EMMANOUIL VERMISSO

Associate Professor, FAU School of Architecture
Registered Architect, TEE, Greece

111 East Las Olas Boulevard, Fort Lauderdale, FL33301

Tenured faculty with Design-oriented academic and professional experience in leading architectural practices, with a focus on **Design Computation and Emerging Technologies**. Primary Research and Teaching interests on cross-disciplinary understanding of Design, Computational methods using analog and digital media, Design Theory and Cognitive models of Design. Current research: History of Computational form-finding and the intersection of Neuroscience and Architecture through understanding of decision making during the design process. Teaching experience in Architectural Design (all levels), Digital Fabrication, Architectural Organicism, Biomorphic Design and Responsive Prototypes. Professional/Academic experience in both Europe and North America. Familiar with CNC-manufacturing technologies and their pedagogical implementation in Architecture.

ACADEMIC EXPERIENCE

2014-   **Associate Professor with Tenure**
        Florida Atlantic University School of Architecture

2008-14 **Assistant Professor (Tenure-track)**
        Florida Atlantic University School of Architecture

        Guest critic: Bartlett School of Architecture, Florida International University, University of Miami

2004   **Design Teaching Assistant for Architectural Design 1**
        Syracuse University, NY

EDUCATION

2005   **Master *of* Architecture II (research)**
        Syracuse University, NY, USA

2001   **Diploma *of* Architecture**
        University of Westminster, London, UK (RIBA Part 2)

2000   **B.Sc (Hons) Architecture**
        Robert Gordon University, Aberdeen, UK (RIBA Part 1)

AWARDS, GRANTS& HONORS

2016   **ACSA Creative Achievement Award**
        Teaching & Research in Design Computation and Biomorphic Design, In recognition of an
        achievement in teaching, design, scholarship, or research, that advances architectural education.
2015   **RESHAPE 15: Wearable Technology Competition 2015: 3rd Prize**
        "Carotid Thermo-Regulator" (Reinventing the traditional neck Ruff as a liquid translator of bodily emotion)
2013   **NCARB Award for the Integration of Practice & Education: 25,000 USD**
        "Interdisciplinary Collaboration on Prototyping for Responsive Kinetic Design"
        Co-PIs: Vermisso, E. and Thitisawat, M. (*One of three winning teams nationwide)
2013   **FAU Technology Proposal: 34,720 USD**
        "Using 3D printing as a medium to enhance design curriculum through analysis and prototyping"
        PI: Vermisso, Emmanouil, Co-PI: Caldieron, JM, Thitisawat, M and Van de Riet, K

2015 **Broward Mentor Professional Development Grant: 2,000 USD**
2013 **Broward Mentor Professional Development Grant: 1,000 USD**
2016 Partial tuition scholarship: *Smart Geometry'16 Hybrid Domains:* 450 USD (Gothemburg, Sweden)
2012 Partial tuition scholarship: *Smart Geometry'12 Material Intensities:* 750 USD (Troy, NY)
2004 ΦΒΔ International Honor Society (Alpha Sigma Chapter, Syracuse University)
2004 Design Teaching Assistantship (fall semester - Syracuse School of Architecture)
2003 Teaching Assistantship (spring semester - Syracuse School of Architecture)
1994-95 Certificates of Distinction in secondary education: 18.5/20 (Hellenic Ministry of Education)
1990-93 Athletic Distinction in Track&Field intra-scholar meetings: 3 Gold Medals (Pierce College, Athens)

TEACHING EXPERIENCE

2008-16 **Academic TeachingSubjects (FAU School of Architecture)**

ARC2201 Architectural Theory 1 (fall '13)
ARC2304 Architectural Design 4 (spring '11)
ARC3321 Architectural Design 6 (summer '11)
ARC4326 Architectural Design 7 (fall '08, '09, '10, '11, '12, '13, '15)
ARC4327 Architectural Design 8 (spring '09, '10, '13, '14, '15, '16)
ARC5328 Advanced Architectural Design 1 (Design 9 - fall '12)
ARC5352 Comprehensive Design Project (Thesis - spring '12)
ARC4507 Dynamic Design Methods (spring '11, fall '11)
ARC3185C* Intro to Digital Modeling and Documentation (spring '13, '14)
ARC4181* Digital Fabrication (fall '08, '10,'11,'16, spring '10, summer '09,'11,'12,'13)
ARC4930* Biomorphic Design (spring '09)
ARC4930* Bio-prototypes (summer '10, spring '12)
ARC4930* Performative Parametric Design (spring '15)
ARC4930* Emergent Form: Computational Design Methods (summer '14, '15, '16)

