PERSONAL INTRODUCTION

QUICK OVERVIEW

MASTER 1 ICE, 2017–2018

Available at https://combemale.github.io/teaching/ice/m1/

BENOIT COMBEMALE
PROFESSOR, UNIV. TOULOUSE, FRANCE

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@BCOMBEMALE
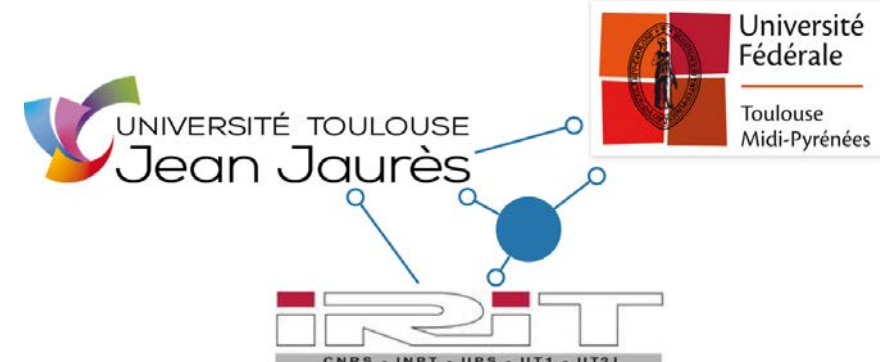
Short Resume

- Positions
  - Since 2017   Full Professor in Software Engineering, University of Toulouse - Jean Jaurès
    - *Teacher in the Department of Mathematics and Computer Science*
    - *Researcher in the MACAO group, joint to CNRS/IRIT*
  - 2009 - 2017   Associate Professor in Software Engineering, University of Rennes 1
    - *Teacher in the engineering school ESIR (+ Master in SE)*
    - *Researcher in the DiverSE group, joint to CNRS/IRISA and Inria*
      - 2017   Visiting Professor at McGill University, CA
      - 2013-2016   Research Scientist at Inria *(on leave from UR1)*
      - 2010-2015   Regular visiting professor at CSU, USA
  - 2008-2009   Postdoc fellow, Inria
  - 2005-2008   Research associate (PhD student) at ENSEEIHT (grant, French government)

- Education
  - 2015   HDR in Computer Science, University of Rennes 1
  - 2008   PhD in Computer Science, University of Toulouse
  - 2005   MSc in Computer Science, ENSEEIHT, Toulouse
  - 2004   IUP NTIE, UT2J, Toulouse (software engineer at INEO SCLE)
  - 2002   IUT in Computer Science, UT2J (Blagnac), Toulouse

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Background: Complex Software–Intensive Systems

- **Multi-engineering approach**
- **Domain-specific modeling**
- **High variability and customization**
- **Software as integration layer**
- **Openness and dynamicity**

Model Driven Engineering, Software Language Engineering, Domain Specific (Modeling) Languages, Software Product Line

Cyber-Physical Systems, Internet of Things

Benoit Combemale
Agility and Safety for Wild Software

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Home | Teaching | Rese... | Students | Publications | Talks | Software | Projects | Services | Bio | Contact

Validation and Verification (formal methods, simulation, model-based testing)

Home

Full Professor at University of Toulouse (UT2J)
PhD and Habilitation in Computer Science

Department of *Mathematics and Computer Science*
Research team *MACAO* (*IRIT* lab)

Member of **Gemoc**

VANCOUVER 2017
SLE

Springer
Software and Systems Modeling
I support the journal as editor!

Latest tweets

RT @andwor: Next: A Systematic Mapping Study on Modeling for Industry 4.0 with @bcombemale and @barais in empirical studies #models17
1 day ago

RT @richpaige: Best #sosym editorial board meeting ever #models17
https://t.co/vTWZeytMkx
2 days ago

SLE'17 program is now online:
https://t.co/KLnTdZkPTX cc @sleconf
3 days ago

RT @richpaige: @bcombemale "Programming is a special case of executable modelling." #exe17 #models17
5 days ago

RT @richpaige: Benoit: "Would standardisation hinder innovation?" #exe17 #models17

Hack your own languages?

