

Taller de programación en Julia | Visita del colegio San Pedro en Quilicura



Bosques aleatorios para entender incendios forestales



PONTIFICIA
UNIVERSIDAD
CATÓLICA
DE CHILE

Facultad de Matemáticas • Escuela de Ingeniería

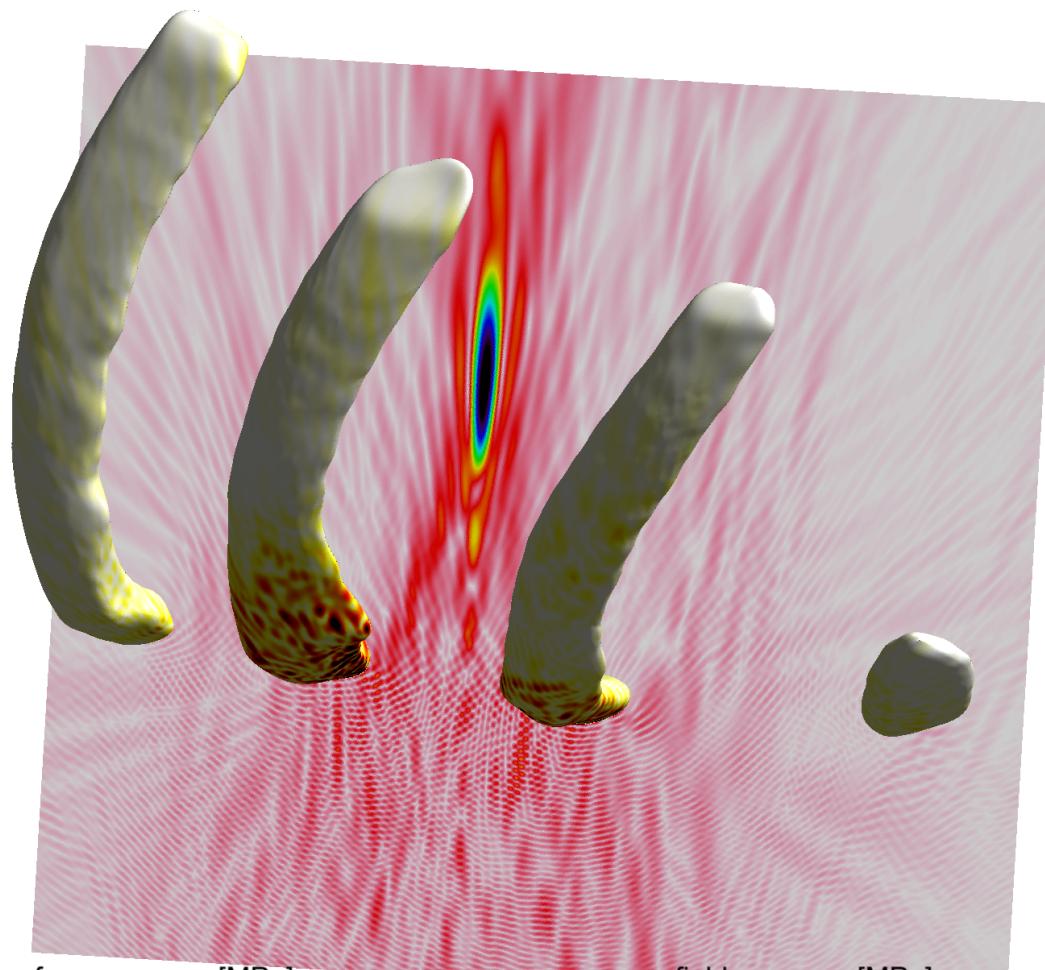
Elwin van 't Wout
9 de agosto de 2019

imc.uc.cl

Agenda

- 9:30 - 11:30 horas | Taller de programación
 - Laboratorio 1 en edificio Raúl Devés
- 11:30 - 12:30 horas | Recorrido campus San Joaquín
- 12:30 - 13:30 horas | Colación
 - Instituto de Ingeniería Matemática y Computacional
 - Edificio Hernán Briones piso 2