*Indicates new specialized courses developed in the area of Design Computation: 6 courses

Supervision of Undergraduate Research

ARC4907 Directed Independent Studies (*indicates sponsored research)

2013 ***Composite Architectures****Fabrication of Carbon Fiber-Reinforced Architectural Components, by J. Norsworthy (funded by a 2,000USD Broward Undergraduate Research Grant/ First prize for oral presentation in the 2014 FAU Research Symposium)

2013 ***Kinetic Architectural Prototypes****Using Smart Materials in Responsive Façade design, by R. Brewer, Richard and S. Sipahi(funded by a 3,500USD Broward Undergraduate Research Grant)

2012 ***Parametric Design of a Solar Responsive Building Component**** Climate-responsive facades, by M. Feldsberg (funded by a 3,500USD Broward Undergraduate Research Grant)

2012 ***Special Topics in Digital Fabrication***Parametric Shape studies for an open-wheel race-car for Formula SAE, by R. Brewer, S. Sipahi, Sitki and A. Vargas

2012 ***The Fibrous Structure Machine*** Bio-mimetic/kinetic concepts for the design of a fabricator for shape studies, by M. Rega

2011 ***Technology Display case*** Furniture Design through Digital Fabrication techniques, by M. Gonzalez-Maya and L. Dritenbas(by invitation from Dr. P.Bebko and Dr. A. Fernandez and sponsored by FAU Broward Campuses)

2010 ***Robo-Jelly***Bio-mimetic concepts for a responsive installation, by P. Diaz

2009   ***Morphallactic Formations*** Biomorphic generative methods for structural design and CNC fabrication, by M. Elder (*Received the ARCC King's Medal for research for 2009-10)

SCHOLARSHIP: PEER-REFEREED PUBLICATIONS & EXHIBITIONS

Journals, Proceedings and Edited Book articles

Vermisso, E and Thitisawat, M: Exchanges between Physical Computing and Performative Parametric Models, in Advanced Building Skins Conference/2015 Energy Forum Proceedings (Bern, Switzerland)

Vermisso, E and Thitisawat, M: Interdisciplinary Collaboration on Prototyping for Responsive Kinetic Design (NCARB Award Final Report submitted to and approved by NCARB, Spring 2015)

Vermisso, E:"The Fabrication of Fabrication: a second order design process", in International Journal of Architectural Computing, ed. Michael Fox, Special Issue: *Architectural Robotics*,issue 03, vol. 10 (2012): 401-422. (ISSN: 1478-0771)

Vermisso, E: "Design Economies of Surface: can Architects learn from the manufacturing process of industry-driven projects like auto-cross racing?", in International Journal of Architectural Computing, ed. Greg Luhan, Special Issue, *Design Economies: The Collaborative Impact*, issue 03, vol. 09 (2011): 459-483.(ISSN: 1478-0771)

Vermisso, E, Thitisawat, M and Feldsberg, M: 2013, 'An irregular discretization process for climate-responsive façades', in *Green Design, Materials and Manufacturing Processes*, ed. Helena Bártoloet al., pp. 489-494, Sustainable Intelligent Manufacturing Conference 2013 (Lisbon: CRC Press, Taylor & Francis Group)

Marroquin, H, Thitisawat, M and Vermisso, E: 2013, Performative parametric design of radiation responsive screens, ARCC 2013 Proceedings, pp.579-587 (Charlotte, NC)

Vermisso, E: 2012, 'Conditioning Elegance: a Design experiment on Intuition and Analysis', ACADIA 2012 Proceedings, pp. 467-478 (San Francisco, CA)

