



Alumni SPRS

20 Juni 2020

Zoom Meeting

Speaker View

Participants (14)

Find a participant

- AC Agus Choiron (Host, me)
- Bahrudin Bahrudin
- Puspita Fajar
- R Redy
- S Saifuddin
- AA agustian adi g
- A Ainul
- RH Robith H
- A Awp

Invite Mute All

Zoom Group Chat

From Puspita Fajar to Everyone: side photo show by Agustian

Activate Windows
Go to Settings to activate Windows.

Type message here...

Mute Stop Video Security Participants Chat Share Screen Record Reactions

14

End

Type here to search

Rapat alumni SPRS ... WhatsApp - Googl... X W Desktop Zoom Zoom Meeting

7:29 PM 6/20/2020

Outline

1. *Flash Back* Studio Perancangan dan Rekayasa Sistem - Mesin UB
2. Program Kerja pada Masa Pandemi Covid-19

1. *Flash Back Studio*
Perancangan dan Rekayasa
Sistem - **Mesin UB**

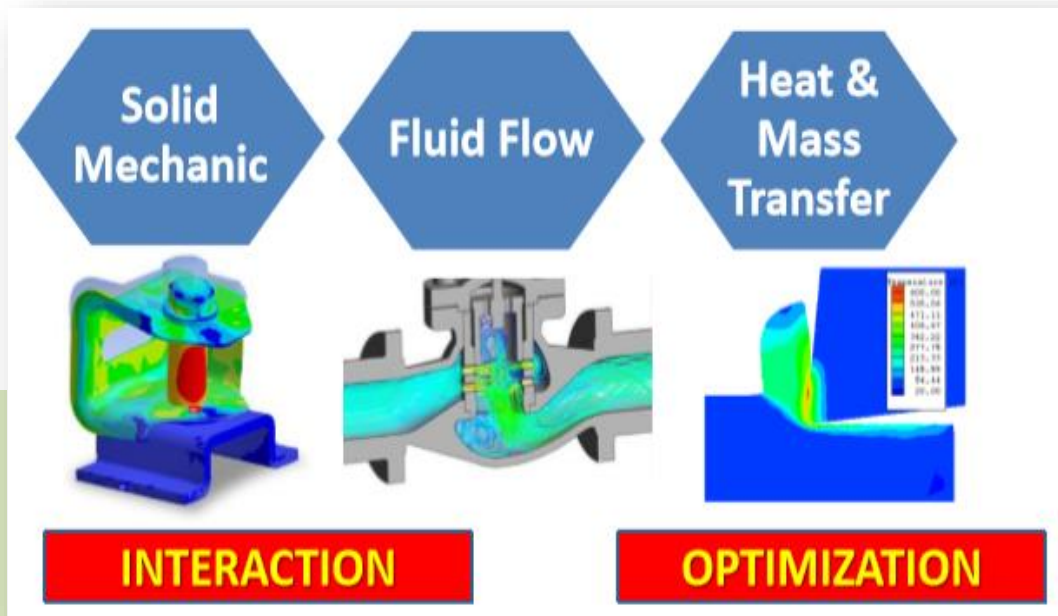
SPRS History

**Kelompok Studi
ANSYS**

**Training ANSYS
dibuka**

**Peminat Skripsi Simulasi
Komputer Meningkatkan**

2003 SPRS Berdiri



**Laboratorium
Konsentrasi
Desain sedikit**

SPRS (Studio Perancangan & Rekayasa Sistem)

DESIGN & SYSTEM ENGINEERING LABORATORY
MECHANICAL ENGINEERING DEPARTMENT BRAJAYATI UNIVERSITY MALANG
KAMPUS BRAJAYATI 107 Malang (53131) 5091932 Fax: 108843

PRODUCT

- COMPUTER SIMULATION TRAINING (FINITE ELEMENT & FINITE VOLUME METHOD, CAD/CAM, STRESS ANALYSIS, FLUID FLOW, etc)
- TRAINING & TEACHING AID PRODUCTION (PLC - PNEUMATIC)
- STUDY GROUP FOR RESEARCH, THESIS & SCIENTIFIC COMPETITION


FACILITIES

- COMPUTER I7 + PRINTER
- FESTO & SCHNEIDER PLC, SMART RELAY
- CONVEYOR & PNEUMATIC TEACHING AID
- RESEARCH - THESIS POSTER
- COMFORTABLE ROOM

RESEARCH

STRESS ANALYSIS : CRASH TEST, HELM IMPACT TEST
OPTIMUM DESIGN : METAL GASKET, BIOMEDICAL
METAL FORMING : METAL CUTTING SIMULATION
FRACTURE MECHANIC & FATIGUE
HEAT TRANSFER & FLUID FLOW
AUTOMATIC CONTROL & MANUFACTURING SYSTEM
COMPOSITE MODELLING

CONTACT PERSON :
HEAD OF DESIGN AND ENGINEERING SYSTEM LABORATORY
Dr. Eng. MOCHA AGUS CHOIRON, ST., MT
HP: 0821 3924 9997
EMAIL : agus_choiron@ub.ac.id
www.design-engineering-system-lab.com



1. Finite Element Analysis Centre
2. Attending Academic Meeting & Competition
3. Develop Innovation & Customized Mechanical Design

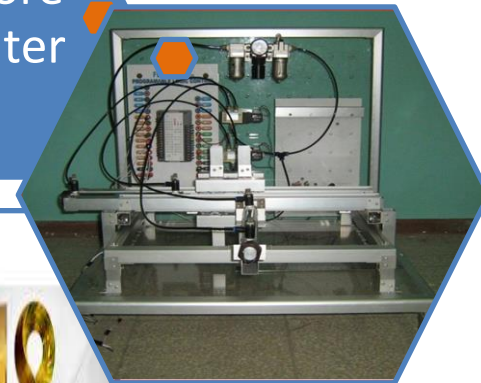
EQUIPMENT

PLC Festo-
Mitsubishi,
Smart Relay
Schneider



12 PC Core
i7 + Printer

ANSYS
Academic
18.1
(5 users)



