

2016 AWARDEE

THE
GOLDEN
GOOSE
AWARD



THE HONEY BEE ALGORITHM

GEORGIA INSTITUTE OF TECHNOLOGY & CORNELL UNIVERSITY

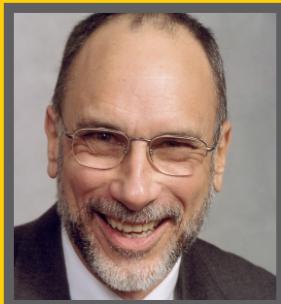
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AFTER HEARING AN INTRIGUING piece on honey bees on NPR, featuring Cornell biologist Tom Seeley, Georgia Tech systems engineering professor John Vande Vate wondered aloud with colleagues Craig Tovey and John Bartholdi, "I wonder if the bees would be more efficient if they hired us as consultants?" Years of research later, they realized it was they who could learn from the bees.

IN THE EARLY 1990S, THESE three systems engineers collaborated with Seeley to develop a model that showed just how efficiently honey bees forage among the sources of nectar in their ever-changing environment. Building on Seeley's detailed understanding of how individual bees behave and interact as they forage, this interdisciplinary team showed how the hive had evolved a self-organized system for effective nectar foraging.

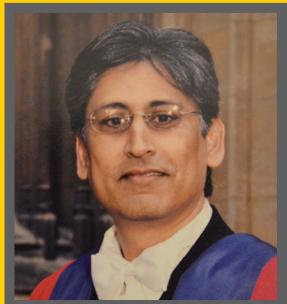
CRAIG TOVEY WILL NEVER forget the day in 2002 when Sunil Nakrani walked into his office to talk about working together on how to allocate shared web hosting servers to meet the varying demands of internet clients. The problem beautifully aligned with his honey bee work, and over a few years, they developed an algorithm that brings in up to 20% more revenue for web hosting services in a \$50B+ global marketplace.



**Dr. John J.
Bartholdi III**

Faculty: Georgia Institute of Technology
University: University of Michigan

Graduate Institution: University of Florida
Undergraduate Institution: University of Florida



Dr. Sunil Nakrani

Graduate Institution: Oxford University
Undergraduate Institution: Georgia Institute of Technology



**Dr. Thomas D.
Seeley**

Faculty: Cornell University
University: Yale University
Graduate Institution: Harvard University
Undergraduate Institution: Dartmouth College



**Dr. Craig A.
Tovey**

Faculty: Georgia Institute of Technology
Graduate Institution: Stanford University
Undergraduate Institution: Harvard University



**Dr. John Hagood
Vande Vate**

Faculty: Georgia Institute of Technology
Graduate Institution: MIT
Undergraduate Institution: Vanderbilt University



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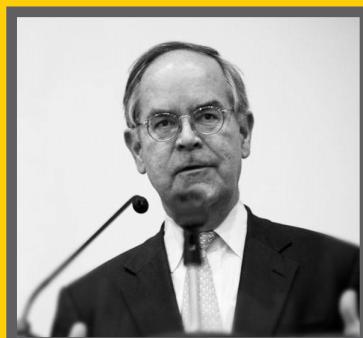
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ABOUT THE AWARD

THE BRAINCHILD OF CONGRESSMAN JIM COOPER, the Golden Goose Award recognizes the enormous and often unanticipated impacts that obscure or odd-sounding federally funded research has had on society—from life-saving medical treatments to game-changing social and behavioral insights to major technological advances.

Awardees are announced throughout the year, followed by an award ceremony each fall in Washington, DC.

The Golden Goose Award
is supported by generous donations from
professional societies, colleges, universities, and corporations;
and enjoys bipartisan support from
Members of Congress in the House and Senate.



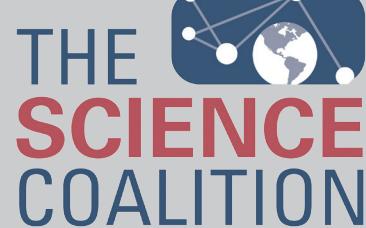
"Few things are as important as scientific research to building a better future."

— REP. JIM COOPER

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