Taller previo



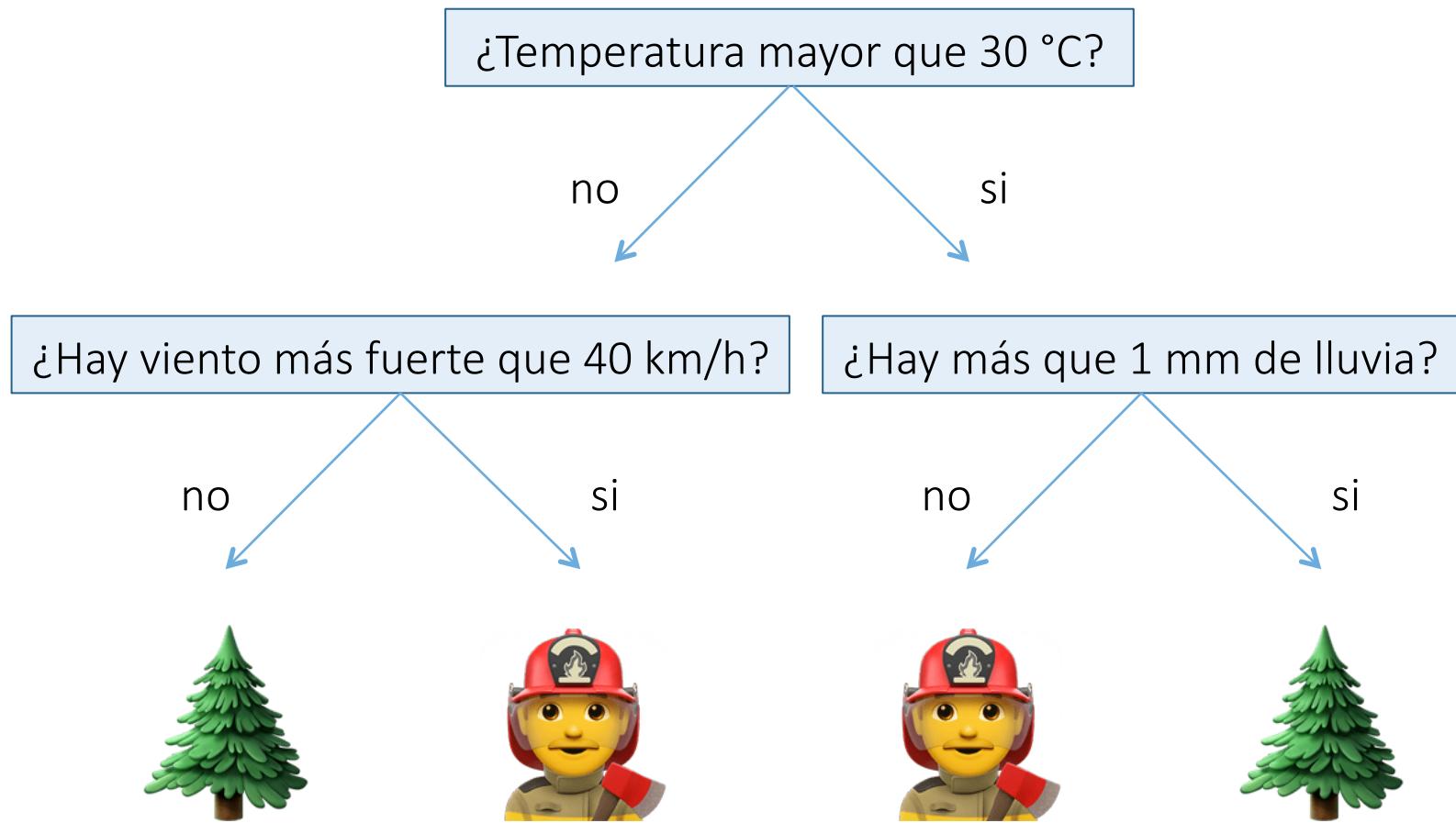
Incendios forestales



Árbol de decisión



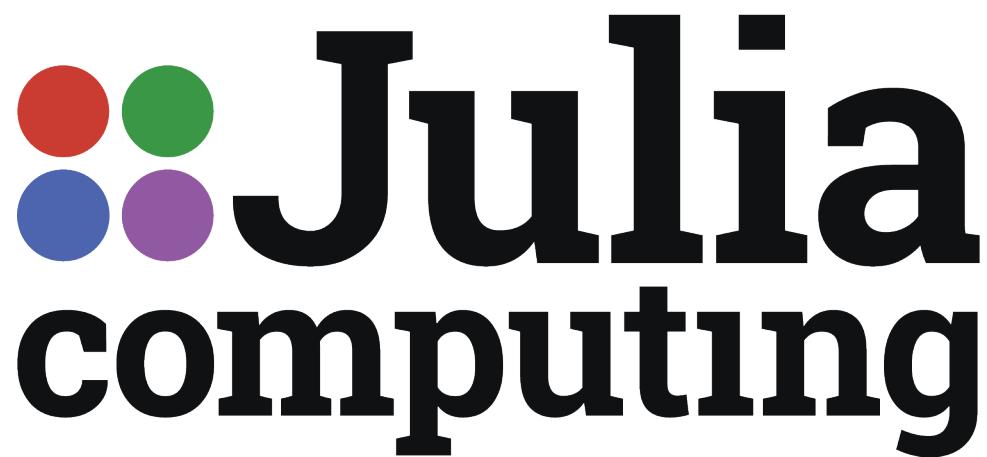
Árbol de decisión



Inteligencia artifical con aprendizaje automatizado

- No programar el árbol de decisión
- Programar cómo crear un árbol de decisión
- Aprender de los ejemplos de incendios forestales anteriores
- El método de bosque aleatorio (*random forest*) es crear muchos árboles de decisión y tomar un promedio para la decisión

Programar con Julia



Bajar archivos de GitHub

<https://github.com/evantwout/Taller-Julia>

The screenshot shows a GitHub repository page for the user 'evantwout' with the repository name 'Taller-Julia'. The page includes a navigation bar with links for Pull requests, Issues, Marketplace, and Explore. Below the navigation bar, there are buttons for Watch (0), Star (0), and Fork (0). The main content area displays the repository's statistics: 4 commits, 1 branch, 0 releases, and 1 contributor. A prominent green button labeled 'Clone or download' is circled in orange. The repository's history shows several files uploaded recently, including 'Aprender-Julia.ipynb', 'IncendiosForestales.ipynb', and 'README.md'. The repository description is 'Taller de introducción a programar en Julia.'.

No description, website, or topics provided.

Manage topics

Branch: master ▾ New pull request

Clone or download ▾

evantwout Add files via upload

Aprender-Julia.ipynb Add files via upload now

IncendiosForestales.ipynb Add files via upload now

README.md Update README.md last month

README.md

Taller-Julia

Taller de introducción a programar en Julia.

Ingresar en JuliaBox

<https://juliabox.com>

The screenshot shows the JuliaBox login page. At the top, there is a navigation bar with a back button, forward button, refresh button, and a search bar containing "juliabox.com". Below the navigation bar, the JuliaBox logo is displayed with the text "Julia BOX" and the tagline "Run Julia in your Browser". To the right of the logo, there are four login buttons: "Log in with Email" (blue), "Log in with GitHub" (dark grey), "Log in with Google" (blue), and "Log in with LinkedIn" (blue). An orange circle highlights the "Log in with GitHub" button. Below the login section, there are several promotional icons