Book and
Journal &
Research
Poster
Collection



SPRS Project Networking

1. **RESEARCH** : Yamaguchi University, Universiti Toen Husein Malaysia, Politeknik Negeri Banyuwangi, Politeknik Kota Malang.
2. **TRAINING** : Universitas Negeri Malang, Universitas Muhammadiyah Jogjakarta, Univeristas Udayana, Universitas Sains dan Teknologi Jayapura
3. **INDUSTRY** : CV Alpha Omega, PT. Indospring Tbk., ASTRA Wintor, PJB Services and PT. Perkebunan Nusantara X
4. **OVERSEAS** : Student exchange UTHM Malaysia, Short Research Stay in UTeM Malaysia and UTHM Malaysia

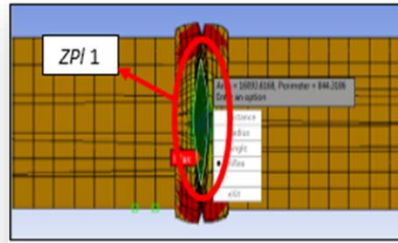
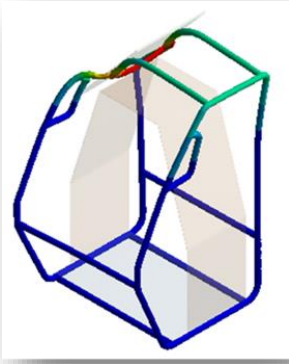


Competition

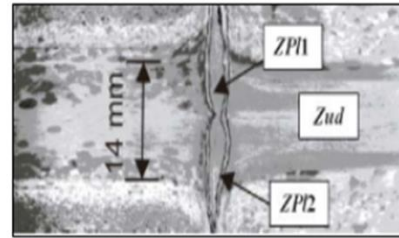
- Finalis BKSTM-2012 (UGM)
- Juara 3 MIDC-2012 (UB)
- Finalis Mechanical Fair 2013 (UI)
- Finalis MIDC-2013 (UB)
- Finalis BKSTM-2013 (UNILA)
- Juara 2 BKSTM 2014 (UI)
- Juara 3 MIDC-2014 (UB)
- Juara 1 MIDC-2015 (UB)
- Top 10 M-FEST 2016-National Innovation Competitions (ITB)
- Best Presentation IEIC 2016 (UNHAS)
- Juara Harapan 1 Lomba Rancang Bangun Nasional ke-6 2016 (ITB)
- Juara 1 dan 2 MIDC 2016 (UB, 2016)
- Juara 1 Lomba Rancang Bangun Nasional ke-7 2018 (Kupang)



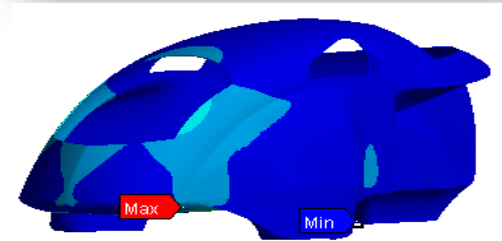
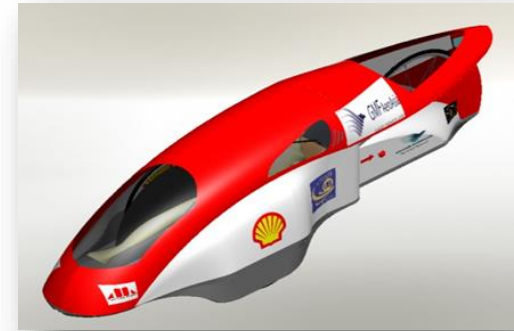
Undergraduate Program



(a)



(b)



