

# QU'EST-CE QU'UN SCIENTIFIQUE ?

## L'ENSEIGNANT-CHERCHEUR : QUI, QUOI, COMMENT

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**Joris Falip**

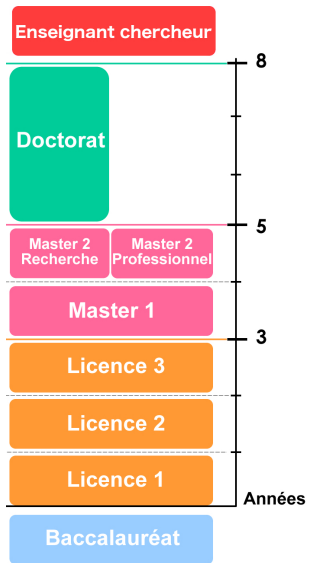
[joris.falip@univ-reims.fr](mailto:joris.falip@univ-reims.fr)

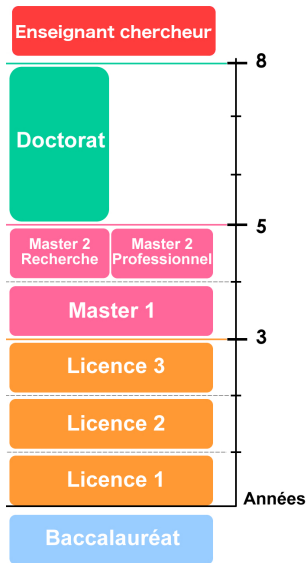
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Université de Reims Champagne-Ardenne

# PARCOURS

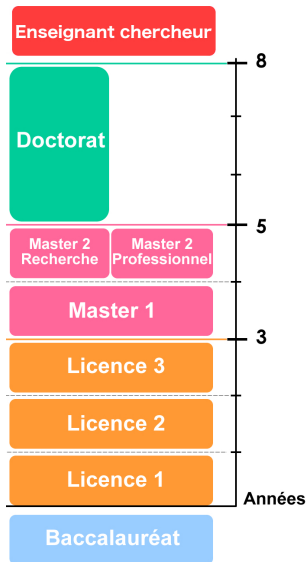




## D'autres parcours possibles :

- Ecole préparatoire
- Ecole d'ingénieur
- ...

# PARCOURS



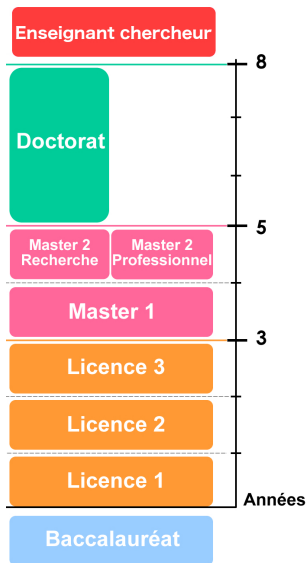
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- Ecole préparatoire
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- ...

## Et d'autres débouchés :

- Industrie
- CNRS
- ...

# PARCOURS



## D'autres parcours possibles :

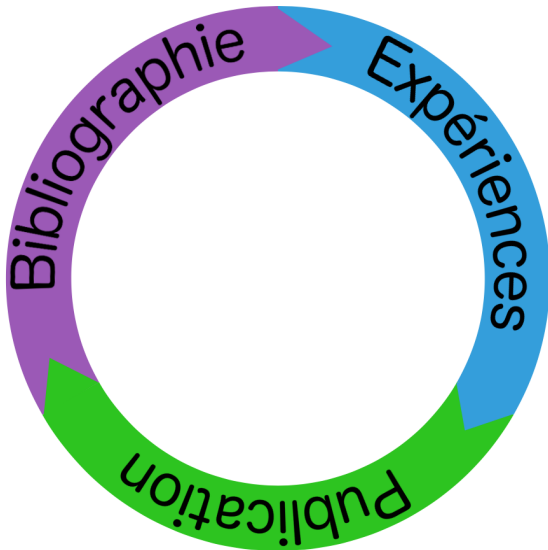
- Ecole préparatoire
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## Et d'autres débouchés :