and text blocks. The first row includes: "Jupyter Notebook Interface" (with a Jupyter icon), "75,000+ users served since 2015" (with a checkmark icon), "Free registration, free to use" (with a gift icon), and "Perfect for classes, students, professors and new Julia users" (with a notepad icon). The second row includes: "Includes 275+ carefully curated popular Julia packages" (with a download icon), "Multi-node deployment capability" (with a network icon), "Parallel computing capability" (with a network icon), and "Buy added memory, storage, nodes and enterprise support" (with a shopping bag icon). At the bottom, there is a table titled "Subscription Models" with three columns: "Free", "Silver", and "Gold". A red horizontal bar spans across the "Free" and "Silver" columns.

Subscription Models	(Login to purchase)	Free	Silver	Gold

Comenzar en JuliaBox

The screenshot shows the JuliaBox web interface. At the top, there is a browser header with the title "JuliaBox" and the URL "juliabox.com". Below the header, the JuliaBox logo is on the left, followed by navigation links for "Dashboard", "Jupyter", and "Help". A green button labeled "Buy more Compute" is visible. In the center, there is a large card with a loading icon on the left and a blue "Launch" button on the right, which is highlighted with an orange oval. Below the "Launch" button is a "Customize" button. At the bottom of the page, there are four smaller cards: "Packages (0.6)" with a package icon, "Git" with a red diamond icon, "Google Drive" with a Google Drive icon, and "My apps" with a stylized app icon.

Subir archivos a JuliaBox

The screenshot shows the JuliaBox web interface. At the top, there is a browser header with tabs for 'JuliaBox' and a URL bar showing 'juliabox.com'. Below the header, the JuliaBox logo is on the left, followed by 'Dashboard', 'Jupyter', 'Help', and a green 'Buy more Compute' button. The main area is titled 'jupyter' and contains three tabs: 'Files', 'Running', and 'Nbextensions'. A message says 'Select items to perform actions on them.' Below this is a file list table with columns for checkboxes, file/folder icons, names, last modified, and file size. An orange circle highlights the 'Upload' button in the top right corner of the table header. The table lists several items:

