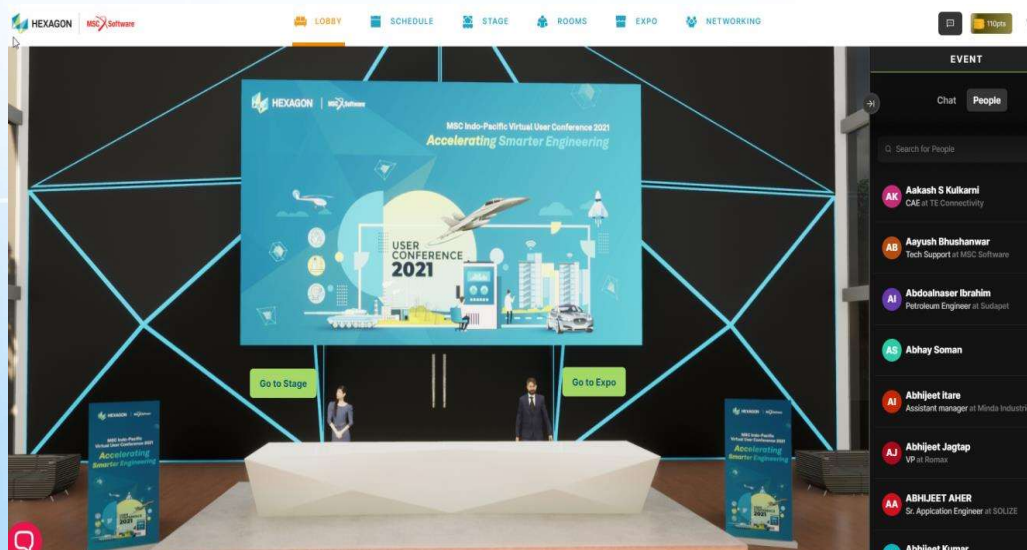


HEXAGON | MSC Software Virtual User Conference 2020
Judge – Paper Presentations

HEXAGON | MSC Software Indo-Pacific Virtual User Conference 2021



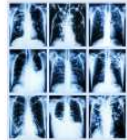

Judge - Paper Presentations (Structures Aerospace Track)




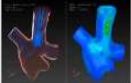
Seminar on Computational Fluid Dynamics for the Medical Profession

Focus Area for 2021
Computer Aided Medicine (CAM)


