

CURRICULUM VITAE ET STUDIORUM

RUBEN COEN CAGLI

AFFILIATIONS

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PERSONAL DATA

Born 08/08/1979, Napoli
Nationality: Italian
Marital Status: Married

RESUME

Ruben Coen Cagli is currently a Postdoctoral Research Associate in the Laboratory of Theoretical and Computational Neuroscience led by Odelia Schwartz at the Albert Einstein College of Medicine of Yeshiva University. After graduating in Quantum Physics in 2004, he completes in 2007 a PhD in Physics at Università di Napoli Federico II, under the supervision of prof. Giuseppe Trautteur and in collaboration with prof. Giuseppe Boccignone at the University of Salerno. His PhD thesis focuses on analyzing visual creativity from the vantage point of computational Cognitive Science. Based on the idea that creative processes are the result of specific sensorimotor skills, his doctoral research has exploited both eye tracking experiments and Bayesian techniques to characterize and model visuomotor coordination in the activity of drawing, and to develop an artificial agent with such capabilities.

His main research interests are Active Vision, Visual Attention, Motor Control, and the Visual Arts. In the longer term, his research aims are: a) to develop a general, biologically plausible framework for the integration of Active Vision and Optimal Motor Control approaches; b) provide an account of the experience of *creating* (as complementary to *perceiving* an artwork, on the basis of its peculiar sensorimotor characteristics).



SELECTED PUBLICATIONS

- 2008 **R.C.C.**, P. Napoletano, G. Boccignone, P. Coraggio *What the Draughtsman's Hand Tells the Draughtsman's Eye: A Sensorimotor Account of Drawing*. International Journal of Pattern Recognition and Artificial Intelligence, **IJPRAI** (in press)
- 2008 **R.C.C.**, P. Napoletano, G. Boccignone, P. Coraggio, A. De Santis *Sensorimotor coupling via Dynamic Bayesian Networks*. Proceedings of the IEEE International Conference on Robotics and Automation 2008, **ICRA** (in press)
- 2007 (Ph.D. Thesis), *Sensorimotor Coupling: Eye Tracking and Computational Modeling in a Drawing Task*. Università di Napoli Federico II. Italia.
- 2007 **R.C.C.**, P. Coraggio, G. Boccignone, P. Napoletano. *The Bayesian Draughtsman: A Model For Visuomotor Coordination In Drawing*. Advances in Brain Vision and Artificial Intelligence, Proceedings of BVAI 2007. **LNCS** 4729.
- 2007 **R.C.C.**, P. Coraggio, P. Napoletano. *DrawBot — A Bio-Inspired Robotic Portraitist*. Digital Creativity Journal. Routledge. **18**, 1.
- 2005 P. Aniello, **R.C.C.**, *An Algebraic Approach to Linear-Optical Schemes for Deterministic Quantum Computing*. (J. Opt B: Quantum and Semiclass. Opt. 7 S711-S720)
- 2005 **R.C.C.**, P. Aniello, N. Cesario, F. Foncellino. *Exploring a New Post-Selection Condition for Efficient Linear Optics Quantum Computation*. (International Journal of Quantum Information, **3** 4 611-621)
- 2004 (B.S. Thesis) *Quantum Computing: Linear Optical Implementation of Logic Gates*. Università di Napoli Federico II. Italia.

SELECTED SCIENTIFIC PRESENTATIONS

- 2007 (Poster) **R.C.C.**, P. Coraggio, P. Napoletano, G. Boccignone. *The Bayesian Draughtsman: A Model For Visuomotor Coordination In Drawing*. Brain Vision and Artificial Intelligence, International Conference, Napoli.
- 2007 (Poster) **R.C.C.**, P. Coraggio, P. Napoletano, G. Boccignone. *What the Draughtsman's Hand Tells the Draughtsman's Eye: A Sensorimotor Account of Drawing*. Perception, Action and Consciousness: Sensorimotor Dynamics and Dual Vision, International Conference, Bristol.

- 2007 (Invited Talk) **R.C.C.** *Drawing: sensorimotor coordination and computational modeling.* Institute Jean Nicod, Paris.
- 2006 (Talk) **R.C.C.** *DrawBot — A Bio-Inspired Robotic Portraitist.* CMCA06. 1st international workshop Computational Models of Creativity in the Arts. Goldsmiths College, London.
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SERVICES TO THE PROFESSION

- 2008 Reviewer – Computational Aesthetics 2008 (CAe08). Lisbon, Portugal.
- 2007-08 Reviewer – IEE Electronics Letters, IET.
- 2007 Included in the Database of Evaluators and Review Experts in the Seventh Research Framework Programme FP7.
- 2006 Reviewer – Digital Creativity Journal, Routledge.
- 2006 Member of the Local Organizing Committee – ‘Ethicbots. International Workshop on Ethics of Human Interaction with Bionic, Robotic and AI Systems.’ Napoli. Italia.
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TEACHING EXPERIENCE

- 2007 Undergraduate course – *Object Oriented Programming for the Information Design.* (Media Studies Department, Università di Fisciano, Salerno.)
- 2006 Workshop – *Processing: Introduction to Programming for the Information Design.* (Media Studies Department, Università di Fisciano, Salerno.)
- 2002–2004 Research and Teaching Collaborator. (Department of Painting, the Academy of Fine Arts, Napoli. Italia.)
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EDUCATION

- 2004–2007 Ph.D. in Physics. (Università Federico II, Napoli. Italia.)
- July 2005 4th VIPS Advanced School on Computer Vision, Pattern Recognition and Image Processing. (Università di Verona. Italia.)
- 1997–2004 Laurea Degree (MSc) *cum Laude* in Physics. (Università Federico II, Napoli. Italia.)
- 2003–2004 Student internship. (ST Microelectronics R&D. Napoli. Italia.)
- 2000–2001 “Erasmus” visiting student. (Universidad de Zaragoza, España.)

LANGUAGES

Italiano (mother tongue).

English (fluent).

Español (fluent).

Français (elementary).