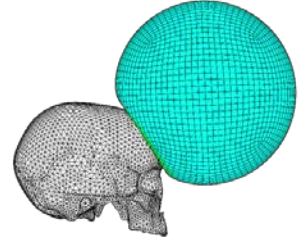


Seminar & Course

Computational Analysis of Soccer Heading and Protective Headgear



Lecturer:

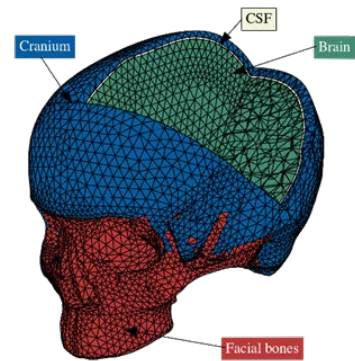
Dr. Mohd Hasnun Arif HASSAN,

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Senior Lecturer, Faculty of Mechanical and Manufacturing Engineering, University Malaysia Pahang, Malaysia

Director of the Innovative Manufacturing, Mechatronics and Sports Laboratory (iMAMS)

Topics:

1. Concussions in Soccer
2. Finite Element Model of Soccer Ball
3. Finite Element Model of Human Head
4. Finite Element Analysis of Soccer Heading
5. Finite Element Analysis of Protective Headgear



SEMINAR

**Wednesday March 20th 12.15 pm, Large Meeting Room,
3rd Floor, Complesso Ingegneria Meccanica, Via Venezia 1**

COURSE Timetable:

Tue 19/03/19 14:30-17:00 Room M3

Wed 20/03/19 12:15-13:30 Large Meeting Room, Via Venezia

Thur 21/03/19 10:00-12:00 Room M3

Rooms at the Dept. of Industrial Engineering, Via Venezia 1, Padova.

Mohd Hasnun Arif HASSAN, PhD

Hasnun currently serves as a senior lecturer at the Faculty of Mechanical and Manufacturing Engineering, University Malaysia Pahang (UMP) located in Pekan, Pahang, Malaysia. He is also the director of the Innovative Manufacturing, Mechatronics and Sports Laboratory (iMAMS), which was founded by Prof. Zahari Taha who was his supervisor of his doctoral study. Hasnun earned his first degree in Mechanical Engineering at the University of Applied Sciences Bingen in Germany in 2010. During the final year of his undergraduate study, he was offered a scholarship by UMP under the fellowship programme to pursue his postgraduate studies. He then pursued a Master's degree in Mechanical Engineering at the University of Malaya in Kuala Lumpur, which he graduated with distinction in 2012. After that, he embarked on his PhD journey at UMP where he studied about the head injury sustained by soccer players due to heading. He completed his PhD study in 2016, then continue to serve UMP as a senior lecturer. His research interests include finite element modelling of the interaction between human and sports equipment, instrumentation of sports equipment, and injury prevention particularly with regards to sports. His work aims to apply engineering principles in sports not only to enhance the performance of an athlete, but also to prevent injuries.

References:

- Hassan, M. H. A., Taha, Z., Hasanuddin, I., & Mokhtarudin, M. J. M. (2018). *Mechanics of Soccer Heading and Protective Headgear*. Springer.
- Taha Z, Arif Hassan MH, Hasanuddin I, et al. Impact-absorbing materials in reducing brain vibration caused by ball-to-head impact in soccer. In: *Procedia Engineering*; 2014. doi:10.1016/j.proeng.2014.06.088.
- Petrone N, Carraro G, Castello SD, et al. A Novel Instrumented Human Head Surrogate for the Impact Evaluation of Helmets. *Proceedings*. 2018;2(6):269. doi:10.3390/proceedings2060269.