Cardio-Thoracic






Blood Flow



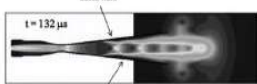
PSI via nested wall



3D Tomography



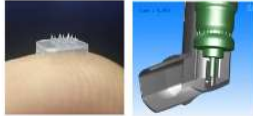
Advanced Drug Delivery



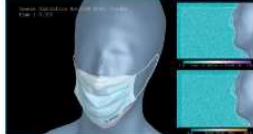
Shock Wave

t = 132 μs

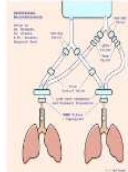

Separation of flow



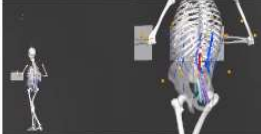
Particle Dynamics



Medical Instrumentations



Biomechanics



HEXAGON MSC Software

02:23:14

Request control

SUNDARRAJ Karthik

+3 PG GP WT SK

ganesh pawar Warissara Tang (Guest) SUNDARRAJ Karthik

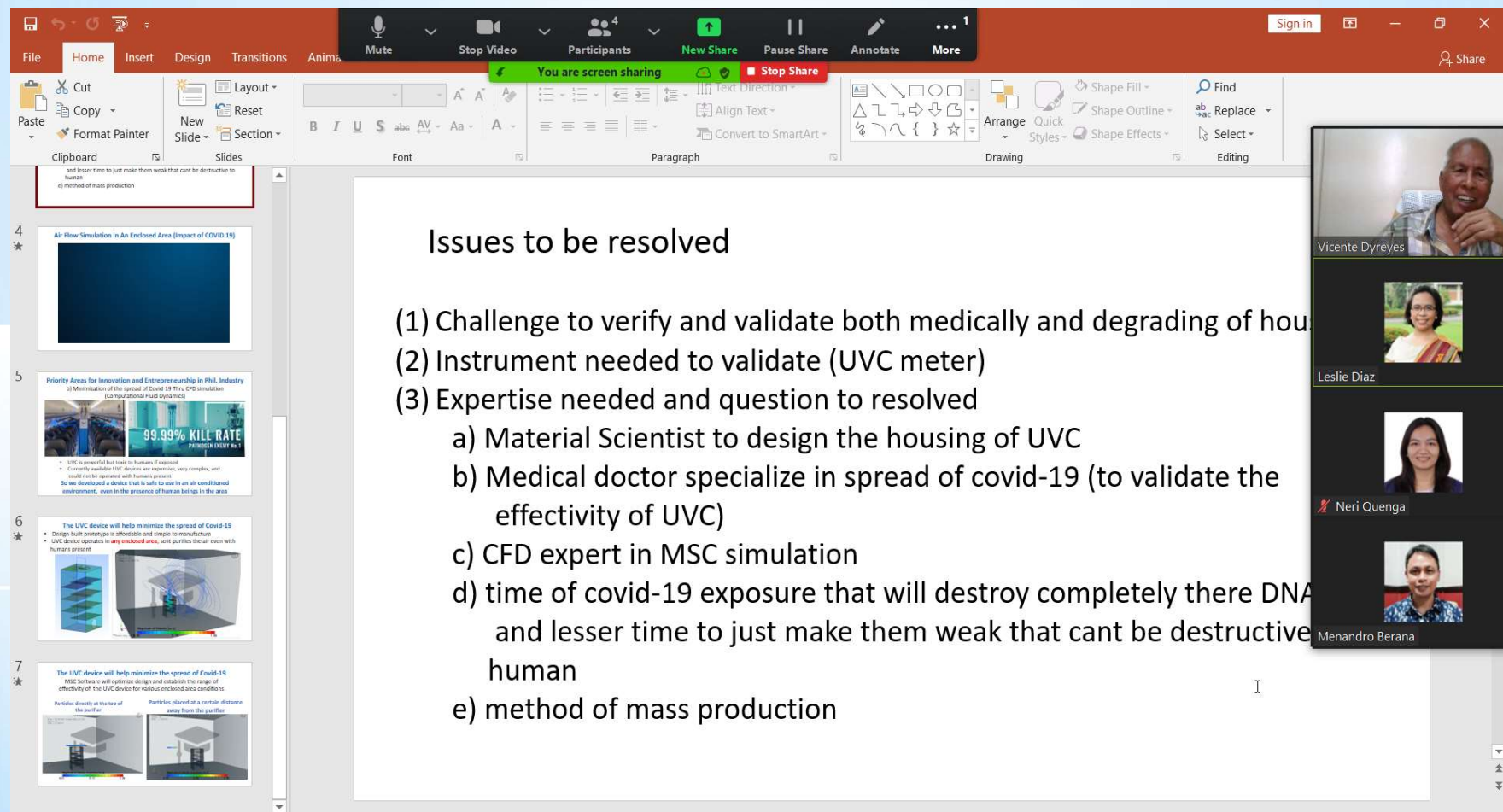
People

Share invite

Currently in this meeting (8)

- VD vicente dyreyes (Guest)
- "Stephen Alcaraz (Computre...
- BZ BIN IBRAHIM MD Kemarol Z... Organizer
- GP ganesh pawar
- PG Prabhakaran Gnanasekaran (...)
- P praphulmenon
- SK **SUNDARRAJ Karthik**
- WT Warissara Tang (Guest)

UVC Air Purifier in Combatting COVID-19: A Project Proposal



Issues to be resolved

- (1) Challenge to verify and validate both medically and degrading of house
- (2) Instrument needed to validate (UVC meter)
- (3) Expertise needed and question to resolved
 - a) Material Scientist to design the housing of UVC
 - b) Medical doctor specialize in spread of covid-19 (to validate the effectivity of UVC)
 - c) CFD expert in MSC simulation
 - d) time of covid-19 exposure that will destroy completely there DNA and lesser time to just make them weak that cant be destructive human
 - e) method of mass production

Presentation at the UP Surgical Innovations & Biotechnology Laboratory (SIBOL) Grand Conversations Leading to Innovation and Collaboration (CLIC)

UP SIBOL Quarterly Grand CLIC

18 March 2021, 9:00-11:00 am

9:00- 9:10	Opening remarks and introduction to CLIC	Edward HM Wang, MD UP-SIBOL Program Lead
9:10-9:30	Presentation of previous projects of Computer Vision Machine Intelligence Group (CVMIG)	Prospero Naval Jr., PhD, CVMIG Head
B U T I L		
9:30-9:40	Air purification with UV <i>The proposed technology will employ finite element analysis in designing and optimizing the use of UV for purification of air circulating in a confined space indoors that can be operated even in the presence of users in the room, which is not possible for current UV disinfection technologies.</i>	Vicente Dyreyes, PhD (Balik Scientist) Meynard Berana, PhD (Mechanical Engineer)
9:40-9:45	Q and A	

Conversations Leading to Innovation and Collaboration

Encouraging birth of new ideas and innovations to address issues and concerns in technologies for healthcare

If you have the heart and mind of an innovator but you don't know who can help and where to start, join our...

Conversations Leading to Innovation and Collaboration (CLIC)

Open minded ka ba? C.L.I.C mo na 'yan!

Join us on MARCH 18, 2021 at 9:00AM
Register at bit.ly/2Hb0dcl or contact us at upsibolcl@upm.edu.ph

Edward HM Wang, MD MSc
UPM College of Medicine

Participants: Nats Orillaza, Vicente Dyreyes, Edward Wang, Roxanne De Leon, Rom Lunar

9:09 am
18 Mar 2021

Collaboration with Industry Company



TEAM EQUINET

Vicente DyReyes

Consultant, Filipino

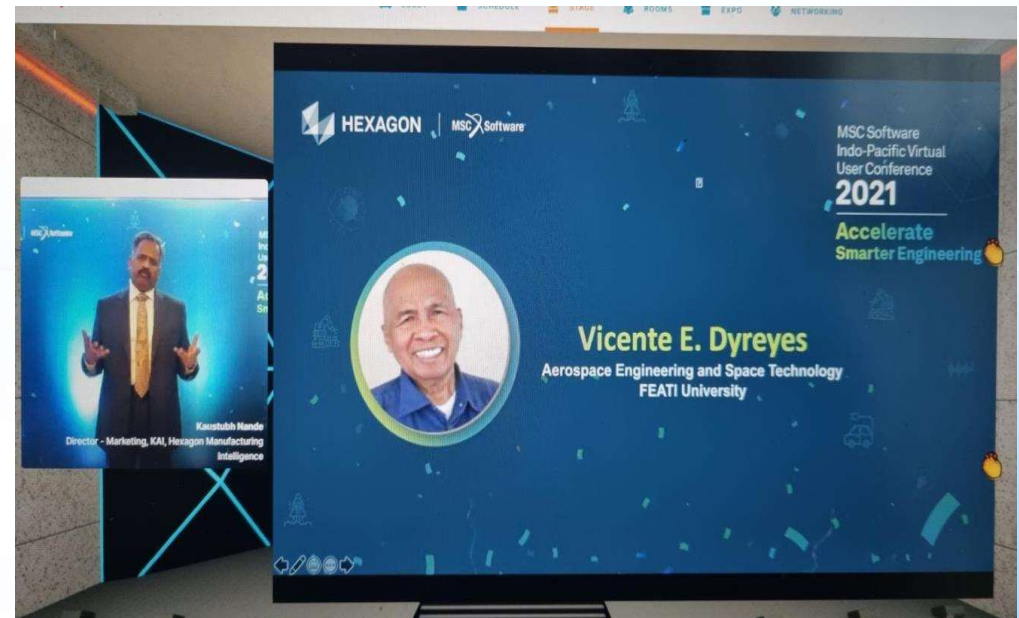
Engr. DyReyes is a licensed Civil and Aerospace Engineer with 47 years of experience in structural analysis and other research program.