Vermisso, E: 2011, 'Cross-disciplinary prototyping: Pedagogical frameworks for integrating biological analogies into design courses', ACADIA 2011 Proceedings, pp. 380-389 (Calgary, CA)

Vermisso, E: 2008, 'Using formal & behavioral patterns in nature to evaluate the design of bio-inspired structural shapes: The case of a canopy for a south-east Asian master-plan', ACADIA 2008 Proceedings, pp. 110-117 (Minneapolis, MN)

Vermisso, E: 2013, 'The "introverted" museum experience: Using urban perspective to develop spatial narratives of "drifting"', HybridCity 2: Subtle Revolutions Proceedings, pp. 447-450 (Athens, Greece)

Vermisso, E: 2011, 'A case-study in cross-disciplinary student work: a CNC-manufactured body for FSAE racing', 2011 ACSA Teachers Seminar proceedings, pp.77-83 (New York, NY)

Vermisso, E: 2009, 'Modernist and Digital Design: Parallel Heresies? Their avant-garde perception of the inhabited vertical partition and their relationships to the Baroque', SIGraDi 2009 Proceedings, pp.213-215 (São Paulo, Brasil)

Vermisso, E: 2009, 'Seeking an inherent historicism in digital Design: Who Care(d)? Tracing an archaeology of Digitality within the shifting paradigms in architectural history ', Critical Digital 2008 Proceedings, pp.85-93, (Cambridge, MA)

Vermisso, E: 2008, 'Digitality controlled: Paradox or necessity? The emergent need for a codification of design rules within digital design methodologies, with references to Classical Architecture and the work of Claude Perrault and Gaudi', eCAADe 2008 Proceedings, pp. 701-708 (Antwerp, Belgium)

Vermisso, E: 2007, ' The Dancing Curve: An emerging paradigm in cross-stylistic discourse', eCAADe 2007 Proceedings, pp. 473-481 (Frankfurt, Germany)

Vermisso, E, Callaghan, C and Hinckley, T: 2006, 'Building in Paper', Digital Fabrication: 22nd Int'l Conference on Digital Printing Technologies Proceedings, pp.90-93 (Denver, CO)

Peer-refereed Projects, Posters& Workshops

Pantazis, E, Vermisso, E, and Sadegh, J: 2016, 'Pattern Formation Investigation through embodied encoding of swarmbots', ACADIA Conference: Post-Human Frontiers: Data, Designers and Cognitive Machines, Projects session (Ann Arbor, MI) -forthcoming

Vermisso, E, and Campusano, G: 2016, 'Quantifiable Continuities: Examining D'Arcy Thompson's Theory of Transformations for Generative Design Studies', AAG International Conference: Advances in Architectural Geometry, Projects session (Zurich, Switzerland)

Vermisso, E, Bernal, J, Mandra, M and Sipahi, S: 2016, 'Adjustable Casts: Computational Form-Finding', ACSA International Conference: Cross-Americas, Projects session (Santiago, Chile)

Vermisso, E and Rega, M: 2012, 'The Fibrous Structure Machine: A generative process towards Form-finding', ACSA 100, Projects session (Boston, MA)

Vermisso, E and Elder, M: 2011, 'Morphallactic Formations: A process towards Structural Form', CAAD Futures 2011 Poster session (Liège, Belgium)

Vermisso, E: 2006, 'The Dancing Curves', 2nd International Conference on Design Computing & Cognition Poster Proceedings, pp.51-52 (Eindhoven, Netherlands)

Vermisso, E: 2004, 'Digital thinking as an author of cross-stylistic architectural discourse', 1st International Conference on Design Computing & Cognition, Workshop Six proceedings, pp.33-36 (Boston, MA)

Peer-refereed Exhibitions

Vermisso, E, Pieris, P, Pieri, S and Diaz, P: 2013, "Bio-Active Roofs", 7th Panhellenic Exhibition of Architecture: "The VOID", Patras, Greece, June 17-July 7, 2013.

Peer-refereed Conference Presentations

Vermisso, Emmanouil. "Computational Thinking & Design Pedagogy: Integrating research and teaching to consider Design Agency". (presentation at the ACSA 104 Conference: Shaping New Knowledges, Seattle, WA, March 16-20, 2016).