22.16 mm



66.47 mm



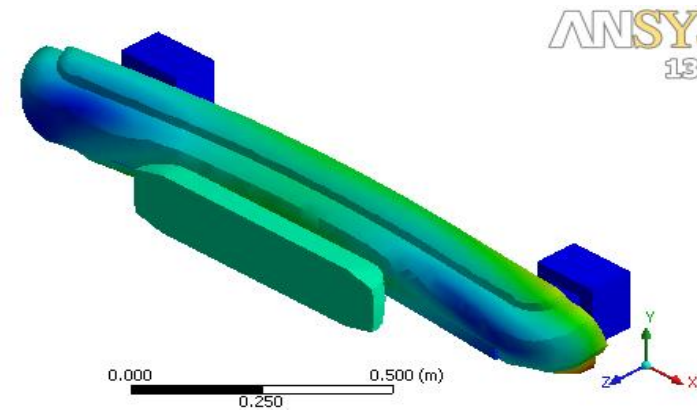
88.63 mm



99.71 mm

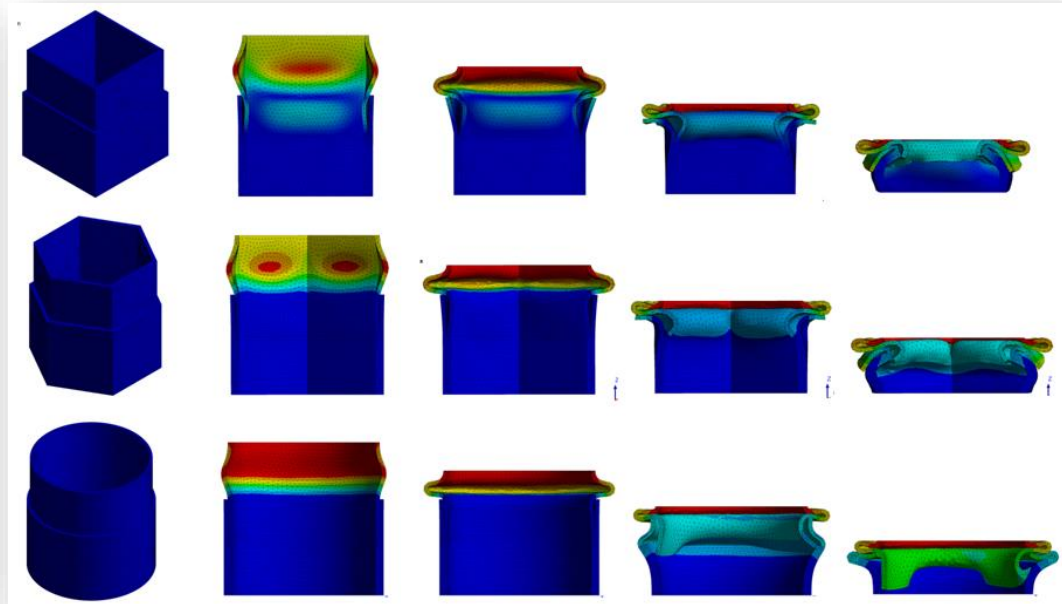
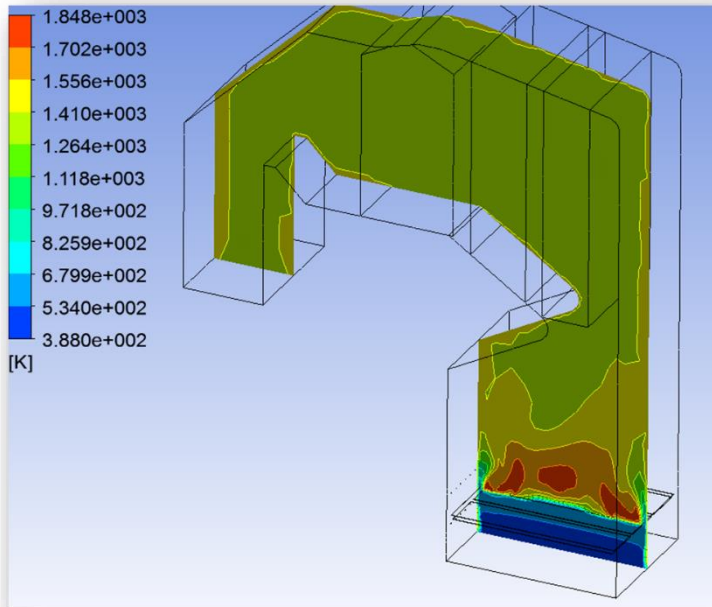
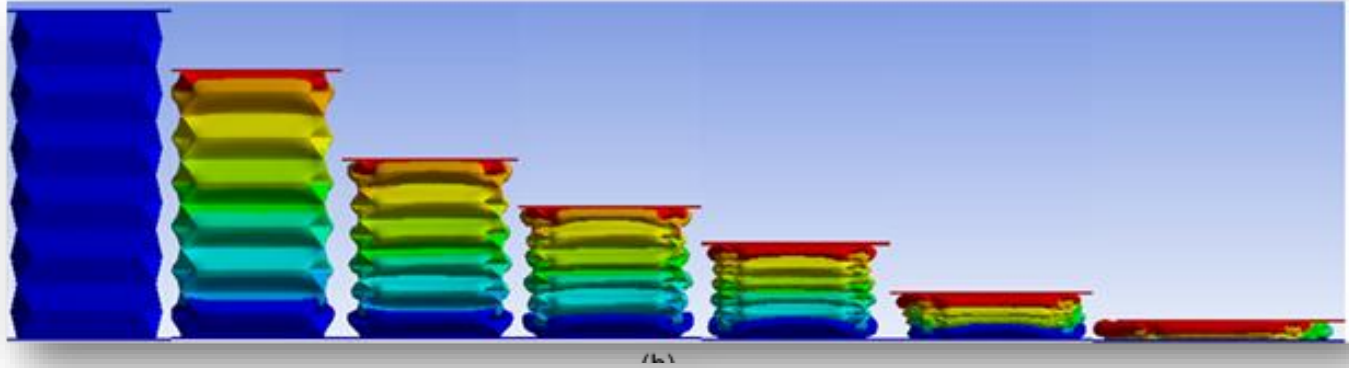