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Accès au poste par concours

|     | 8:00                                                                                     | 9:00                                                                       | 10:00                                                                     | 11:00 | 12:00 | 13:00                                                                                                      | 14:00                                                                         | 15:00                                                                     | 16:00                                                                        | 17:00                                                                                      | 18:00                                                                      | 19:00 |
|-----|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------|-------|-------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------|
| U02 |                                                                                          |                                                                            |                                                                           |       |       |                                                                                                            |                                                                               | <b>[TD]</b> 14:30 16:30<br>M2104 Bases conception<br>INF82_2<br>U02M_info |                                                                              |                                                                                            | <b>[TP]</b> 17:30 18:30<br>M2203 Envir.comortable<br>INF82_1A<br>U02M_info |       |
| U03 | <b>[TD]</b> 08:15 10:15<br>M2104 Bases conception<br>INF82_5<br>U03M_info                |                                                                            | <b>[TD]</b> 10:15 12:15<br>M2104 Bases conception<br>INF82_4<br>U03M_info |       |       |                                                                                                            | <b>[TP]</b> 14:30 16:30<br>M2102 Architecture réseau<br>INF82_3B<br>U03M_info |                                                                           | <b>[TP]</b> 16:30 18:00<br>M4101C Ruby on Rails<br>INF84_4A<br>U03M_info     |                                                                                            |                                                                            |       |
| U04 |                                                                                          | <b>[TP]</b> 09:15 11:15<br>M2105 Intro interfaces<br>INF82_3A<br>U04M_info |                                                                           |       |       | <b>[TP]</b> 13:30 16:30<br>M4105C Develop Web avancé<br>INF84_3A<br>U04M_info<br>Programmation web avancée |                                                                               |                                                                           |                                                                              |                                                                                            |                                                                            |       |
| U05 |                                                                                          |                                                                            |                                                                           |       |       | <b>[TP]</b> 13:30 16:30<br>M4105C Develop Web avancé<br>INF84_4A<br>U05M_info<br>Programmation web avancée |                                                                               |                                                                           |                                                                              | <b>[TP]</b> 17:30 18:30<br>M4203 Express- Comm<br>INF84_1A<br>U05M_info<br>Ratnapage 11/02 |                                                                            |       |
| U06 | <b>[TP]</b> 08:15 11:15<br>M4105C1 Prog avancée C++<br>INF84_1B<br>INF84_2B<br>U06M_info |                                                                            |                                                                           |       |       | <b>[TP]</b> 13:30 14:30<br>M4203 Express- Comm<br>INF84_1A<br>U06M_info                                    |                                                                               |                                                                           | <b>[TP]</b> 16:30 18:30<br>M2105 Intro interfaces<br>INF82_4A<br>U06M_info   |                                                                                            |                                                                            |       |
| U07 |                                                                                          |                                                                            |                                                                           |       |       |                                                                                                            | <b>[TP]</b> 14:30 16:30<br>M2102 Architecture réseau<br>INF82_3A<br>U07M_info |                                                                           | <b>[TP]</b> 16:30 18:30<br>M2103 Bases pro orientée<br>INF82_2A<br>U07M_info |                                                                                            |                                                                            |       |



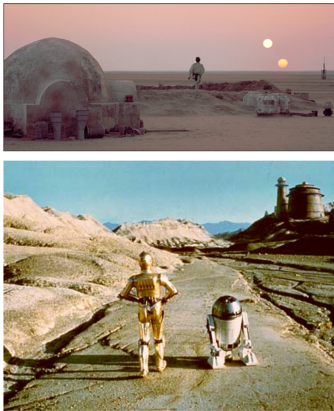


Figure 2: Exoplanet images from the 1977 movie *Star Wars*. Part of the movie is set on a rather earth-like, if somewhat more arid, exoplanet named Tatooine which orbits a close binary of differing colour: in supporting texts, these are identified as class G and K stars. The sunset scene shown above, into which the second sun was at the time inserted with analog cinematographic tricks, is an iconic image for the first movie in the series. But since outdoor photography for the movie was of course shot in terrestrial settings, scenes like the one shown beneath lack a feature that would be noticeable even for a close binary like the one shown here: the doubled shadow fringes which can be seen in our result rendering in figure 9. The blue sky colour, however, is actually fairly plausible, and would look much the same in “reality”.

## 2.2 Star Emission Spectra

The visible cosmos is populated with a huge number of individual stars, practically all of which seem to adhere to certain basic rules as far as their overall emission and appearance is concerned. As a rough first approximation, the light emission of stars can be described by so-called *blackbody radiation* [Siegel and Howell 2001], in dependence of the surface temperature of the star. Per unit solid angle the radiation of such an object is, in dependence of wavelength  $\lambda$  and temperature  $T$ , given by:

$$I(\lambda, T) = \frac{2hc^2}{\lambda^5} \frac{1}{e^{\frac{hc}{\lambda T}} - 1} \quad (1)$$

Figure 3 shows the currently assumed distribution of star colours and luminosities found in the observable cosmos.

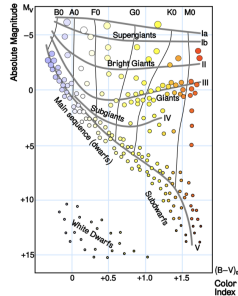
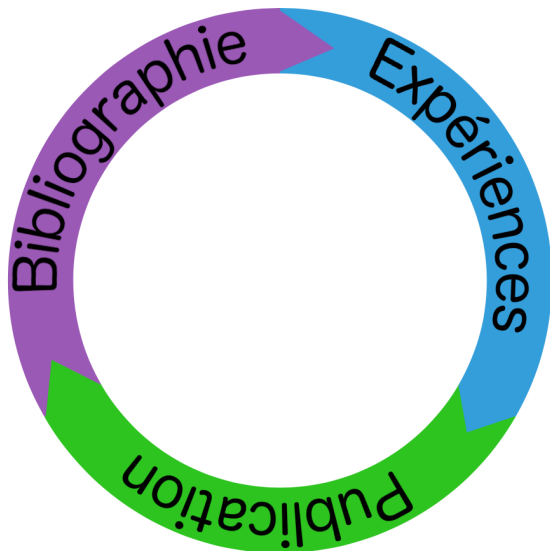


Figure 3: The Hertzsprung-Russell diagram, in which star luminosity and colour are correlated with relative abundance in the visible





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