Vermisso, Emmanouil. "Conditioning Elegance: a Design experiment on Intuition and Analysis". (presentation at the annual ACADIA Conference on Synthetic Digital Ecologies, San Francisco, CA, October 18-21, 2012).

Vermisso, Emmanouil. "Form follows inFORMation". (presentation at the Teaching with Technology Showcase, Davie, FL, February 2012).

Vermisso, Emmanouil. "A case-study in cross-disciplinary student work: a CNC-manufactured body for FSAE racing". (presentation at the ACSA Teachers Seminar on Performative Practices: Architecture and Engineering in the twenty-first century, New York, June 16-18 2011).

Vermisso, Emmanouil. "Design factors which enhance user perception within simple Lego®- driven kinetic devices". (presentation at the work-in-progress session of the annual convention of the conference on Tangible Embedded and Embodied Interaction, Funchal, Madeira, February 2011).

Vermisso, Emmanouil. "Seeking an inherent historicism in digital Design: Who Care(d)? Tracing an archaeology of Digitality within the shifting paradigms in architectural history". (presentation at the Second International Conference on Critical Digital, Boston, MA, April 17-19, 2009).

Vermisso, Emmanouil. "Conditioning Elegance: a Design experiment on Intuition and Analysis". (presentation at the annual ACADIA Conference on Silicon+Skin: Biological processes and Computation, Minneapolis, MN, October 16-19, 2008).

Vermisso, Emmanouil. "Digitality controlled: Paradox or necessity? The emergent need for a codification of design rules within digital design methodologies, with references to Classical Architecture and the work of Claude Perrault and Gaudi". (presentation at the annual convention of the eCAADe Conference on Integrating Methods and Techniques, Antwerp, Belgium. September 17-19, 2008).

Vermisso, Emmanouil. "The Dancing Curves". (presentation at the annual convention of the eCAADe Conference on Tools and Methods, Frankfurt, Germany. September 26-29, 2007).

SCHOLARSHIP: NON-REFEREED PUBLICATIONS, PRESENTATIONS, EXHIBITS

Beesley, P, Thitisawat, M and Vermisso, E: 2015, "Hammock Veil: The Architecture of (inv)visible thresholds", [exhibition curator] 2nd Avenue Studio, Fort Lauderdale, FL, March 7-19, 2015.

Vermisso, Emmanouil. "3D Printing: A tool for the Entrepreneur". (presentation at the Mobile Technology Consortium, Boca Raton, April 2014).

Vermisso, E: 2013, "Self-Organizing Landscapes", FAU Biennial Faculty Exhibition, Boca Raton, FL, September 21-December 7.

Vermisso, E: 2011, "Vessel of Consilience", FAU Biennial Faculty Exhibition installation, Boca Raton, FL, September 17 -November 12.

Vermisso, E: 2010, 'Fabricating Interaction' [exhibition curator] 2nd Avenue Studio, Fort Lauderdale, FL, September 10-24, 2010.

Vermisso, E: 2009, "Building in Paper" installation, FAU Biennial Faculty Exhibition installation, Boca Raton, FL, November -January 2010.

Vermisso, E, 2008, 'УПРАВЛЯЕМОЕ «ЦИФРОВОЕ ПРЕДСТАВЛЕНИЕ»: ПАРАДОКС ИЛИ ПОТРЕБНОСТЬ? Неожиданнопоявившаясянеобходимостькодификациипроектныхправил в пределахметодологийцифровогопроектирования, соссылкаминаКлассическуюАрхитектуру и работуКлодаПерро и Гауди', *AMIT Journal (Moscow Institute of Architecture),* online issue 3(4) Sept. '08 (by request from the editor, Mikhail Matalasov). previously reprinted in eCAADe 2008 Proceedings: Vermisso, Emmanouil, 2008: 'Digitality controlled: Paradox or necessity? The emergent need for a codification of design rules within digital design methodologies, with references to Classical Architecture and the work of Claude Perrault and Gaudi')

Vermisso, Emmanouil. "Nature within Architecture". (presentation at the FAU Introspection Architecture Lecture Series, Fort Lauderdale, FL, December 2008).