Diamond



ANSYS
13

Master Program



Doctoral Program

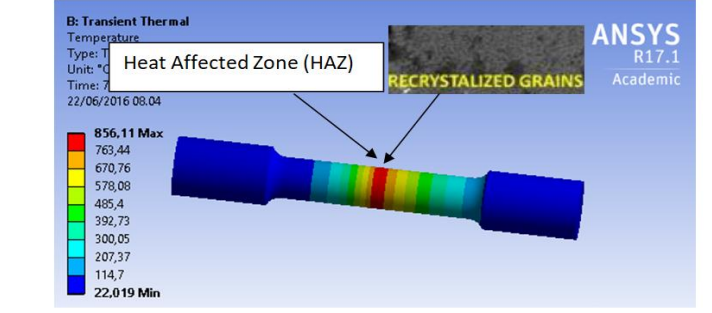
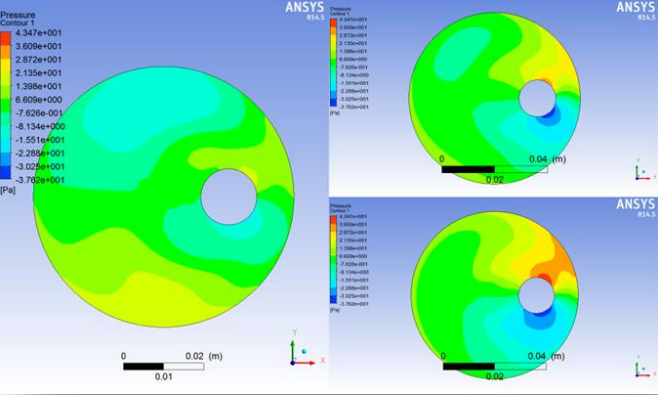
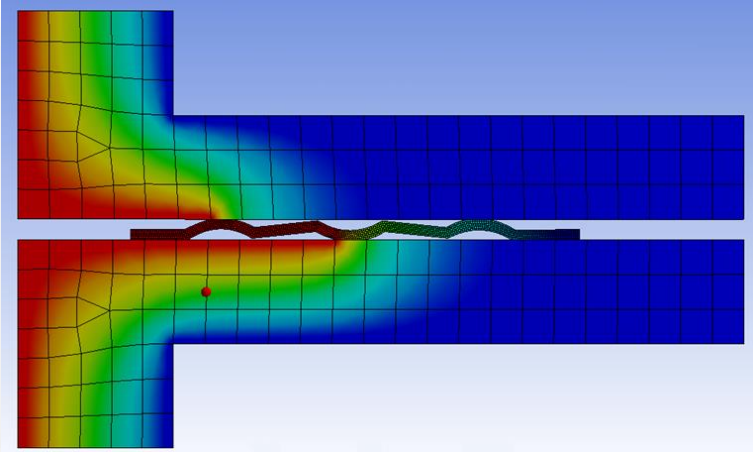
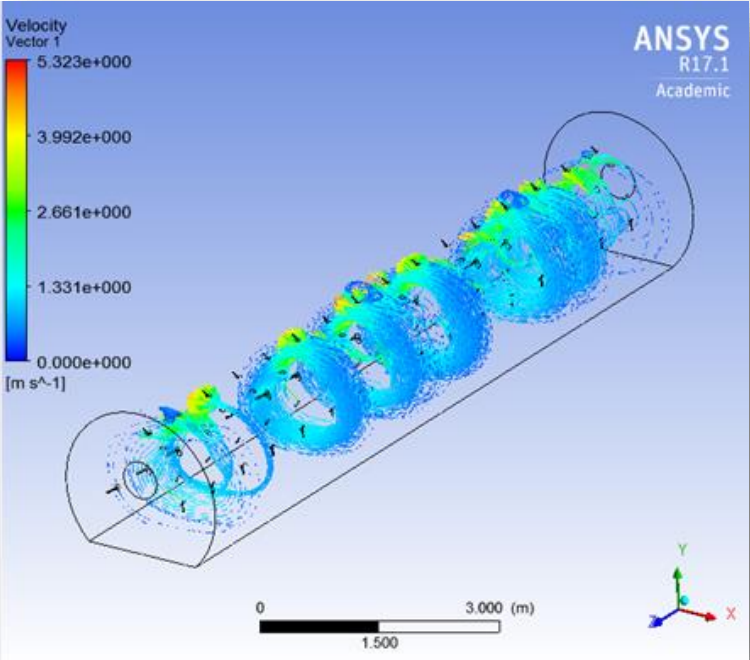
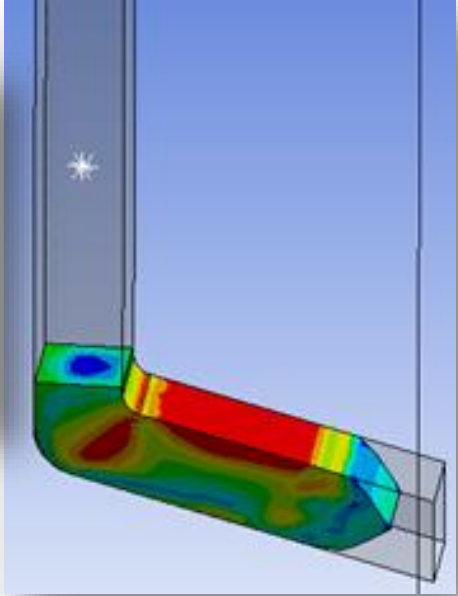
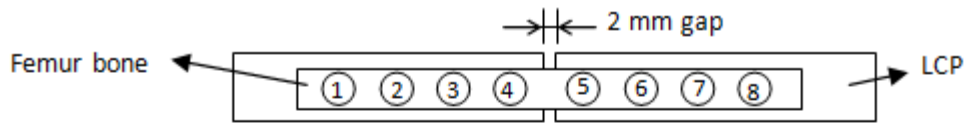


Fig. 7 Heat affected zone near the weld interface in the stainless steel side



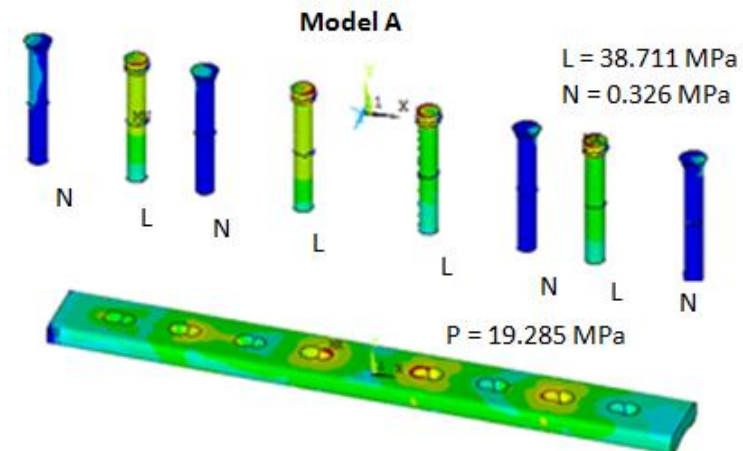
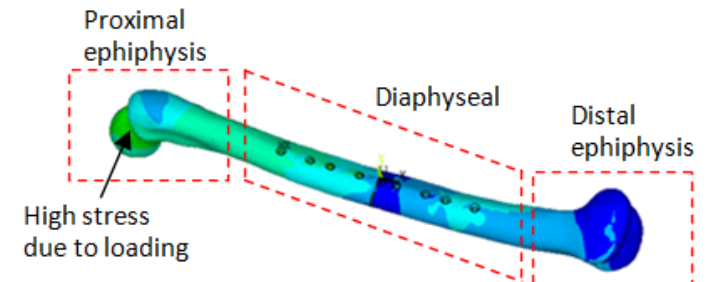
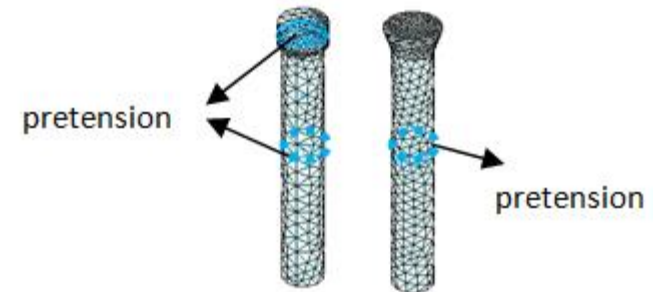
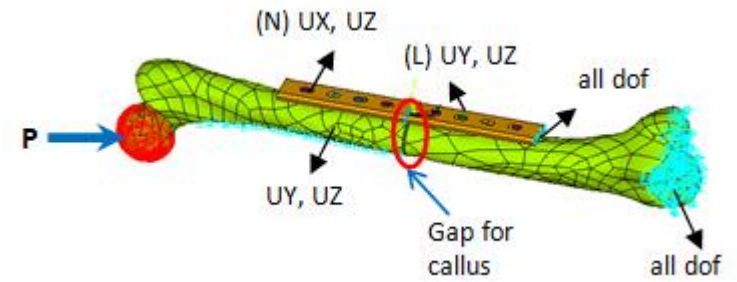
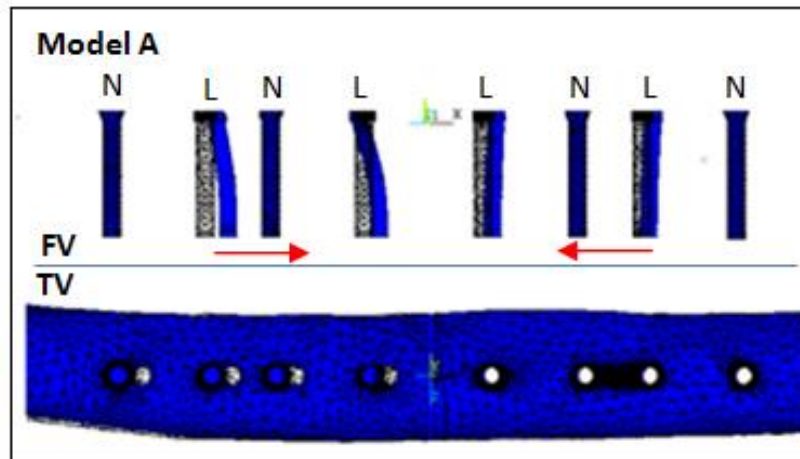
Biomedical Engineering



