



## KMUTT Formula Student

Black Pearl Racing

<https://www.facebook.com/kmuttformulastudent>



### Presentation プレゼンテーション

マシン名: **Black Pearl VI : Phantom**

This car design under the concept of Black pearl leopard gecko. The very small strong fast gecko. So the Black pearl 6 phantoms must be smaller, lighter, powerful and also have greater cornering.

Smaller concept comes with the lighter weight. We try to reduce in every part of our car and we can reduce 30 kilograms from 285 to 255 kilograms under high reliability mind set. Powerful concept, We install YZF R-6 with the new intake and exhaust design that can produce 75 Hp which beyond 12 from last year and 59.4 Nm for maximum torque which increase 5 percent from last year model. The highest we ever made. So we got 0.29 for power per weight ratio beyond from last year about 31.18 percent. Faster also comes from our new electronics gear shifter so we can change the gear faster 50 msec. For greater cornering performance we optimize our suspension geometry and we also choose the new dampers that have the higher performance including aero dynamic devices .As the result, we got higher cornering speed and the laterals acceleration.

Moreover we want our car to be the smart gecko by adding new electronic devices called telemetry package. Consist of driving sensors, GPS module, WIFI module and driver intercommunication to make real time monitoring to improve all in dynamic events.

### Participation report 参戦レポート

This year Black Pearl Racing team had participated in Student Formula Japan 2014. We got 14th Place from 88 registered team with 598.91 from 1000 points. We were first rank among the foreign team and also got JAMA award for accomplished all the events.

This was the first time we finish all event in SFJ. Normally we encounter problem in inspection event which held us back in acceleration and skid-pad event. This year we had revised our design to be right under the FSAE rule with safety in mind. As result we can passed inspection event within 1st inspect. However, in static event our performance was poor due to our report and presentation was missed in content. But we had received referee feedback on our report, content and event purpose.

In dynamic event, our performance was not fulfill our expectation due to power-shifter mechanism and driver inexperience. Finally, we learned thousand and incomparable experience through hardship, teamwork and contrast in concept during the year of project. We expected that next year our team will learn from mistake to take position in award ceremony.

### 今回の総合結果・部門賞

●総合 14 位 ●日本自動車工業会会長賞

### Profile チーム紹介・今までの活動

KMUTT Formula Student club was established in 2004 to participated in the Thai society of automotive engineer auto challenge competition as a representative of KMUTT. From drawing boards to workshop, our team is committed to both theoretical to practical excellence.

### Team-member チームメンバー

#### Saran Thammasirikul(CP)

Surachate Chutima(FA),  
Anak Khantachawana(FA),  
Chonravit Nuya, Krongpoo Laimangkorn,  
Kullawat Yingrukcharern,  
Peeranat Saichin,  
Thanawat Wongpattananukul,  
Norawit Somchit, Terasak Panna,  
Suparak Paksontipong,  
Jamroen Wannasiri, Tanakon Rukjit,  
Nakarin Jantara, Tanic Leunanonchai,  
Tanapat Jantalert, Siripoj Srivirat

### Sponsors スポンサーリスト

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**Team-Movie** <http://www.jsae.or.jp/formula/jp/12th/movie/29.html>