PROFESSIONAL EXPERIENCE

2008   Professional Registration: Registered Architect,Technical Chambers of Greece, Athens

2007-08 **Allford Hall Monaghan Morris, London**
         Assistant Architect (Part 2), (04/2007-05/2008)

Jumeirah Garden City, Dubai: Sustainable residential development in the Business Bay area.
Olympic Masterplan, London: Olympic Village Design for 2012 Olympic Games.
Skanska Modernahus Housing, UK: Prototypical, low-cost sustainable housing solutions

2006-07 **Foster + Partners, London**
Assistant Architect (Part 2), (04/2006-04/2007)
Al Raha Beach, Dubai: Preliminary responsive façade design; Core package co-ordination.
Sky Palaces & Hotel in Business Bay, Dubai: Concept & Scheme Design for a hotel; development of 3-dimensional structural options in conjunction with engineering consultants.
Botanical Gardens, Singapore: (Competition) development and testing 3-dimensional concepts for pedestrian bridge cladding and greenhouse enclosures using 3-d printing.
Harry's Island masterplan, Singapore: (Competition) Design development for integration of outdoor canopies within a master-plan in consultation with engineers (ARUP).

2005 **Hellenic Air-Force, Greece** (02/2005 - 11/2005)
Military service as Reserve Sergeant in N. Makri, Greece.

2003-03 **Stefan Zins Associates Ltd, London**
Assistant Architect (Part 2), (09/2002- 07/2003)
Various residential projects and feasibility studies (London & south of England)

2001-02 **Porphyrios Associates, London**
Assistant Architect (Part 2), (09/2001- 06/2002)
King's Cross master-plan (London), FAY Hotel (Frankfurt), Private Residence (Spetses island)

1998-99 **Elias Skroumbelos& Associates Ltd, Athens**
Architectural Assistant Part 1 (09/1998- 07/1999)
Rhodes airport extension (Greece); Concept design for cinema complex (Athens-Greece)

Independent Projects

2008 Preliminary Design for a private residence in Anavissos, Greece
2005 Design proposal for Officers' Bar at the Hellenic Air-Force military compound, N. Makri, Greece

PROFESSIONAL DEVELOPMENT

Specialist workshop curating, participation & professional training

2016 ***Freeform Developable Spatial Structures*** [Advances in Architectural Geometry '16 - ETH, Zurich, Switzerland]
topic: Algorithmic exploration of structural topologies using graphic statics
2016 ***Swarmbot Assemblages*** [Smart Geometry: Hybrid Domains – Chalmers Institute of Technology, Gothemburg, Sweden]
topic: Dynamic construction processes through Stigmergic interaction
2015 ***Parametric Facades Systems and Logistics Sequencing***[Facades+, NYC]
topic: use of CATIA 3D and Navisworks for project delivery scheduling (taught by SHoP Architects)
2015 ***Hammock Veil: The Architecture of (in)visible Thresholds***(organized by E.Vermissoand M.Thitisawatwith Philip Beesley Architect)
topic: workshop and exhibition on responsive architecture using mechatronics
2014 ***Textile Morphologies*** [TEX-FAB 5 - Austin, TX]
topic: force-active structures through physical & computational form-finding
2014 ***Introduction to Computational Arts: Processing***
Online course on programming using the 'Processing' language offered by *Coursera*
2012 ***Architecture & Neuroscience*** [Minding Design Symposium - Taliesin West, Scottsdale, AZ]
topic: panel discussion with A. Pérez-Gómez & M. Arbib
2012 ***Micro Synergetics*** [Smart Geometry: Material Intensities - RPI, Troy, NY]
topic: smart materials integration into responsive prototypes

2012 **Synthetic Landscapes** [ACSA 100 - Billerica, MA]
topic: mesh optimization and fabrication for 3d printing
2011 **Parametric Robot Control** [CAAD Futures '11 - Liège, Belgium]
topic: robotic manufacturing
2011 **Hack your Seeeduino Film** [TEI '11 - Funchal, Portugal]
topic: flexible printed circuits for programmable prototypes
2009 **Arduino & Processing**[ACADIA '09 - SAIC, Chicago, IL]
topic: introduction into micro-controllers for design
2008 **Rhino-script** [Acadia '08 - Minneapolis, MN]
topic: scripting (programming in Rhino)