<input type="checkbox"/>	Name	Last modified	File size
<input type="checkbox"/>	Incendios	2 months ago	
<input type="checkbox"/>	logs	3 months ago	
<input type="checkbox"/>	Taller-Julia	a month ago	
<input type="checkbox"/>	tutorials	3 months ago	
<input type="checkbox"/>	VisitaPUC	2 hours ago	

Subir archivos a JuliaBox

The screenshot shows the JuliaBox web interface. At the top, there is a header bar with the JuliaBox logo, a search bar containing "juliabox.com", and various navigation links like "Dashboard", "Jupyter", and "Help". A green button labeled "Buy more Compute" is also visible. Below the header, the word "jupyter" is displayed in a large font. Underneath, there are three tabs: "Files" (which is selected), "Running", and "Nbextensions". A message "Select items to perform actions on them." is shown above a file list. The file list includes several items: "Aprender-Julia.ipynb" (selected, highlighted in blue), "Incendios", "logs", "Taller-Julia", "tutorials", and "VisitaPUC". To the right of the file list is a toolbar with buttons for "Upload", "New", and "Cancel". An orange oval highlights the "Upload" button. The bottom right corner of the interface features a small "imc.uc.cl" logo.

Name	File size	Last modified
Aprender-Julia.ipynb		3 months ago
Incendios		3 months ago
logs		a month ago
Taller-Julia		3 months ago
tutorials		3 months ago
VisitaPUC		2 hours ago

Abrir archivos en JuliaBox

JuliaBox

juliabox.com

Dashboard Jupyter Help Buy more Compute

jupyter

Files Running Nbextensions

Select items to perform actions on them.

Upload New

<input type="checkbox"/> 0		Name	Last Modified	File size
<input type="checkbox"/>		Incendios	2 months ago	
<input type="checkbox"/>		logs	3 months ago	
<input type="checkbox"/>		Taller-Julia	a month ago	
<input type="checkbox"/>		tutorials	3 months ago	
<input type="checkbox"/>		Aprender-Julia.ipynb	2 hours ago	
<input type="checkbox"/>		Introducción.ipynb	a minute ago	10.8 kB
<input type="checkbox"/>		Introducción.ipynb	a minute ago	18.2 kB

¡A programar!

The screenshot shows a Jupyter Notebook interface running on JuliaBox. The browser tab is titled "Aprender-Julia". The notebook title is "jupyter Aprender-Julia (autosaved)". The menu bar includes File, Edit, View, Insert, Cell, Kernel, Widgets, Help, Trusted, and Julia 1.0.3. The toolbar below the menu includes icons for file operations, run, kernel, and mode switching (Markdown, Appmode). Below the toolbar, buttons for Validate, Feedback, Submit, and a cell editor are visible. The main content area contains the following text:

Esto es Jupyter

Arriba a la derecha se puede ver el "kernel" o núcleo que interpretará nuestro código. En este caso, usaremos el lenguaje de programación Julia.

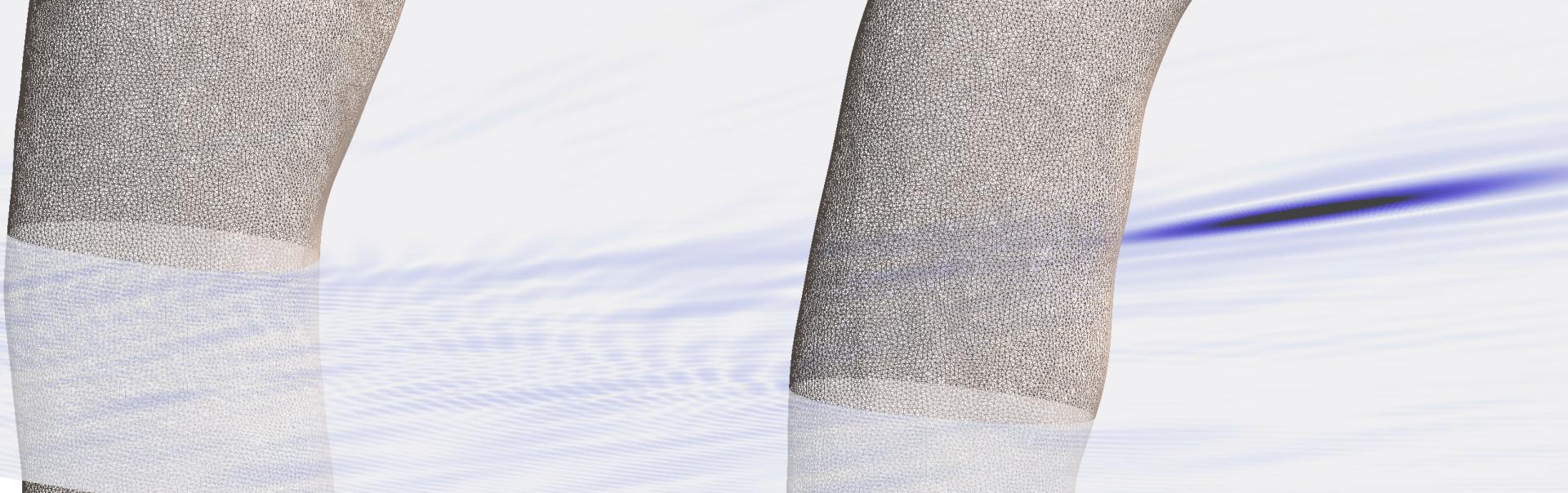
Este texto está inserto en una celda de tipo "markdown", que nos permite fácilmente ordenar nuestras ideas en texto.