Professional Career

1968 - 74	Instructor, Department of Mathematics, New Jersey Institute of Technology, Newark, NJ
1974 - 83	Senior Engineer
1983 - 89	Engineering Specialist
1989 - 99	Senior Technical Engineering Specialist
1999 - 07	Principal Engineer, Northrop Grumman Corporation
2007 - 13	Contract Engineer., Gulfstream, Northrop Grumman Corp., Lockheed Martin Space and Aerospace Corp., Bombardier Aerospace
2013 - 15	Consulting Engineer. Strand Aerospace Malaysia
2018 - present	Consulting Scientist, Department of Science and Technology (DOST), Philippine Government

Engr. DyReyes is also a Balik Scientist and he is proficient in Finite Element Analysis and was able to work with various industries abroad, both in the civilian and military.

Recognition / Awards





CERTIFICATE OF APPRECIATION


We gratefully award

Engr. Vicente DyReyes


For offering his time to share his expertise on the webinar
"INTRODUCTION TO FINITE ELEMENT ANALYSIS (FEA)"

9:00 am to 12:00nn of Sept 17, 2021 via Zoom and Facebook live.




Dr. Gil Monato Santos
Vice-Chancellor for
Laguna Campus
De La Salle University


Dr. Kathleen Aviso
Incoming Dean of Gokongwei
College of Engineering
De La Salle University –
Manila Campus


Dr. Aristotle T. Ubando
DLSU Professor
DOST-CRADLE Project Lead



Awards this

CERTIFICATE OF APPRECIATION

to
ENGR. VICENTE DYREYES

for unendingly sharing his expertise to the training series for

Balik Scientist Program - National University Event
Basic Finite Element Analysis

Given this 9th day of July 2021 via MS TEAMS, National University - Manila


DR. RIA LIZA CANLAS
DIRECTOR, NU CentIE



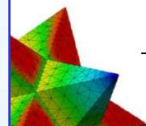
CERTIFICATE OF APPRECIATION

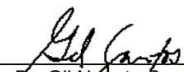
We gratefully award

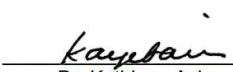
Engr. Vicente DyReyes


For offering his time to share his expertise on the webinar entitled
"FINITE ELEMENT ANALYSIS (FEA) and IT'S APPLICATION IN THE INDUSTRY"
Discussing the how's and why's of FEA including the impact in the industry.

9:00 am to 12:00nn of Sept 24, 2021 via Zoom and Facebook live.




Dr. Gil Monato Santos
Vice-Chancellor for Laguna
Campus
De La Salle University


Dr. Kathleen Aviso
Incoming Dean of
Gokongwei College of Engineering
De La Salle University


Dr. Aristotle T. Ubando
DLSU Professor
DOST-Cradle Project Lead

Summary

Activities (*as indicated in TOR)	Deliverables (*as indicated in TOR)	% accomplished	Remarks
I. Provide expert advice and technical expertise/ consultations on existing projects of and new proposals to be developed with FEATI University, National University, and Department of National Defense	FEATI University Assisted in the preparation of a simulation manual that will be used in monitoring progress of the proposed a simulations research project that will use MSC Software Finite Element Method.	100% 100 %	Collaboration with DND did not pursue due to non-commitment of DND
- At least three (3) projects/proposals assisted - At least two (2) proposals developed - At least ten (10) people trained - Simulation reports Procedures and guidelines	National University Constantly met with the team involved in the various research projects particularly the Polite Project and performed analyses of said projects.		

Activities (*as indicated in TOR)	Deliverables (*as indicated in TOR)	% accomplished	Remarks
III. Develop/draft course syllabi/curricula on the following topics:	Lectured on FEA using MSC software for students of the Structural Theory (Lab) courses of the FEATI Civil Engineering Dept. Other engineering departments are in the process of incorporating FEA in their respective program curricula.	100 %	Submitted to PCIEERD
FEATI University Aerospace/Aircraft Structures 1&2 Advanced training program for FEA (thermal, fatigue, stress, etc.)		100%	
National University Finite Element Theory and application	Trained FEATI faculty who will subsequently handle courses with MSC components.	100%	Part of NU Presentation
	Worked with NU's Center for Innovation and Entrepreneurship on the formulation of syllabus for the Finite Element Theory and Application course which will be offered to both internal and external clients.		

Activities (*as indicated in TOR)	Deliverables (*as indicated in TOR)	% accomplished	Remarks
<p>IV. Conduct training/lecture/ forum on the following:</p> <p><i>FEATI University</i></p> <ul style="list-style-type: none"> Finite Element Analysis for Aerospace Applications Finite Element Analysis for Engineering Applications of Finite Element Analysis for Industry Basic MSC FEA Training Advance MSC FEA Training Advance MS FEA for Aerospace Applications 	<p>Lectured on FEA using MSC software for students of the Structural Theory (Lab) courses of the FEATI Civil Engineering Dept.;</p> <p>Other engineering departments will also embed FEA in their respective program curricula</p> <p>Trained FEATI faculty members who will subsequently handle courses with MSC components.</p>	100%	

Activities (*as indicated in TOR)	Deliverables (*as indicated in TOR)	% accomplished	Remarks
V. Conduct other research and development activities - At least thirty (30) people Trained - At least two (2) publications in an ISI journal	CentIE Project Collaboration: <i>Case Analyses on shortened time-to-market for product development projects.</i>	100 %	More than 30 were trained
FEATI University Development of standard design, analysis, validation and testing procedures for aerospace products		95 %	PhilSA will validate.
National University Case Analyses on shortened time-to-market for product development projects		95 %	Being validated thru PoLite Product

Activities (*as indicated in TOR)	Deliverables (*as indicated in TOR)	% accomplished	Remarks
VI. Establish collaborations/linkages with local and foreign institution/s	Establishment of the Finite Element Institute of the Philippines (FEIP) in collaboration with different universities, institutions, and industries to help in technology advancement, innovation, and entrepreneurship.	50 %	Ongoing for executing the Roadmap
Includes MOA among NU, FEATI, and other possible stakeholders			
At least one (1) signed Memorandum of Agreement	Signed Memorandum of Understanding among ITDI-FEIP-FEATI-NU promoting Finite Element Analysis	100%	Sept 29, 2021 Signing of MOU

OTHER ACTIVITIES

Validation of the static and dynamic analyses of the In-Vessel Composting Machine Project of the DOST-ITDI