Model	Screw configuration	Preview
A	N-L-N-L L-N-L-N	
B	N-N-L-L L-L-N-N	
C	N-L-L-N N-L-L-N	
D	N-L-L-L L-L-L-L	
E	N-L-N-N N-N-L-N	

● Locking screw (L)

○ Nonlocking screw (N)

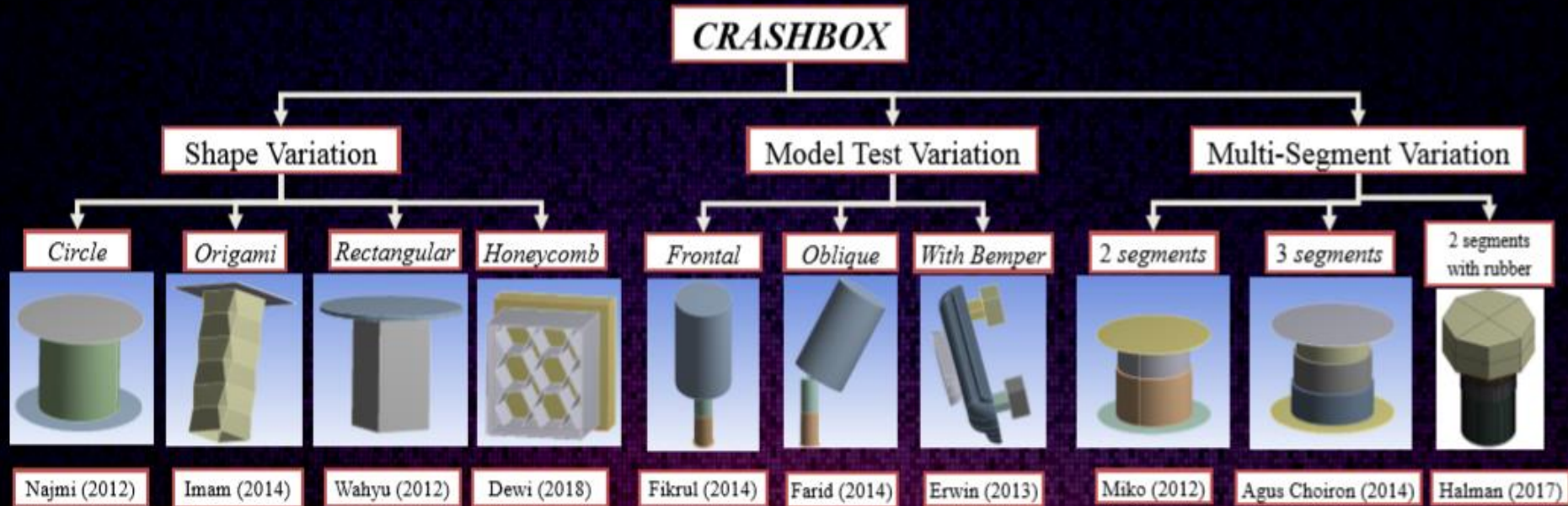




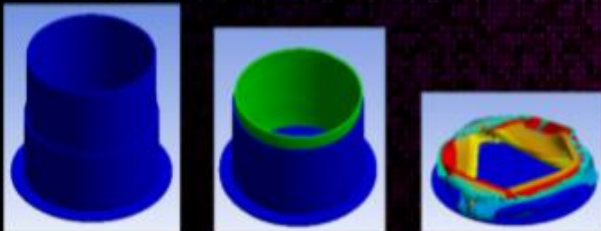
CRASHBOX PROJECT

DESIGN AND SYSTEM ENGINEERING LABORATORY

Mechanical Engineering Department, Brawijaya University, Malang City



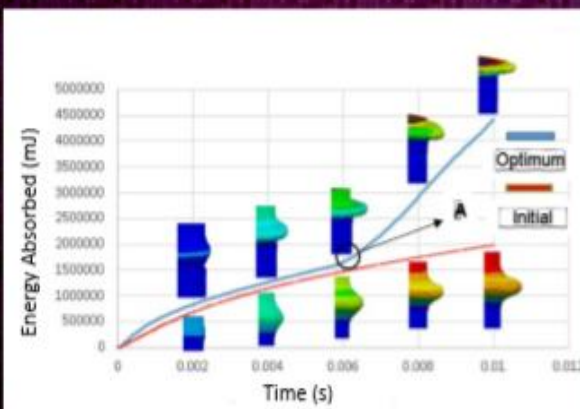
Deformation Mode



The initial condition to final condition from Two-Segments Crashbox using impactor with frontal direction