Cuenta, entre otras cosas, con soporte para:

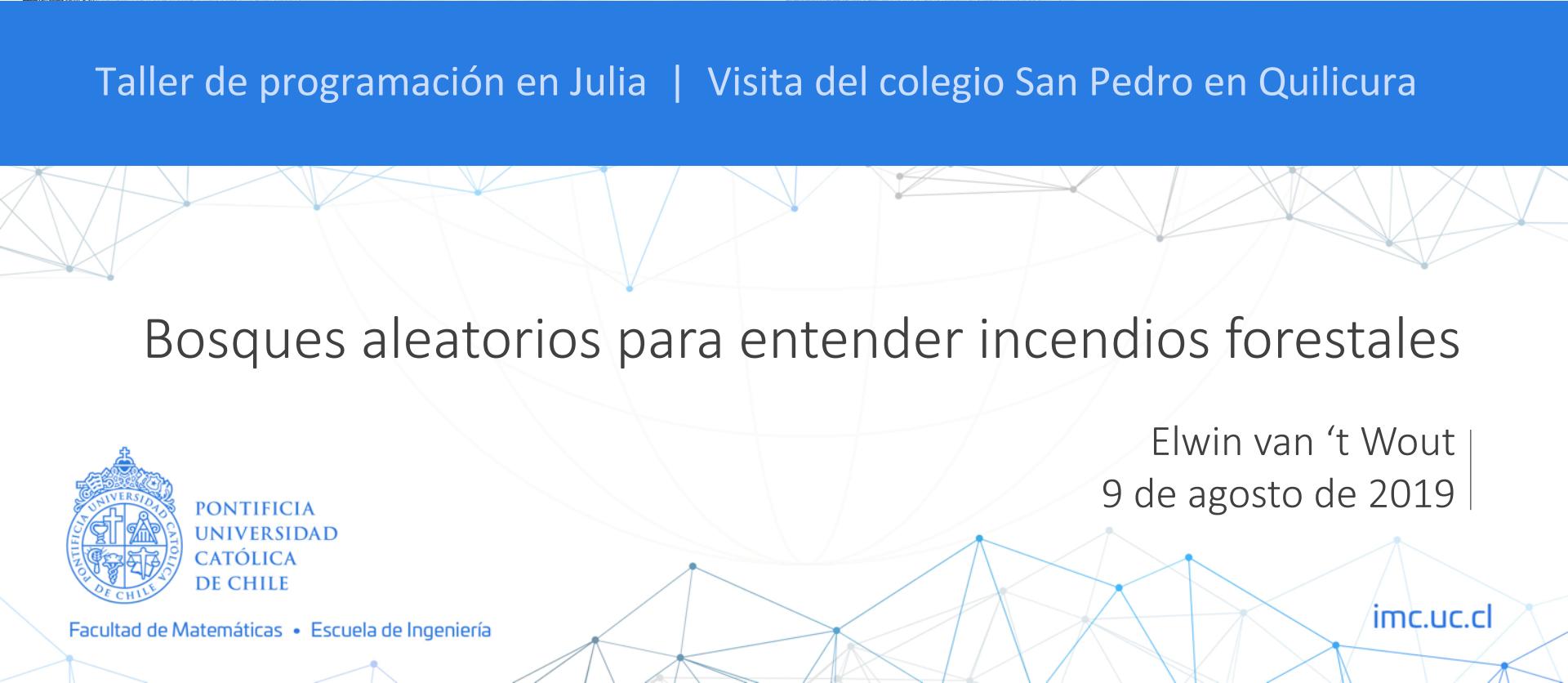
Titulos

Subtitulos

Bajadas



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