

# Optimal Synergy of Engineering and Life Sciences

Announcement-V: June 15, 2006

Papers after peer review will be published in a special volume:

“Optimal Synergy of Engineering and Life Sciences”

by *Journal of Evolutionary Optimization* (<http://www.jeo.org/avignon>)

Conference venue: Palais des Papes, Avignon, France

contact: Julie MELIN, [j.melin@palais-des-papes.com](mailto:j.melin@palais-des-papes.com)

Chargée de clientèle;

tél : 04 90 27 50 59 fax : 04 90 27 50 58 Centre de Congrès du Palais des Papes

Dates: June 26, 27, 29 and 30, 2006

Sunday, June 25, no session; a tour of the Palais from 4PM to 6 PM

Wednesday, June 28, no session; regional sight seeing to be announced

## Dead lines

1. Full paper (after the conference) by September 15, 2006
2. Reviewers comments back to authors by November 15, 2006
3. Final Paper for the Journal by February 15, 2007
4. Publication of the Special Issue June 2007

## Schedule

**Day-I:** Monday, June 26, 2006

- (a) Opening Session — **Chair: José Braga**
  - i. 9:00 – 9:15 “CNRS-NSF Cooperation” Conference Chair’s Comments — Braga
  - ii. 9:15 – 9:30 Introduction of the Symposium — Selvadurai
- (b) Coffee break: 9:30 – 10:00
- (c) Theoretical & Applied Mechanics — **Chair: Patrick Selvadurai**
  - i. 10:00 – 11:30 — “Elasticity and invariance” Spencer — [anthony\\_j\\_m\\_s@which.net](mailto:anthony_j_m_s@which.net)
  - ii. 11:30 – 13:00 — “On the Equations of Balance for Bodies with a Growing Mass” Irschik — [irschik@mechatronik.uni-linz.ac.at](mailto:irschik@mechatronik.uni-linz.ac.at)
- (d) 1300 – 1500 — Lunch break
- (e) Computational Mechanics — **Chair: Hans Irschik**
  - i. 15:00 – 16:30 — “Bifurcation, Buckled Plates, and Nonlinear PDE’s ” Wolkowisky — [wolkowis@euclid.colorado.edu](mailto:wolkowis@euclid.colorado.edu)
  - ii. 16:30 – 18:00 — Thackeray — “Quantification of environmental change, isotopic analyses, and southern African mammals: a palaeoanthropological perspective with special reference to *Mrs Ples*.”
- (f) 17:00 – 19:00 — Free Time
- (g) 19:00 – 20:00 — General Lecture-I: Chair Anthony J.M. Spencer – “Mathematics and Meditation: Two Paradigms for Dealing with the World” by Bruno Buchberger — [Bruno.Buchberger@risc.uni-linz.ac.at](mailto:Bruno.Buchberger@risc.uni-linz.ac.at)

**Day-II:** Tuesday, June 27, 2006

- (a) Engineering Mechanics and Applications — **Chair: Gautam Dasgupta**
  - i. 10:00 – 11:30 — Patrick Selvadurai — “Bettis reciprocal theorem for inclusion and contact problems ” — [patrick.selvadurai@mcgill.ca](mailto:patrick.selvadurai@mcgill.ca)
  - ii. 11:30 – 13:00 — Jose Manuel Garcia Aznar — “Computational simulation of bone remodelling” — [jmgaraz@unizar.es](mailto:jmgaraz@unizar.es)
- (b) 1300 – 1500 — Lunch break

- (c) Optimization and Design — **Chair: Hitoshi Inomo** —
  - i. 15:00 – 16:00 — Shiraki — LIVEDESIGN — [shiraki@eng.kagawa-u.ac.jp](mailto:shiraki@eng.kagawa-u.ac.jp)
  - ii. 16:00 – 17:00 — Arakawa — Fuzzy Logic Applications — [arakawa@eng.kagawa-u.ac.jp](mailto:arakawa@eng.kagawa-u.ac.jp)
  - iii. 17:00 – 18:00 — Aritomo — LIVEDESIGN applications
- (d) 1800 – 1900 — Free Time
- (e) 1900 – 2000 — General Lecture-II: Chair: Wataru Shiraki — “Algorithmic Architecture”  
by Jose Sanchez — [jis17@columbia.edu](mailto:jis17@columbia.edu)
- (f) 2000 – 2200 — Dinner

**Day-III:** Thursday, June 29, 2006

- (a) Lifescience Applications — **Chair: Renée Garcia**
  - i. 1000 – 1130
  - ii. 1130 – 1300 — Braga — “How can we handle patterns of interconnections between developing teeth?”
- (b) 1300 – 1500 — Lunch break
- (c) Theoretical Mathematics — **Chair: Jay H. Wolkowisky**
  - i. 15:00 – 16:30 — Buchberger — “Formal Mathematics: A Key to the Future” — [bruno.buchberger@risc.uni-linz.ac.at](mailto:bruno.buchberger@risc.uni-linz.ac.at)
  - ii. 16:30 – 18:00 — Keränen — Combinatorics on Words
- (d) 1800 – 1900 — Free Time
- (e) 1900 – 2000 — General Lecture-IV: Chair: Braga — Paleoanthropology: “Animals and Art” by Thackeray — [thack@nfi.co.za](mailto:thack@nfi.co.za)

**Day-IV:** Friday, June 30, 2006

- (a) Theory and Applications in Imaging — **Chair — Eizaburo Tachibana**
  - i. 10:00 – 11:00 Braga — Dental Growth Increments (theory and instrumentation)
  - ii. 11:00 – 12:00 Gavrilovic — [predrag@pluto.iziis.ukim.edu.mk](mailto:predrag@pluto.iziis.ukim.edu.mk) — “Earthquake protections of Byzantine churches in Macedonia”
  - iii. 12:00 – 13:00 Gout – Imaging
- (b) 1300 – 1500 — Lunch break
- (c) Research in Progress — **Chair: José Braga**
  - i. 15:00 – 16:00 Renée Garcia — “Success and Failure in the Use of CT imaging in Cranial Bone Density Research ” — [rgarcia43@saddleback.edu](mailto:rgarcia43@saddleback.edu)
  - ii. 16:00 – 17:00 Deano Stynder — [dstynder@yahoo.com](mailto:dstynder@yahoo.com) — “Human craniofacial variability and studies of population continuity and discontinuity, a cautionary tale”
  - iii. 17:00 – 18:00 Gautam Dasgupta — [dasgupta@columbia.edu](mailto:dasgupta@columbia.edu) — “Material modeling and morphometrics using *algebraic geometry*”
- (d) 18:00 – 19:00 — Closing Session — **Chair: José Braga**
  - i. 18:00 to 18:30 — Remarks from participants
  - ii. 18:30 to 18:45 — Gautam Dasgupta — Activities supported by the NSF
    - A. Announcement of the October 12 and 13, 2006 meetings in Columbia University  
Focus: Mathematics of Optimization and Implementation in Life Sciences
    - B. Journal Publication in <http://www.jeo.org>, <http://www.jeo.org/avignon>
  - iii. 18:45 to 19:00 — Proposals for *Future Activities* to continuing cooperative projects
- (e) 19:00 – 20:00 — General Lecture-III: Chair: Dasgupta — Archeology: “Structural conservation, repair and strengthening of historical monuments”  
by Gavrilovic Predrag — [predrag@pluto.iziis.ukim.edu.mk](mailto:predrag@pluto.iziis.ukim.edu.mk)
- (f) 2000 – 2200 — Dinner