Judge for the paper presentations (Structures Aerospace Track) from industries and academic institutes during the HEXAGON | MSC Software Virtual User Conferences held in December 2020 and September 2021

Technical Panel Evaluator for DOST-PCIEERD-funded projects

Thesis panel member for the proposal entitled Interfacial Delamination Analysis on Fan-out Water-Level Package Using Finite Element Method, upon invitation by DLSU

Resource speaker for 2 DLSU-organized webinars on Finite Element Analysis

Conduct of lecture series on Finite Element Technology (FET) using MSC Software, which focused on the overview of FET from academics to research, innovation and product development. Participants were DLSU students, administrators, faculty and staff, industry practitioners and DLSU collaborators, April-May 2021

OTHER ACTIVITIES

Conduct of weekly lectures for a group of aerospace and engineering graduates from different schools. So far, over 20 sessions of this activity called FELA (Finite Element Lecture to Aeronautics) had been completed.

TESDA resource person and member of the panel for the evaluation of 60 policy research proposals submitted by the Regional Review Panel from different TESDA regional offices

Consultancy services for Equinet as an attempt to collaborate with an industry company

Technical resource person on the proposed collaboration between DLSU and Amber Kinetics with regard to Flywheel Technology

Conduct of FEA workshops for DOST-ITDI

Mentorship for a team of engineering and aero graduates for their presentation on UVC Technology for a start-up competition organized by Sandbox Philippines. The team qualified for the semi-finals round.

Participation in the UP SIBOL Quarterly Grand CLIC (Conversations Leading to Innovation and Collaboration)

5Ps Summary

	Name	Duration	Place (if applicable)
People Trained	<p>Training/lecture on “Theory of Fatigue and Damage Tolerance”</p> <p>FEATI BS AeroE students:</p> <ul style="list-style-type: none"> • Aquino, Adrian Anthony Manglicmot • Eslabon, Shannon Scalee Estrebor • Javier, Joan Karla Palad • Maseki, Ikesam Lozano • Patawaran, John Carlo Domanais • Perez, Jesriel Vargas • Quilala, Rodge Lorenz Nicolas • Reynaldo, John Roman Pinlac • Salazar, Naz Antonio Joson • Rodriguez, Inno • Gacutan, Darwin • Pajarito, Asea • Climacosa, John Louie 	<p>4 days (April 2021)</p>	<p>Via Zoom</p>

	Name	Duration	Place (if applicable)
People Trained	<p>MSC/FEA training under the FEATI Structural Theory course:</p> <ul style="list-style-type: none"> • Adrian Anthony M. Aquino • Shannon Scalee E. Eslabon • Joan Karla Palad Javier • Adrian Tan Nacua • John Carlo Patawaran • Jesriel Vargas Perez • Rodge Quilala • Naz Antonio Joson Salazar 	<p>SY 2020-2021</p> <p>1st Semester, SY 2021-2022</p>	Via Zoom
	<p>Lecture series for aerospace and engineering graduates from different schools:</p> <ul style="list-style-type: none"> • Almeria, Krystal Ysavel P. • Ancheta, Jeruel Jan Rovil C. • Barcelona, Ella Louise N. • Dimaranan, Robert Miguel C. • Dingal, Dan Tristan • Hermoso, Francis Benedict M. • Lavadia, Ma. Anne Lyn B. 	Continuing weekly	Via Zoom

	Name	Duration	Place (if applicable)
People Trained	BSP-NU Event General Training for Linked Projects Christian Aldwin D. Canlapan Columna, Jenalyn Ma. Theresa Judith N. Principe Gwenzel S. Riego Llevie B. Gonzales Jiggs Josef Z. Rotoni Ria Liza C. Canlas Dranreb D. Bersamina Allieson C. Ilao Edison M. Esberto Salvador V. Soneja Jr Carolyn D. Matira Rafael A. Dimaculangan Jan Guiller Vergara	June 4-5,11, 18,19, 25 & 26 2021	

	Title of Project	Date implemented	Funding Agency
Project Implemented	PoLite innovation	NU documentation	

	Title of Publication	Date of Submission	Place (if applicable)
Publications	NU documentation		

