

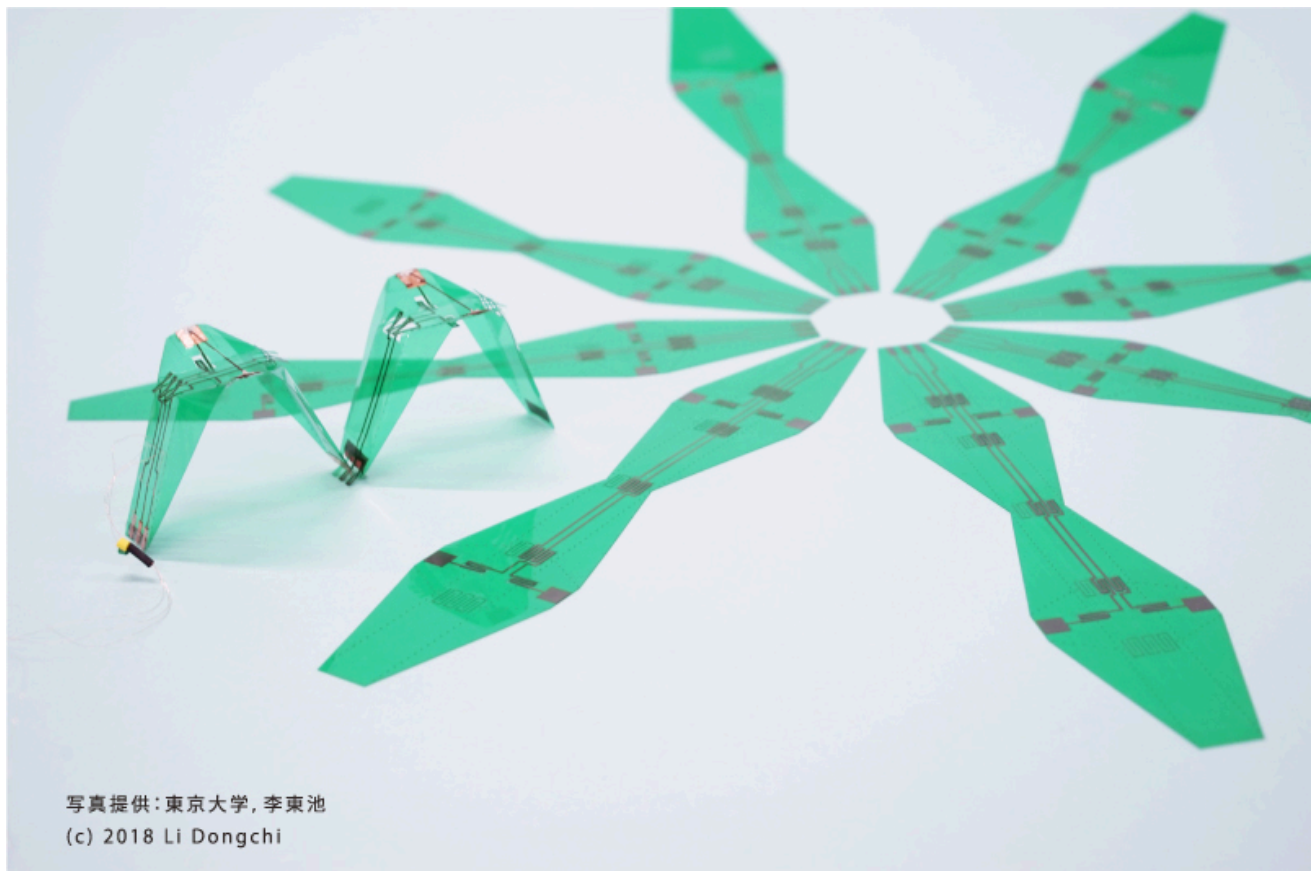
Elephantech

Origami Robots with Flexible Circuit Sheets utilizing P-Flex® was awarded the "Best Demo Award" at ACM UbiComp 2018.

October 16, 2018

Elephantech Inc. (head office: Chuo-ku, Tokyo, CEO: Shinya Shimizu, hereinafter "Elephantech") manufactures "P-Flex®", a flexible PCB, and advocates new circuit board manufacturing methods using printed electronics technology.

"P-Flex ®" was utilized for "Origami Robots with Flexible Circuit Sheets", a research demonstration by ERATO Kawahara Universal Information Network Project which was awarded the Best Demo Award at ACM UbiComp 2018 held in Singapore.



シンガポールで開催中のACM UbiComp 2018において、「Origami Robots with Flexible Circuit Sheets」と題した研究デモ発表に対して Best Demo Award が贈られました！

UbiComp 2013でBest Paper AwardをいただいたInstant Inkjet Circuitがきっかけで創業されたElephantechの最新技術P-flexを使って、折り紙構造の上に柔軟でロバストな配線を作ることイモムシのような動きをする愛らしい(?)ロボットを製造。

形状記憶合金をアクチュエータとし、イモムシの這行(しゃこう)運動に着想を得た特有のリズムで平面の上を滑らかに動き回ります。

D. Lee, K. Saito, T. Umedachi, T. D. Ta, and Y. Kawahara,

“Demo: Origami Robots with Flexible Printed Circuit Sheets,” Adjunct Proc. of ACM UbiComp 2018, Singapore, Oct. 2018.

川原 万有情報網プロジェクトさんの投稿 2018年10月10日水曜日

Our story so far

Elephantech was founded as a result of the "Instant Inkjet Circuit" developed by University of Tokyo Associate Professor Kawahara which was awarded the Best Paper Award at UbiComp 2013.

There were many people that suggested that P-Flex®, formed from Inkjet Technology with the characteristics of being thin and light, could be utilized for applications using origami. The present research demonstration was made possible by adopting Elephantech's patented "Tomoe Type" hinge structure which allows wiring to connect perpendicularly at the crease, making it possible to avoid disconnection issues at the crease.

Regarding "Origami Robots with Flexible Circuit Sheets"

The robot body is manufactured by additive production and laser cutting. For the demonstration, the robot, using a shape memory alloy as an actuator, moved around smoothly along the flat surface with the characteristic rhythm inspired by the crawling movement of a caterpillar.

LINK

- ERATO Kawahara Universal Information Network Project
- Kawahara Laboratory
- ACM UbiComp 2018

Company Overview

Name	Elephantech Inc.
Representative	Shinya Shimizu, CEO
Establishment	January 2014
Capital	JPY 458,390,000 (including capital reserve)
Address	4-3-8 Hatchobori, Chuo-ku, Tokyo 104-0032, Japan

URL	https://www.elephantech.co.jp/en/
Business description	Development of printed electronics manufacturing technology and provision of related services

(As of October, 2018)