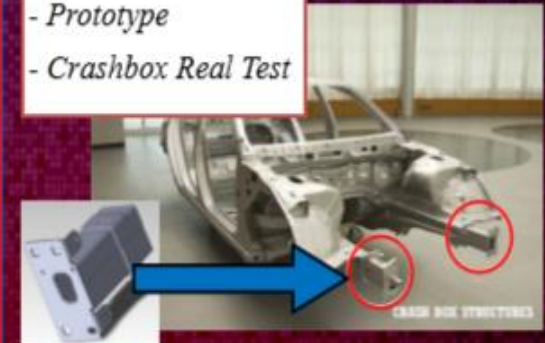
Designed by: Stefanus Sugianto

Energi Absorption Performance and Deformation Mode

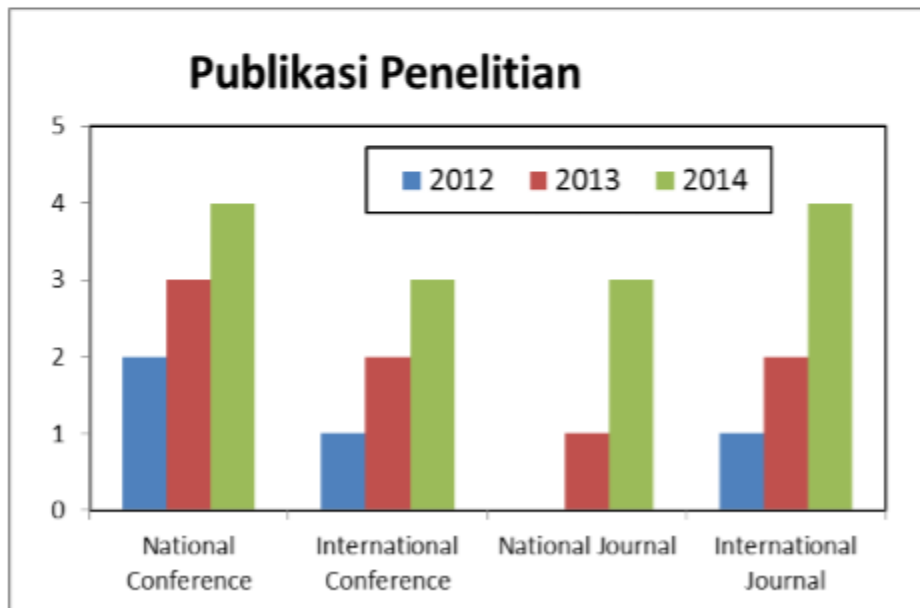
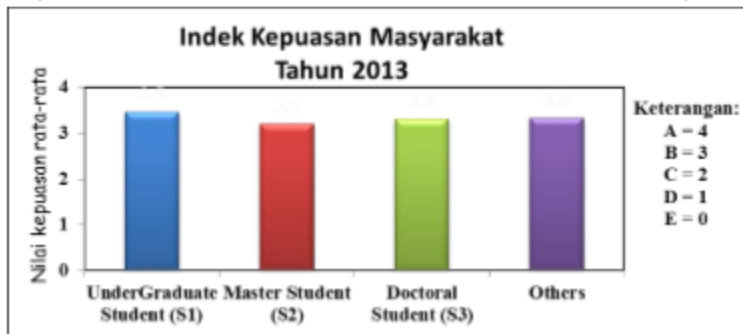
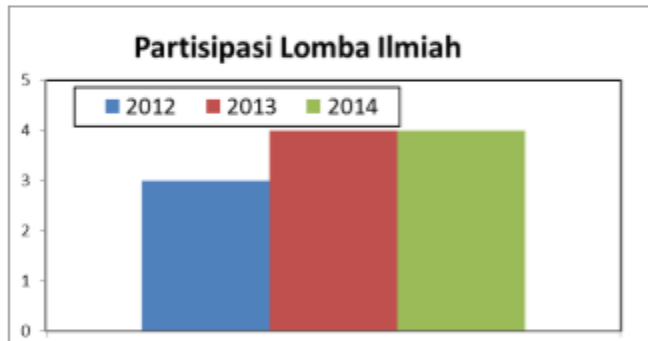
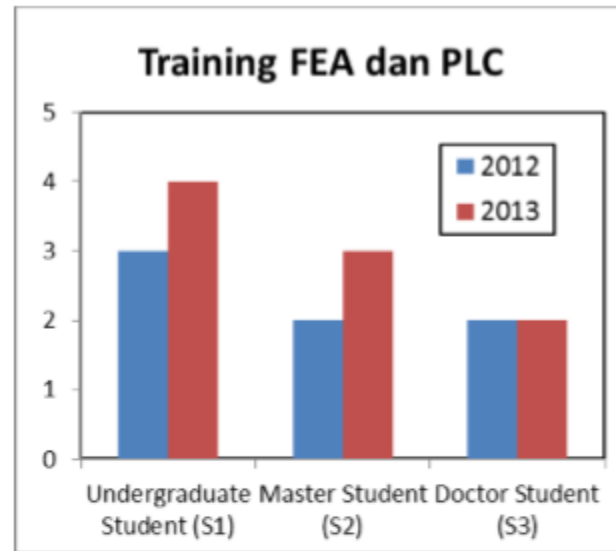
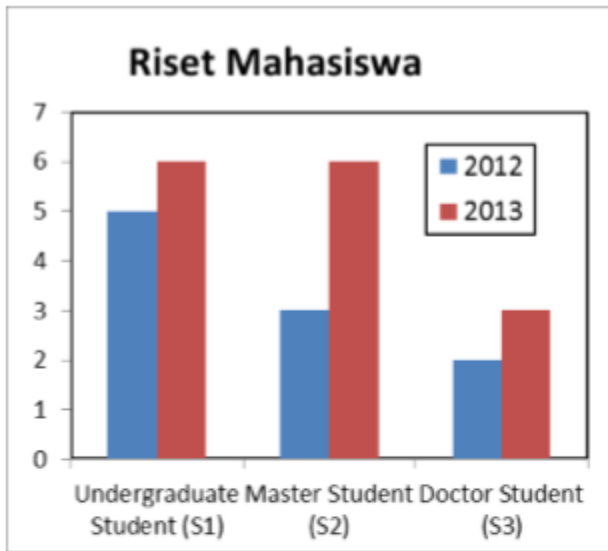