Join us in the MDE/SLE group of the CNRS IRIT lab, in a freshly rebuilt campus of the warm and vibrant city of Toulouse!

Open Positions
for MS, PhD and Postdoc

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WE WANT YOU!

Round table

background? business project? expectations for the future? …

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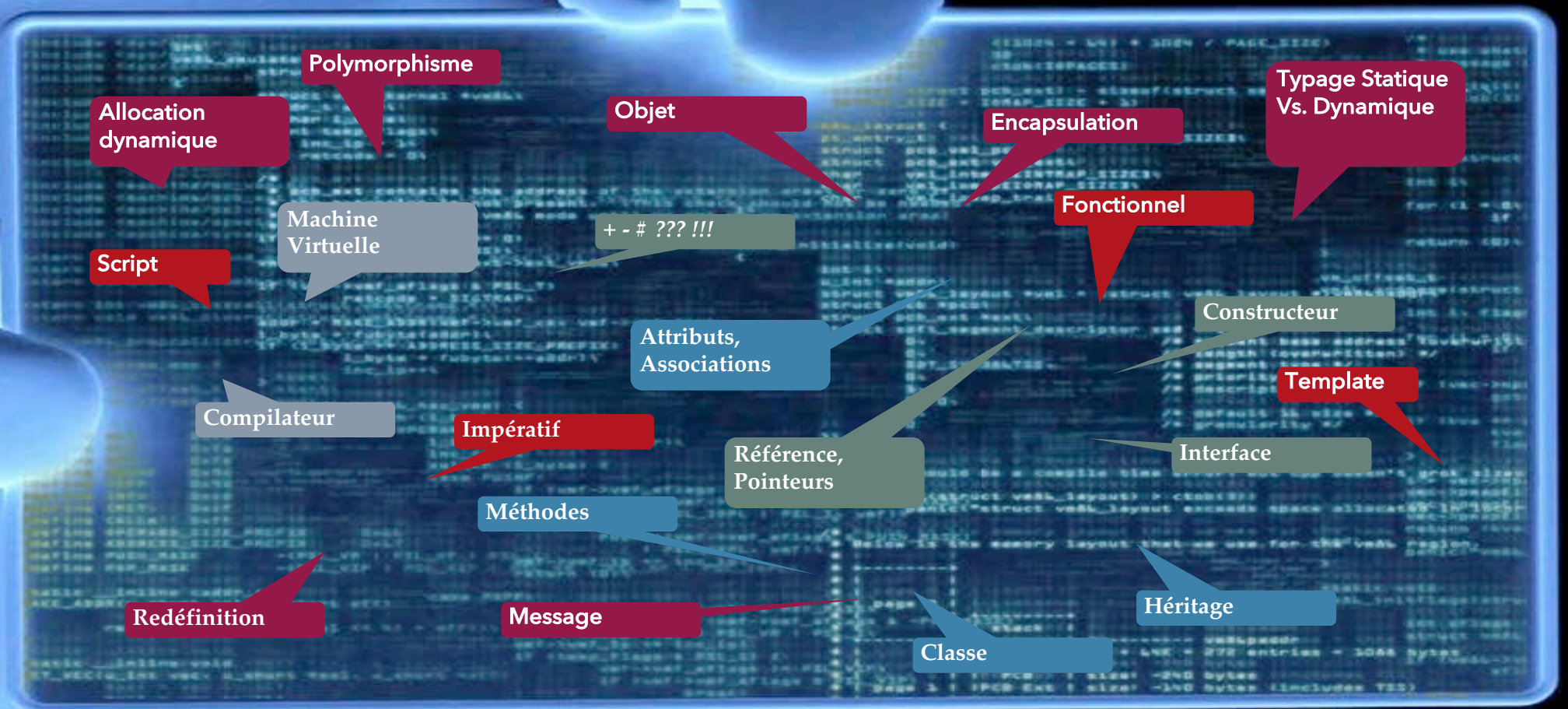
Software Engineering: Definition

The production of **operational software** satisfying **defined standards of quality...**

... includes programming, but is **more than programming!**

The five components of Software Engineering [Meyer]:

- ▸ **Describe**: requirements, design, specification, doc...

