Pesquisa colaborativa entre Universidades e Empresas em São Paulo, Brasil

Carlos Henrique de Brito Cruz

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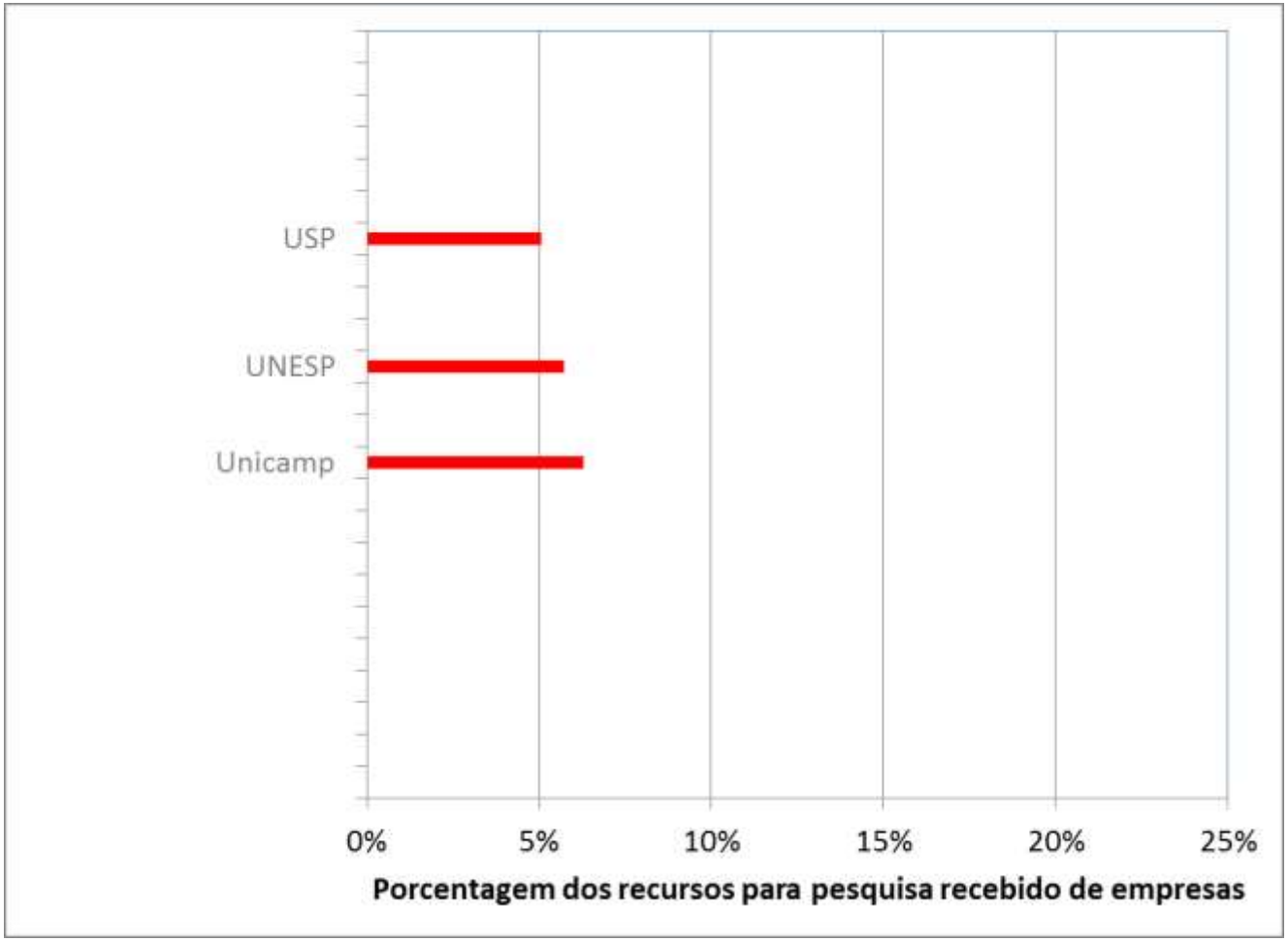
% dos recursos para P&D obtidos de empresas: USP, UNESP, Unicamp .....