Challenges

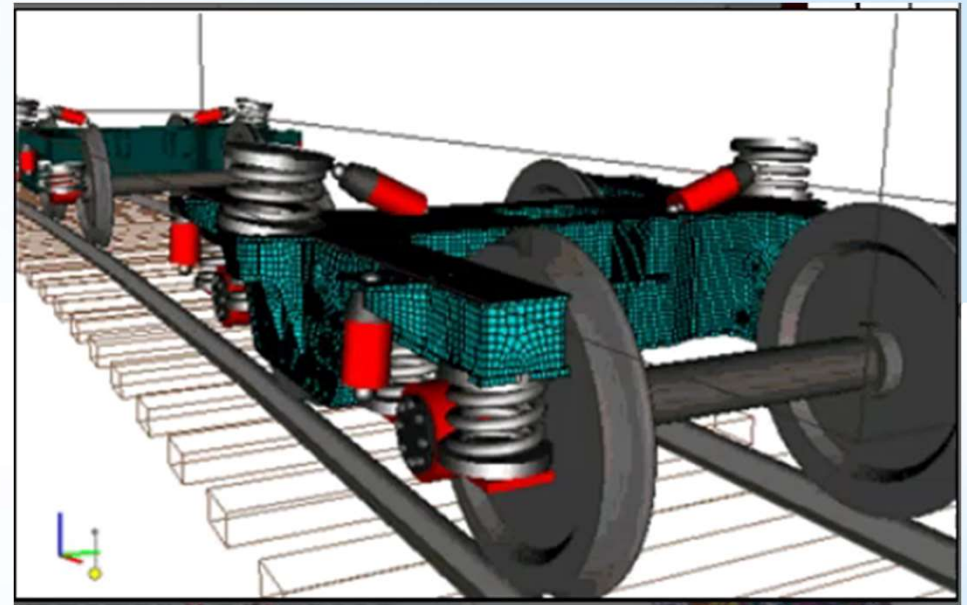
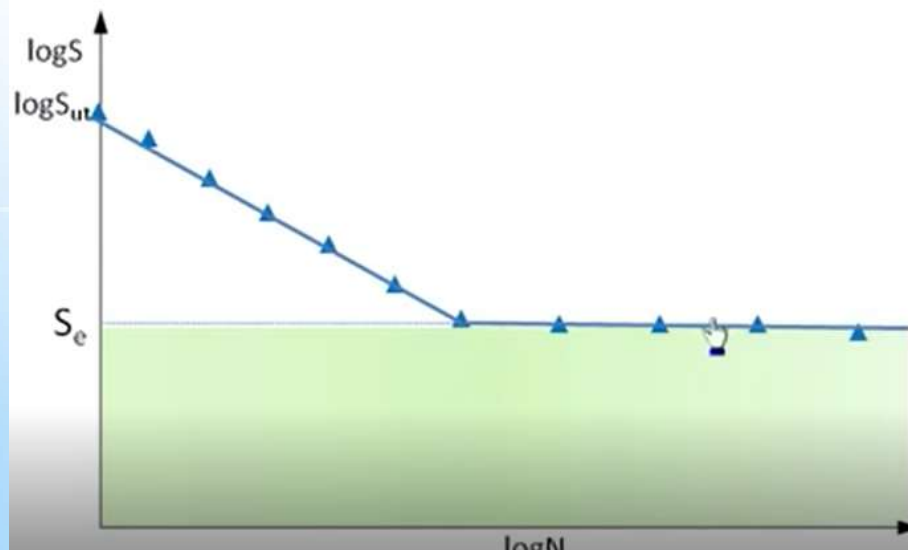
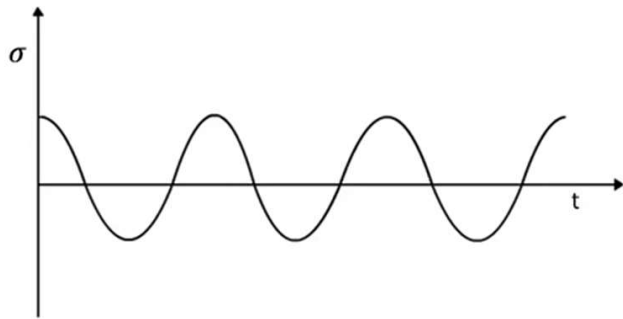
FATIGUE FAILURE