- ▸ **Implement**: programming

- ▸ **Assess**: testing and other V&V techniques

- ▸ **Manage**: plans, schedules, communication, reviews

- ▸ **Operate**: deployment, installation...

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Our Courses: A Long Path Together ☺

- **Master 1 ICE**

  - Génie Logiciel (GL):
    - GLa: Validation & Vérification   P1
    - *GLb - Processus de développement collaboratifs*
    - *GLc – Développement orienté test et refactoring*
    - *GLd - Qualité logicielle*
    - *GLe – Maintenance, Gestion du changement*

  - Environnement Collaboratif (EC):
    - ECa: Méthodes de développement   P1
    - ECb: Ingénierie des systèmes   P1/P2
    - ECc: DevOps   P1
    - *ECd - Maîtrise des licences d'un produit logiciel*

  - Ingénierie Dirigée par les Modèles (IDM)   P2/P3
  - Projet de développement collaboratif (PDC)   P3/P4/P5

- **Master 2 ICE**

  - Projet collaboratif tuteuré (PCT)   P2/P3/P4

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Course Organization

- Bookmark the **course website**
  - https://combemale.github.io/teaching/ice/m1/

- You all need a **Github** account:
  - (optional) Student pack: https://education.github.com/pack
  - We will (maybe) use: https://classroom.github.com
  - BTW, recommended: https://github.com/buunguyen/octotree

- You all need to join SE Labs on **Slack**:
  - http://bit.ly/2fZoMiO

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Course Organization

- Lectures, tutorials and labs have to be <u>interactive</u>

- Lectures, tutorials and labs are all <u>mandatory</u>

- Laptops (and others mobile devices) are useless during lectures => <u>prohibited</u>

- Disclaimers:
  - my slides are a mix of French and English
  - my slides are usually just in time published, i.e. by the day/hour of the lectures (and might be outdated before)
  - You must use your preferred IDE (and I have a very limited knowledge on most of them)
  - BTW, I'm not your type checker, compiler, javadoc, stackoverflow, google... No way!

How to reach me

▸ Preferably at the **end of a lectures/tuto/labs**

▸ Or on **Slack** (use the right chanel)

▸ Ultimately, by sending an **email** (`benoit.combemale@irit.fr`) with:

  ▸ Your **academic email** (or a comprehensible one)

  ▸ An **explicit object** starting with "[ICE1-XX] …", where XX is the course related to the email

  ▸ A **full signature** including your name, group/partners, etc.

  ▸ A **comprehensible description** of your issues

  ▸ The **related files** (diagrams, source code…)

    ▸ Rq: to export an Eclipse project, use the dedicated facility (Project's contextual menu (by right clicking) > export > Archive File…)

compliance_with_these_rules => a_guaranteed_response

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Course Materials

▸ **Slides of the courses**

▸ Complementary materials on the course websites

    ▸ **https://combemale.github.io**

▸ Textbooks and books (see slides)

Ingénierie Dirigée par les Modèles : des concepts à la pratique, by Jean-Marc Jézéquel, Benoit Combemale, Didier Vojtisek, Références sciences, ellipses (Eds.). 2012.
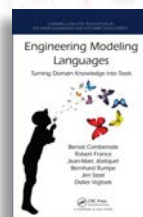
Engineering Modeling Languages: Turning Domain Knowledge into Tools, by Benoit Combemale, Robert B. France, Jean-Marc Jézéquel, Bernhard Rumpe, Jim R.H. Steel, and Didier Vojtisek. Chapman and Hall/CRC, pp.398, 2016. Companion website: http://mdebook.irisa.fr

▸ Get connected!

    ▸ blog, forum, twitter, rss, tutorials, mailing lists, etc.

    ▸ https://www.cybrhome.com/topic/engineering-blogs-of-companies

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