ACADEMIC JURIES, SERVICE, ADMINISTRATIVE ACTIVITY

Invited Juries/ Consulting

2014 Florida International University School of Architecture (Miami, April '14): Invited Guest Critic
2013 University of Miami School of Architecture (Coral Gables, May '13): Invited Guest Critic
2012 Bartlett School of Architecture, University College London(London, June '12): Invited Guest Critic
2013 Design Consultant for BRPH Architects on Responsive Façade Design (with Prof. Thitisawat, M.)

Peer-Reviews for Book Proposals and Conferences [by invitation]

2012 Vermisso, E: Review for a book proposal on Organic Patterns & Design Methodology, Routledge. [By invitation from Ms. W. Fuller, Editor for Architecture Books, Routledge, Taylor & Francis, NY]
2013 ACSA Fall conference on *Subtropical Cities: Design Interventions for changing climates* (October 17-19, 2013, Fort Lauderdale, FL)
2012 TEI'2013: Seventh International Conference on *Tangible, Embedded & Embodied Interaction* (February 10-13, 2013, Barcelona, Spain)
2012 SMI'2012: Shape Modeling International Conference (May 22-25, 2012, College Station, TX)
2011 TEI'2012: Sixth International Conference on *Tangible, Embedded & Embodied Interaction* (February 19-22, 2012, Kingston, ON)
2010 ACSA 99th Annual Meeting: *Where Do You Stand*, Paper session: "Between the Analog and the Digital", (March 3-6, 2011, Montréal, CA)

Service to the Institution (Department, College, University) & the Profession

2015- College Research Committee: Member
2013-15 University Honors Council: Member
2013-15 Faculty Search Committee: Member
2012-15 Digital Technology Committee: Founder Member
2010-15 Web Design Committee: Member
2013-14 Reviewer for FAU Research Symposium, Boca Raton, FL
2013 Faculty Planning Committee, Reviewer/Judge, Broward Research Symposium, Davie, FL
2012 FAU Undergraduate Research Journal Reviewer
2012 Body Design/Prototyping consultant for FAU Owls Racing Team: Formula SAE Michigan '11, '12 (by invitation from Dr. Masory, O., Professor of Mechanical Engineering)
2013 Curriculum Committee: Member
2013 Lecture Series advisor
2011-13 Oscar Vagi Fellowship: Coordinator
2011-12 Student Advisory Council: Coordinator
2010-13 Awards/ Scholarships Committee: Member (formerly, chair)
2010-11 College for Design and Social Inquiry Awards Committee: Member
2010-11 E-Learning Committee: Member
2010-13 Office for Information Technology (OIT) Committee: Member, College representative
2010-14 Portfolio Workshop for Broward College, Fort Lauderdale, FL (by invitation from Director Noriega)

DIGITAL SKILLS: SOFTWARE & HARDWARE

Skills: 3D Modeling, Parametric Modeling, Environmental Simulation, Digital Fabrication, 3D file Data Management, Rendering, Graphic Design.
Software: Rhinoceros®, RhinoCAM, Grasshopper, Microstation, AutoCAD, Sketchup, FormZ, Ecotect, SpringFORM, Scan & Solve™, Adobe Creative Suite
Scripting: Processing
Hardware: Laser-cutting, CNC-milling, 3D printing, Microprocessors (Arduino, etc.)

LANGUAGES

Greek (mother tongue)
English (fluent speaking, reading and writing - Cambridge Proficiency)
French (speaking, reading and writing - Diplôme Sorbonne 1)
Italian, Spanish, Russian (basic knowledge)

REFERENCES (available upon request)

PROFESSIONAL AFFILIATIONS & INTERESTS

Current and past memberships: **Smart Geometry, ACADIA, eCAADe, SIGraDi, ACM SIGCHI, SAE**
Other interests: Florida Dragon Sign Association, Manchester Hung-Kuen Club (1996-98), Pierce College Track&Field team (1990-93), IHIQ Society, Skiing.