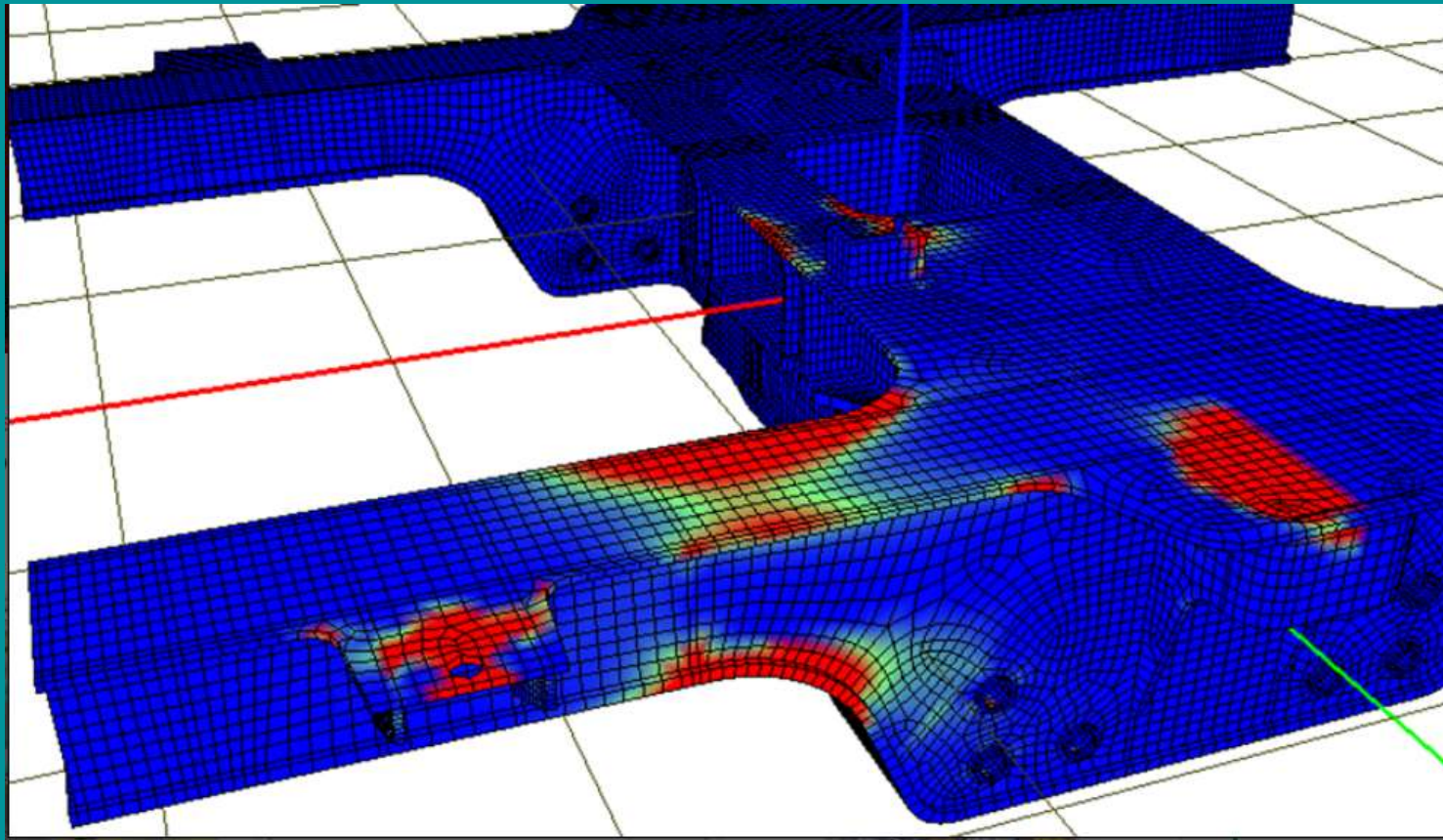
STRESS Vs NUMBER OF CYCLES

Traditional way

vs

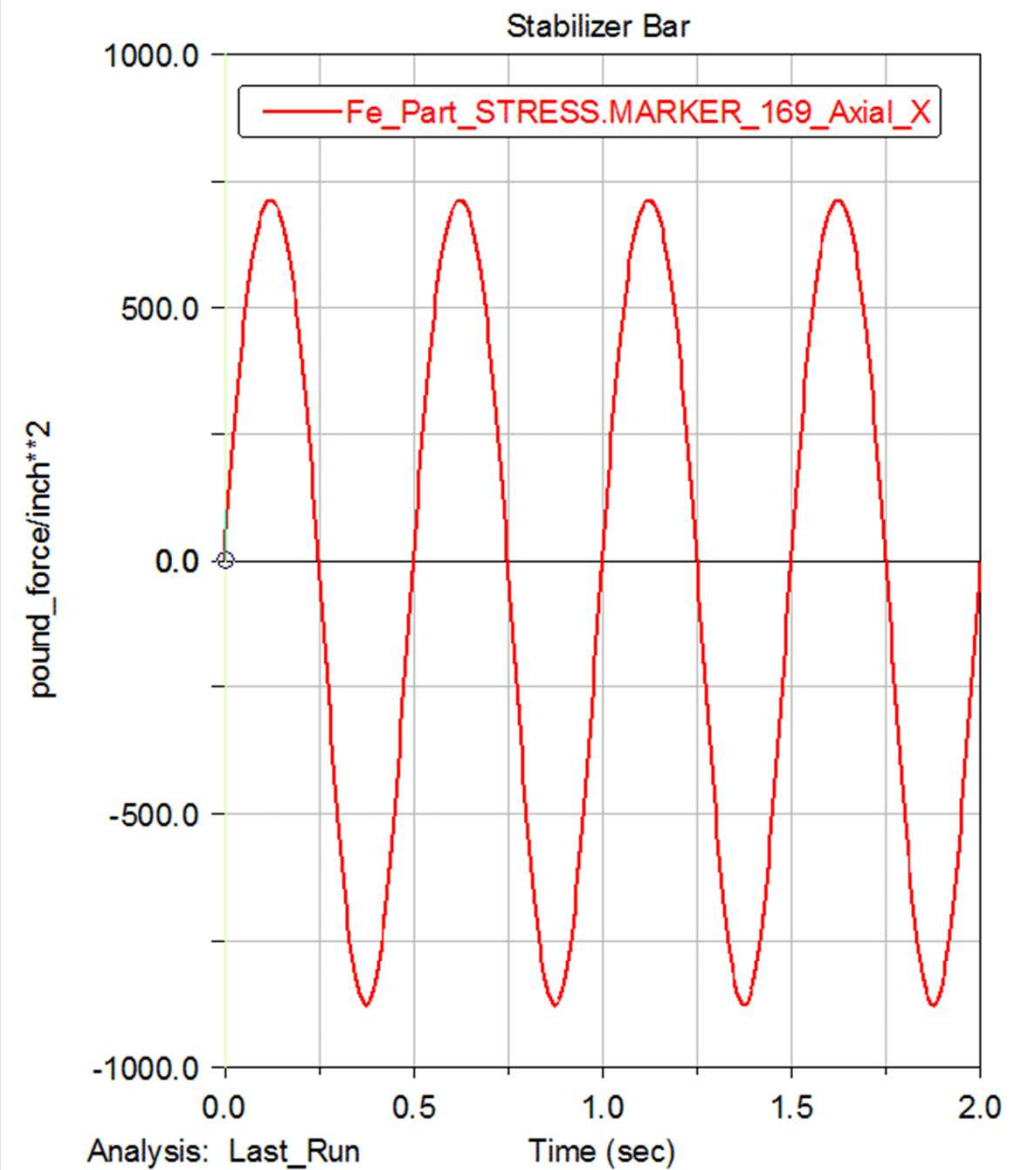
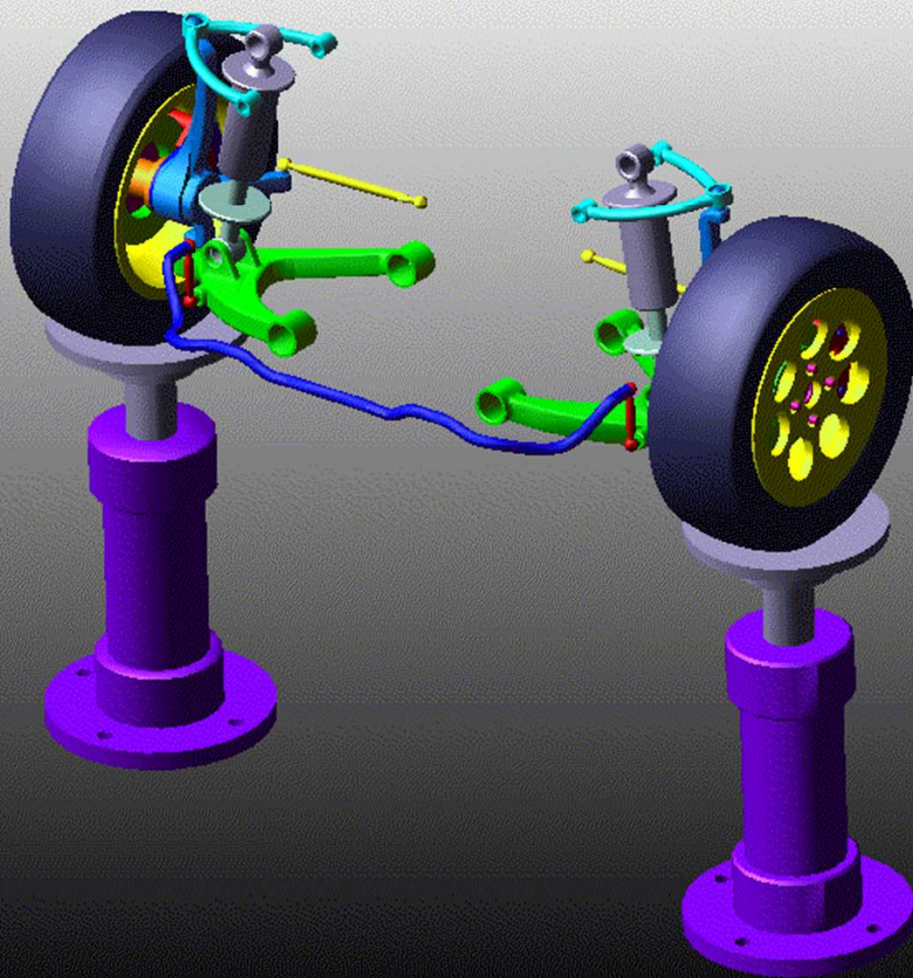
FEA Simulation