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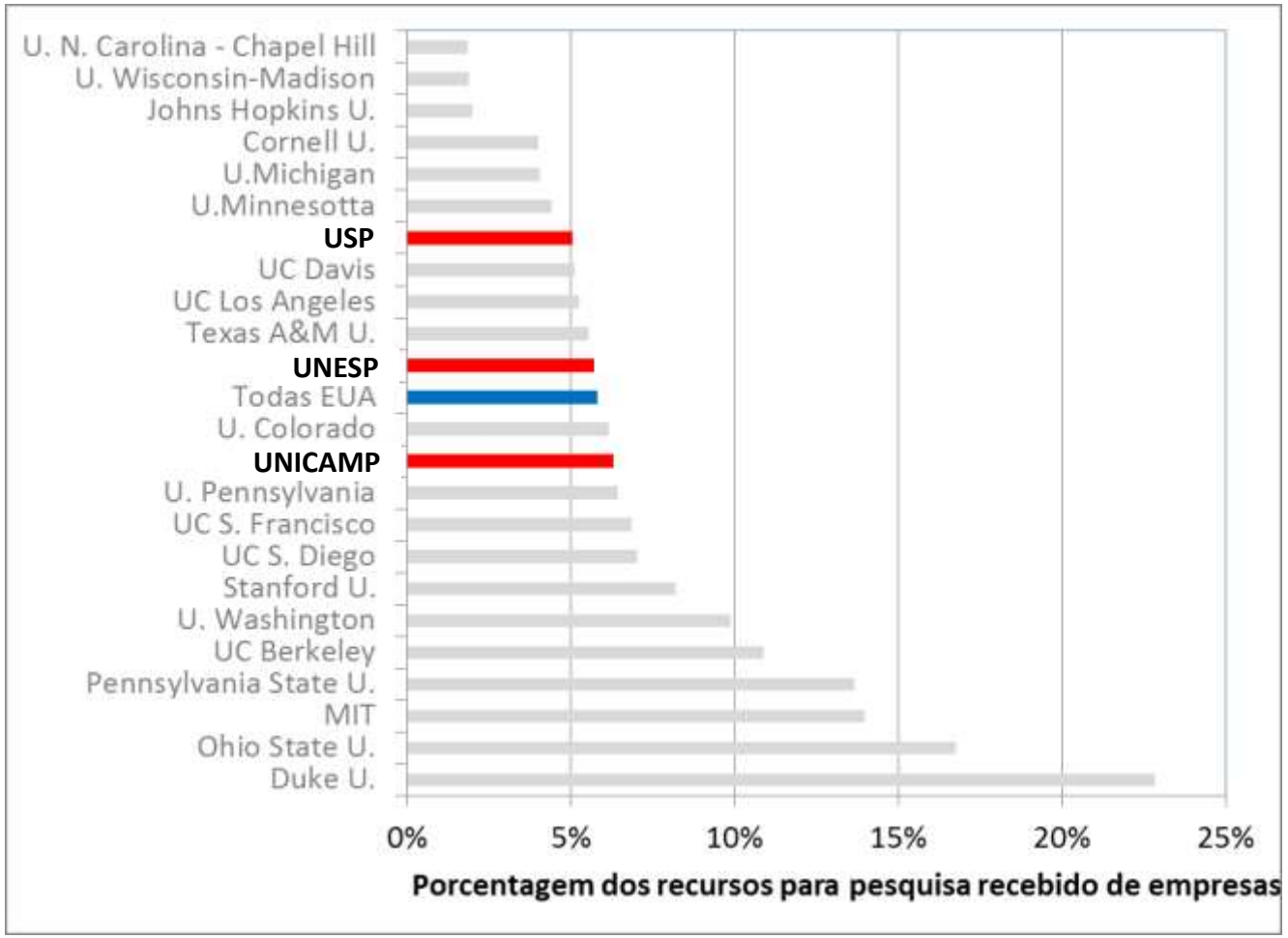
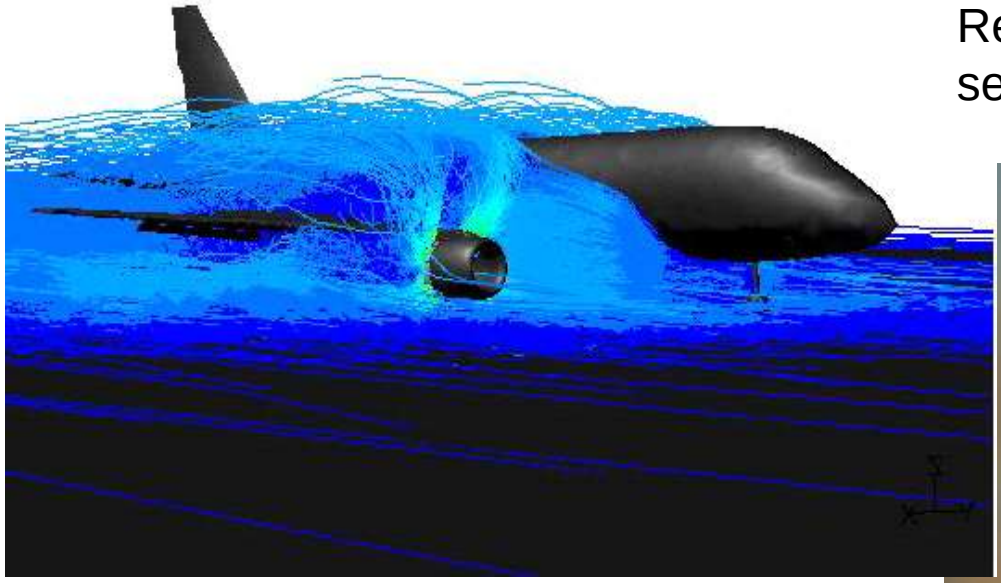