Future Project

- Optimum Design
- Prototype
- Crashbox Real Test



SPRS in Number



Aktivitas Laboratorium SPRS

1. Simulasi dan modelling kasus-kasus di bidang **DESAIN** (stress analysis), **PRODUKSI** (simulasi proses pembentukan dan pemotongan), **MATERIAL** (failure analysis dan composite) dan **KONVERSI ENERGI** (fluid mechanic dan heat transfer).
2. Perancangan sistem terintegrasi pada tahapan pra desain melalui **koneksi CAD-CAE-CAM** untuk mendapatkan produk yang optimal.
3. Simulasi produk yang memiliki inovasi teknologi berbasis kebutuhan lokal-nasional dapat bekerjasama dengan jurusan lain seperti di bidang optimasi dan design product dengan Teknik Industri, **SIMULASI ALAT BANTU MEDICAL** dengan Kedokteran dan **SIMULASI MEKANISME PERTANIAN** dengan Teknologi Pertanian serta jurusan lain yang membutuhkan.

ROADMAP PENELITIAN SPRS (2013-2024)

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Simulasi dan modelling kasus-kasus di bidang Desain, Produksi, Material dan Konversi Energi (Lingkup Internal Jurusan Mesin)											
Simulasi produk yang memiliki inovasi teknologi berbasis kebutuhan lokal-nasional bekerjasama dengan Jurusan lain (Lingkup Eksternal Jurusan)											
Perancangan sistem terintegrasi pada tahapan pra desain melalui koneksi CAD-CAE-CAM untuk mendapatkan produk yang optimal											
							Produk unggulan hasil dari optimasi desain dengan sistem terintegrasi melalui koneksi CAD-CAE-CAM dan menjadi pusat konsultan Stress Analysis untuk kasus pengembangan produk-produk inovasi teknologi berbasis kebutuhan skala lokal dan nasional				

2. Pembahasan Program Kerja dan Hasil Rapat

Program Kerja SPRS

- ❑ SOP Training (Update buku (kompleksitas soal), **PPT**, video,) → **Training ONLINE**
- ❑ SOP Riset (flexible → poster, database..)
- ❑ Covid 19 : (**hand sanitizer**: 500 ml+pemegang), masker, jaga jarak) + Surat masuk ke lab
- ❑ Seminar ke Bali OFF → Presenter Online
- ❑ Database Riset **Crash Box/Biomedical**
(Geometri-Frontal/oblique, material (composite)) → optimasi → prototype → Uji exp → PATENT/SOLD.
- ❑ Penerimaan Asisten Baru

Pembagian Tugas

- ❑ Database Riset **Crash Box** → Mahen
- ❑ Koleksi buku Training → Anggi
- ❑ Verifikasi model running (low/high speed, Frontal/oblique, material) → Dzia
- ❑ Training AIM → Bayu

Keuangan 2.3 Juta (+/-),

→ berbagi Agustus - Desember 2020

Tantangan di masa Pandemi Covid-19

Rutinitas yang tertunda :

1. Kegiatan Berbagi di bulan Ramadhan
2. Seminar Nasional di Bali

Training Internal ??

Penerimaan Asisten baru ?

Patent sederhana, HAKI

Google Drive

PLC share ke Elmes

Networking alumni dg Mesin UB (Lab)

Video kerjasama dg Alumni (praktisi/study case)

Gasket digalakkan → ilman, robith

Frame sepeda → baharudin

Alumni support data

Noise di Honda → topic judul

KPI diterapkan ke semua member SPRS

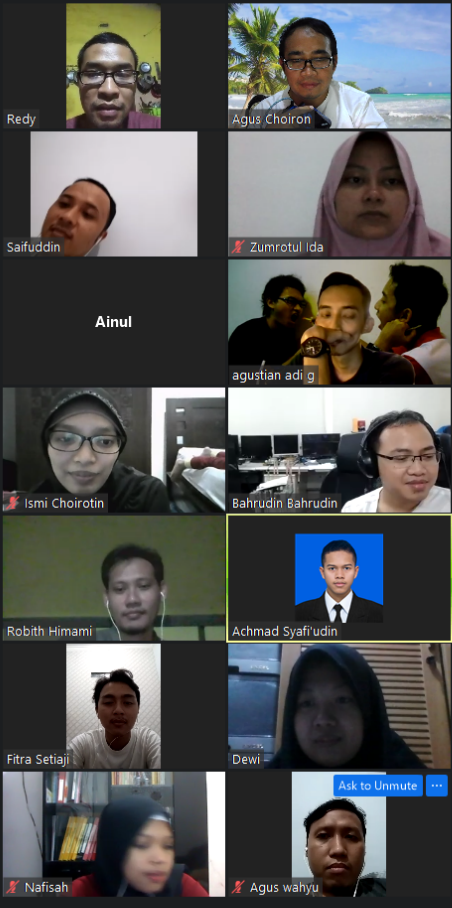
PJ alumni SPRS

Tantangan di masa Pandemi Covid-19

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- Training Internal ??
- Penerimaan Asisten baru ?
- Patent sederhana, HAKI

SLIDE 19 OF 19

7:58 PM 6/20/2020



Microsoft Word ribbon: REVIEW, VIEW, FORMAT. Sub-ribbons: Paragraph, Drawing, Editing. Tools include: Text Direction, Align Text, Convert to SmartArt, Shape Fill, Shape Outline, Shape Effects, Find, Replace, Select, Arrange, Quick Styles.

Activate Windows
Go to Settings to activate Windows.