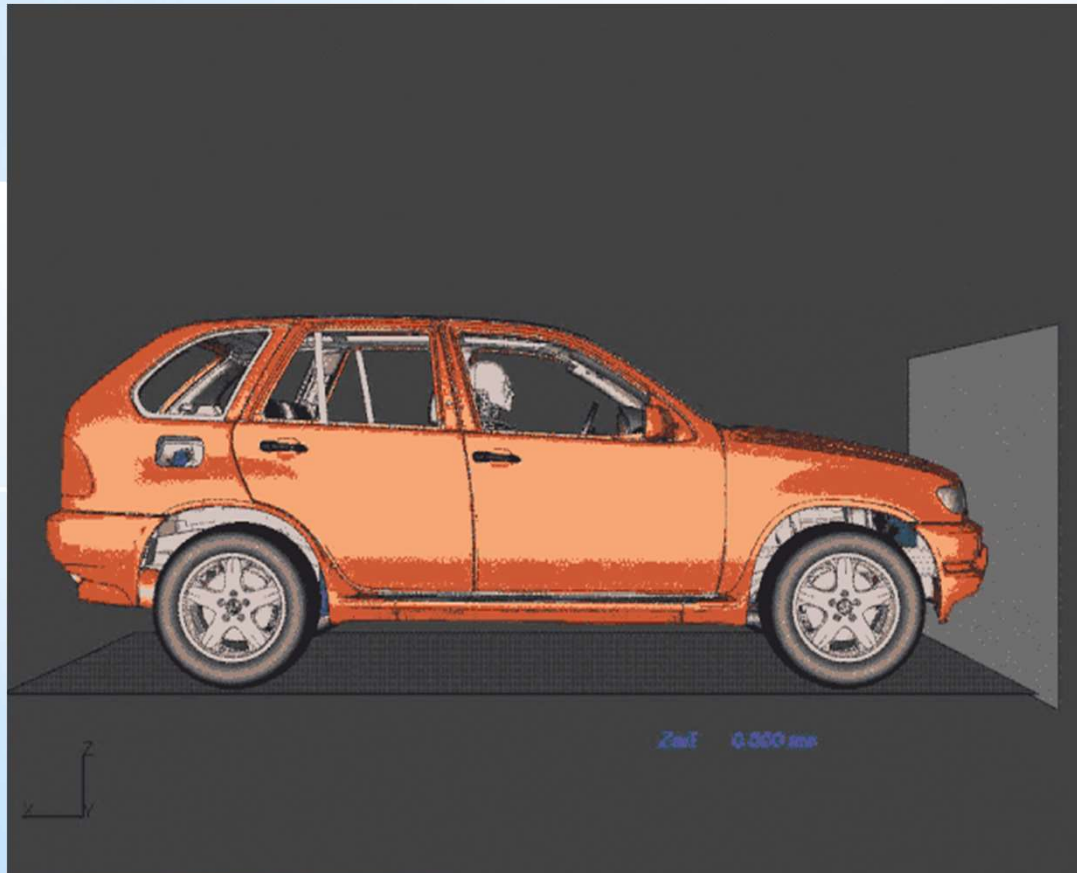
Fatigue Simulation

Last_Run Time= 0.0000 Frame=001



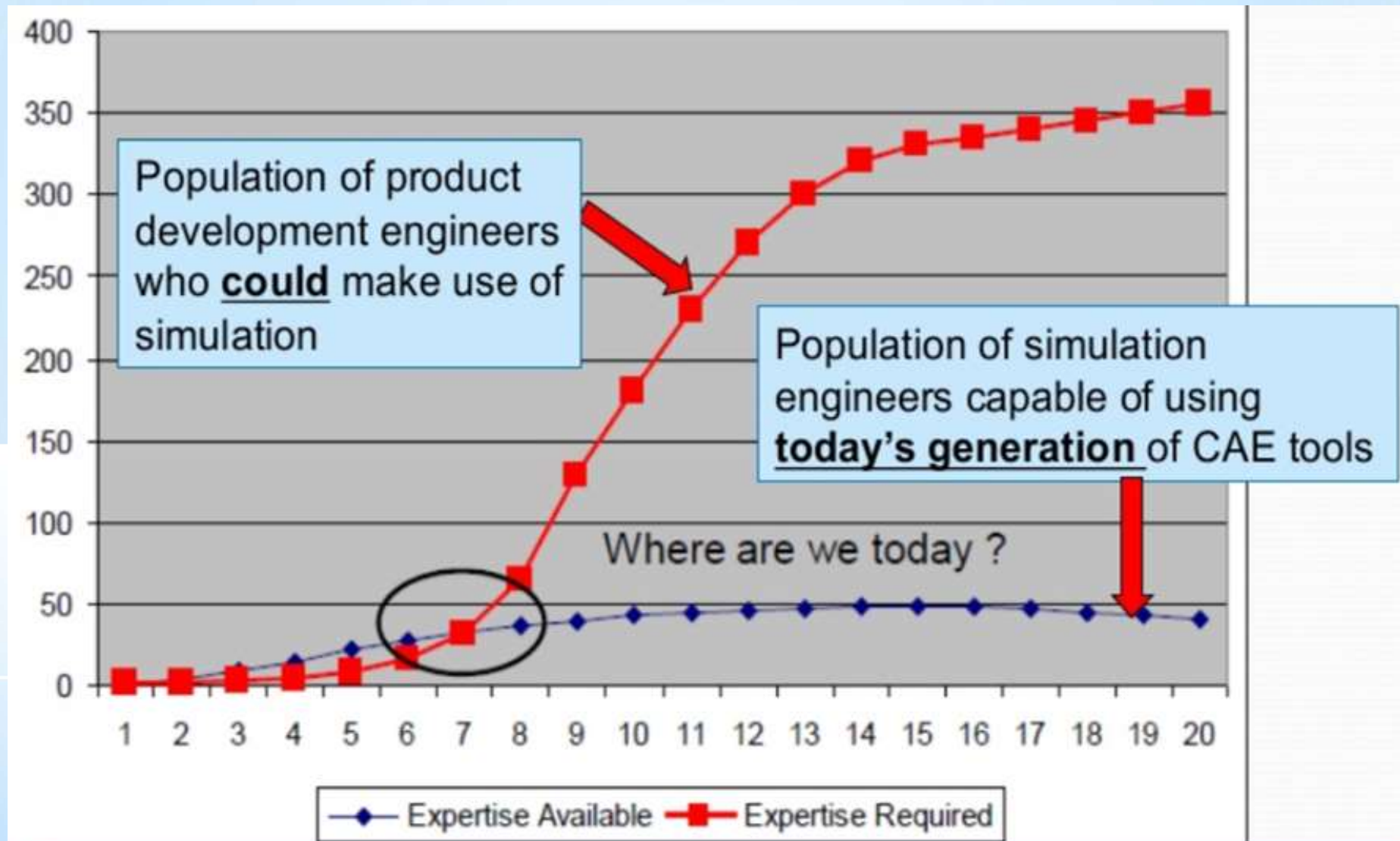


Traditional way

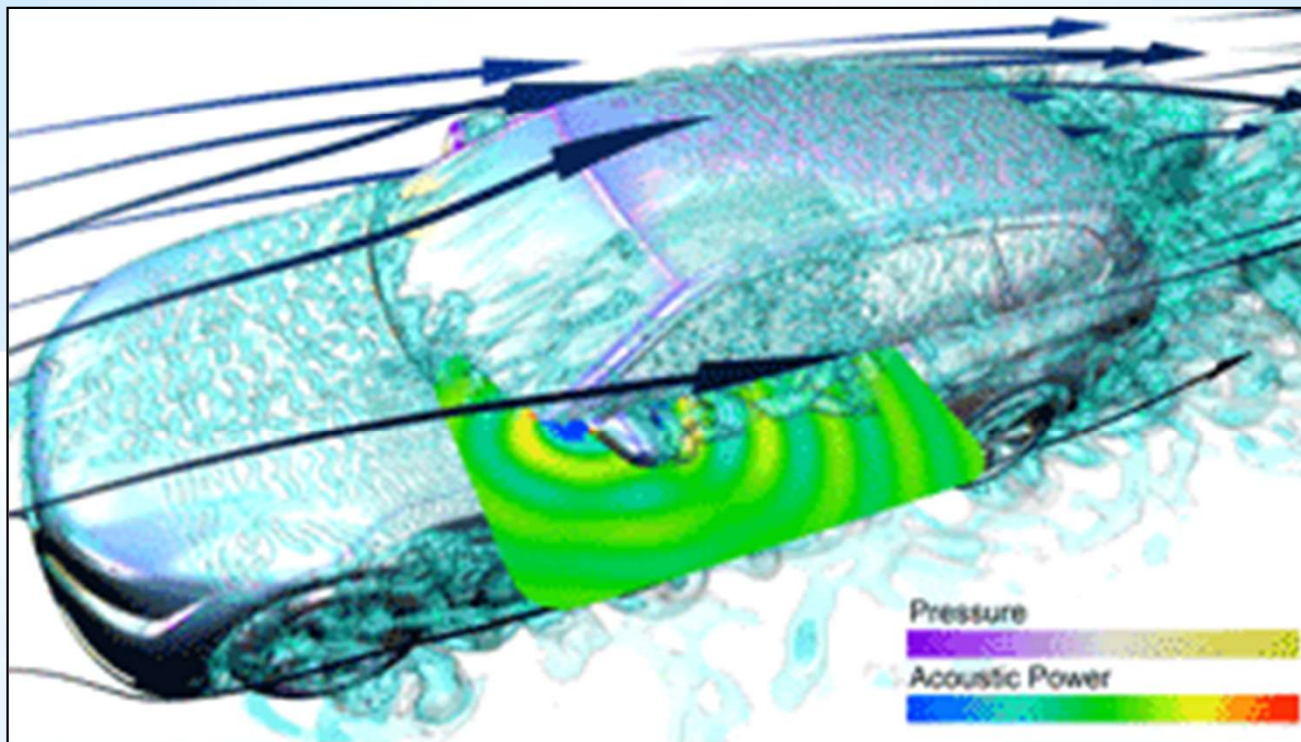


FEA Simulation

Recommendation

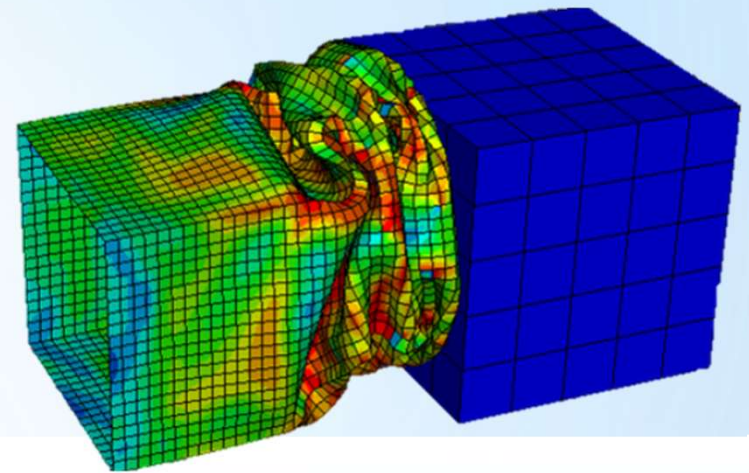


Multiphysics Approach (acoustic and structural and CFD)



CONCLUSION

- ✓ Finite Element course should be offered in engineering universities
- ✓ Use Finite Element software in Industries
- ✓ Collaboration between Academe and Industry



Since FET is the preferred tool in industrialized countries, we can participate in product development without our own industry by being part of Engineering in designing product development at affordable cost. We just have to be experts in FE Simulation.