Embraer-FAPESP: R&D to build an innovative jet

Computational Fluid Dynamics (CFD) simulation and tests

Research co-funded by FAPESP, involving several universities



Better microorganisms for biofuels production

Genome structure of a *Saccharomyces cerevisiae* strain widely used in bioethanol production

Juan Lucas Argueso,[1,9,10] Marcelo F. Carazzolle,[3,9] Piotr A. Mieczkowski,[6,9] Fabiana M. Duarte,[3] Osmar V.C. Netto,[3] Silvia K. Missawa,[3] Felipe Galzerani,[3] Gustavo G.L. Costa,[3] Ramon O. Vidal,[3] Melline F. Noronha,[3] Margaret Dominska,[1] Maria G.S. Andrietta,[4] Sílvio R. Andrietta,[4] Anderson F. Cunha,[5] Luiz H. Gomes,[7] Flavio C.A. Tavares,[7] André R. Alcarde,[8] Fred S. Dietrich,[1,2] John H. McCusker,[1] Thomas D. Petes,[1] and Gonçalo A.G. Pereira[3,10]

Pesquisa FAPESP – five students hired by Braskem

FAPESP+Peugeot-Citroen: centro de investigación en motores a biocombustibles

- Finanziación por 10 años
- Unicamp, USP, Mauá, ITA
- Investigadores de las universidades e de la empresa
  - Vice-coordinador es investigador de la empresa asociado como profesor visitante
- Otros 4 ERC:
  - Natura
  - Glaxxo-Smith-Kline, GSK (2)
  - British Gas, BG

FAPESP inaugura Centro de Pesquisa em parceria com a PSA Peugeot Citroën

Iniciativa apoiará o desenvolvimento de motores movidos a biocombustíveis com participação de pesquisadores da USP, Unicamp, ITA e Instituto Mauá de Tecnologia

A Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP) e a PSA Peugeot Citroën do Brasil anunciaram ontem, dia 04 de novembro de 2014, na sede da FAPESP, o lançamento do Centro de Pesquisa em Engenharia "Professor Urbano Ernesto Stumpf", para desenvolvimento de motores de combustão interna, adaptados ou desenvolvidos especificamente para biocombustíveis e de estudos sobre a sustentabilidade dos biocombustíveis.

Flow of ideas and personnel: optical communications in Campinas

UNICAMP ventures

Spin-off start-ups: 206

Ideas migth start as abstractions

Pergamon

Int. Comm. Heat Mass Transfer, Vol. 28, No. 7, pp. 963–972, 2001

0735-1933/01/$–see front matter

PII: S0735-1933(01)00300-1

UNSTEADY HEAT CONDUCTION IN 3D ELLIPTICAL CYLINDERS

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ABSTRACT

The main purpose of this paper is to present a numerical calculation procedure for transient heat conduction in a 3D elliptical cylinder. A non-orthogonal analytical transformation converting an elliptical cylinder into a parallelepiped was developed. The finite-volume method was applied to the transformed partial differential equations. The resulting algebraic equations were solved by a technique similar to the alternating-direction-implicit scheme.

...then evolve into a concrete idea that industry can recognize...

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A transient three-dimensional heat transfer model of the human body☆

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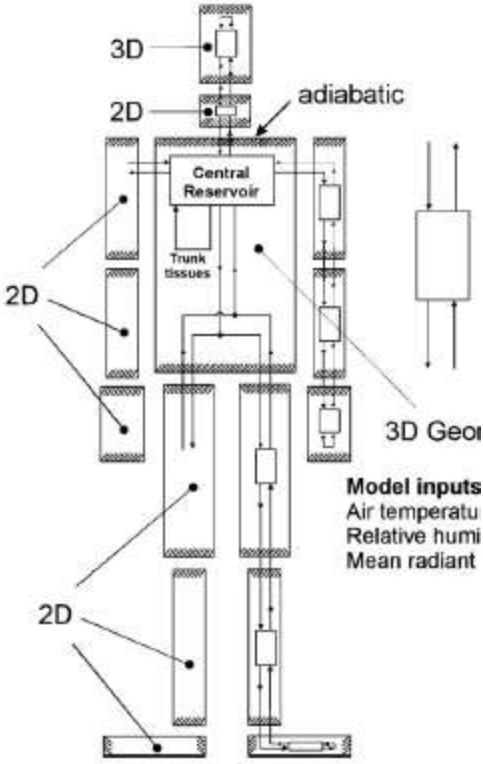
Thermal comfort

ABSTRACT

The objective of this work is to develop an improved model of the human thermal system. The features included are important to solve real problems: 3D heat conduction, the use of elliptical cylinders to adequately approximate body geometry, the careful representation of tissues and important organs, and the flexibility of the computational implementation. Focus is on the passive system, which is composed by 15 cylindrical elements and it includes heat transfer between large arteries and veins. The results of thermal neutrality and transient simulations are in excellent agreement with experimental data, indicating that the model represents adequately the behavior of the human thermal system.



Result: FAPESP-Embraer-Poli, USP Research Center for Comfort Engineering