Agus Choiron

isa

Zumrotul Ida

Bahrudin Bahrudin

Robith Himami

agustian adi g

Agus wahyu

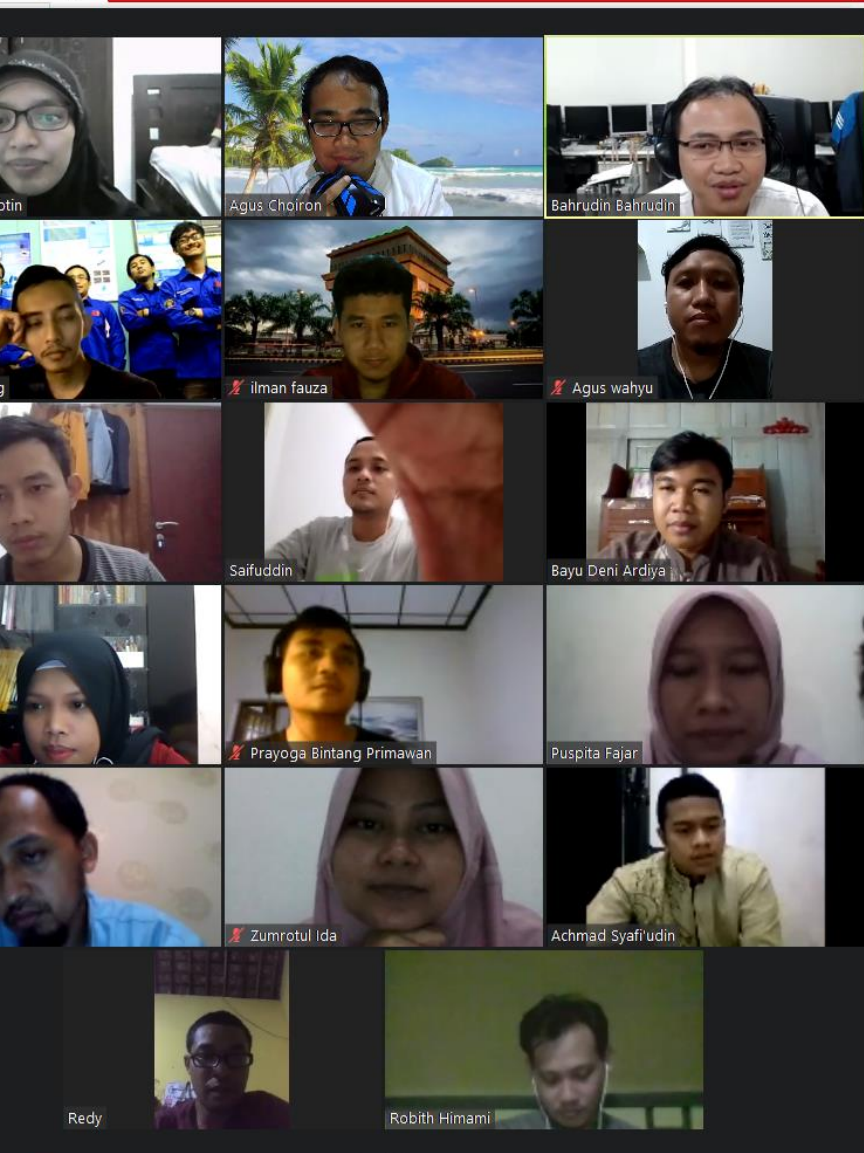
Ainul

Saifuddin

Nafisah

Achmad Syafi'udin

Prayoga Bintang Primawan



Tantangan di masa Pandemi Covid-19

- Rutinitas yang tertunda :
 1. Kegiatan Berbagi di bulan Ramadhan
 2. Seminar Nasional di Bali
- Training Internal ??
- Penerimaan Asisten baru ?















- Patent sederhana, HAKI
- Google Drive
- PLC share ke Elmes
- Networking alumni dg Mesin UB (Lab)
- Video kerjasama dg Alumni (praktisi/study case)
- Gasket digalakkan

Participants (17)

Find a participant

- AC Agus Choiron (Host, me)
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- Achmad Syafi'udin
- A Ainul
- B Bayu Deni Ardiya
- Puspita Fajar
- RH Robith Himami
- S Saifuddin
- AW Agus wahyu
- IF ilman fauza
- I isa
- Ismi Choirotin
- N Nafisah
- PB Prayoga Bintang Primawan
- ZI Zumrotul Ida

Invite Mute All

 Bahrudin Bahrudin	 Agus Choiron	 ilman fauza	 Agus wahyu
 Ainul	 Prayoga Bintang Primawan	 Puspita Fajar	 isa
 Zumrotul Ida	 Achmad Syaf'udin	 agustian adi g	 Robith Himami
 Saifuddin	 Ismi Choirotin	 Fitra Setiaji	Redy
Muhammad Sub...	B Bayu Deni Ardiya	Kamaruddin Ru...	Nafisah

Participants (20)

Find a participant

- AW Agus wahyu
- AA agustian adi g
- B Bayu Deni Ardiya
- Fitra Setiaji
- KR Kamaruddin Rudi M13
- MS Muhammad Subhan
- N Nafisah
- PB Prayoga Bintang Primawan
- ZI Zumrotul Ida

Invite Mute All

Zoom Group Chat

From Puspita Fajar to Everyone:
slide photo show by Agustian

From Bayu Deni Ardiya to Me: (Privately)
Pak, saya izin rapat program maha
wirusaha dengan kelompok saya
rapatnya di zoom juga



ilman fauza

Agus wahyu

Ainul



Zumrotul Ida

agustian adi g

Robith Himami



Fitra Setiaji

Redy

vivo 1902




Kamaruddin Ru...



Muhammad Sub...

Nafisa





Fajar



Zumrotul Ida



agustian adi g



Ismi Choiroti



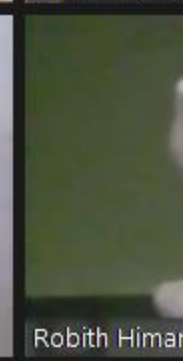
02



isa



Achmad Syafi'udin



Robith Himar



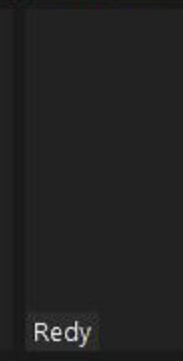
a Bintang Primawan



Fitra Setiaji



Galaxy A50s



Redy

Agus wahyu

Kamaruddin Ru...

Muhammad Sub...