### Instalando o Eclipse



Abra: http://www.eclipse.org/downloads/

## Instale o Eclipse Classic.



Na tela de boas vindas: vá para o Workbench.



## Configurando o Eclipse para criar plugin do ImageJ

1. Criar um novo projeto

Vá em File  $\rightarrow$  New  $\rightarrow$  Java Project

Create a Java Project         Enter a project name.         Project name:         Contents         © Create new project in workspace         © Create project from existing source         Directory:       C:\Users\Monica\workspace         JRE         © Use an execution environment JRE:       JavaSE-1.6         © Use a project specific JRE:       jre6         © Use default JRE (currently 'jre6')       Configure JREs         Project layout       © Use project folder as root for sources and class files         © Create separate folders for sources and class files       © Configure default         Working sets       Teater separate folders for sources and class files	New Java Project	
Project name:         Contents         © Create new project in workspace         © Create project from existing source         Directory:       C:\Users\Monica\workspace         JRE         © Use an execution environment JRE:       JavaSE-1.6         © Use a project specific JRE:       jre6         © Use default JRE (currently 'jre6')       Configure JREs         Project layout       O use project folder as root for sources and class files         © Create separate folders for sources and class files       Configure default         Working sets           Add project to working sets           Working sets:	Create a Java Project Enter a project name.	
Project name         Contents         © Create new project in workspace         © Create project from existing source         Directory:       C:\Users\Monica\workspace         JRE         @ Use an execution environment JRE:       JavaSE-1.6         @ Use a project specific JRE:       jre6         @ Use default JRE (currently 'jre6')       Configure JREs         Project layout       0         @ Create separate folders for sources and class files       Configure default         Working sets		
Contents            © Create new project in workspace             © Create project from existing source          Directory:       C:\Users\Monica\workspace          JRE            @ Use an execution environment JRE:       JavaSE-1.6             Use a project specific JRE:        jre6             Use default JRE (currently 'jre6')        Configure JREs             Project layout           Use project folder as root for sources and class files             O Use project folder as root for sources and class files           Configure default          Working sets           Add project to working sets           Select	Project name:	
	Contents	
<ul> <li>Create project from existing source</li> <li>Directory: C:\Users\Monica\workspace</li> <li>Browse</li> <li>JRE <ul> <li>Use an execution environment JRE: JavaSE-1.6</li> <li>Use a project specific JRE: jre6</li> <li>Use default JRE (currently 'jre6')</li> <li>Configure JREs</li> </ul> </li> <li>Project layout <ul> <li>Use project folder as root for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Korking sets</li> <li>Add project to working sets</li> <li>Working sets:</li> </ul> </li> </ul>	Oreate new project in workspace	
Directory:       C:\Users\Monica\workspace       Browse         JRE       Image: Comparison of the system of th	Create project from existing source	
JRE <ul> <li>Use an execution environment JRE:</li> <li>JavaSE-1.6</li> <li>Use a project specific JRE:</li> <li>jre6</li> <li>Use default JRE (currently 'jre6')</li> </ul> Configure JREs           Project layout <ul> <li>Use project folder as root for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Working sets</li> <li>Add project to working sets</li> <li>Working sets:</li> <li>Select</li> </ul>	Directory: C:\Users\Monica\workspa	ce Browse
<ul> <li>Use an execution environment JRE: JavaSE-1.6 •</li> <li>Use a project specific JRE: jre6 •</li> <li>Use default JRE (currently 'jre6') Configure JREs</li> <li>Project layout</li> <li>Use project folder as root for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Add project to working sets</li> <li>Working sets: •</li> </ul>	JRE	
<ul> <li>Use a project specific JRE: jre6</li> <li>Use default JRE (currently 'jre6')</li> <li>Configure JREs</li> <li>Project layout</li> <li>Use project folder as root for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Configure default</li> <li>Working sets</li> <li>Add project to working sets</li> <li>Working sets:</li> </ul>	Our State	JavaSE-1.6
<ul> <li>Use default JRE (currently 'jre6')</li> <li>Project layout</li> <li>Use project folder as root for sources and class files</li> <li>Create separate folders for sources and class files</li> <li>Configure default</li> <li>Working sets</li> <li>Add project to working sets</li> <li>Working sets:</li> </ul>	O Use a project specific JRE:	ire6 v
Project layout         O Use project folder as root for sources and class files         Image: Create separate folders for sources and class files         Create separate folders for sources and class files         Configure default         Working sets         Image: Configure default         Vorking sets:         Image: Configure default         Image: Configure default         Select	O Use default JRE (currently 'jre6')	Configure JREs
Create separate tolders for sources and class files      Configure default      Working sets      Working sets      Working sets:      Vorking sets:      Select	Project layout	es and class files
Add project to working sets     Working sets:     Select	Working sets	and class files <u>Configure default</u>
Working sets:	Add project to working sets	
	Working sets:	▼ Select
	Working sets:	* Select

Project name: Dê nome ao projeto (Sugestão: PTC2892-Aula03)

Outras opções: default

Selecione: Finish

2. Configurações extras

Clique com o botão direito no nome do projeto e selecione Properties

• 🛛 🕯	🖹 🛛 🔅 🕈 🔘 🕶 💁 😴 🗳 🗳	• 🙋 🛷 • 🖞 •	$\{ \neg \Leftrightarrow \diamond \diamond \bullet \bullet$			📑 🐉 Java	
ckage E	kp 🛛 🔓 Hierarchy 🖓 🗍				An	Outline 🛛 🔪 outline is not availab	c
	02.n.l.602     II       New     Go Into       Open in New Window     Open Type Hierarchy       Open Type Hierarchy     F4       Show In     Alt+Shift+W       Copy     Ctrl+C       Copy Qualified Name     Paste       Paste     Ctrl+V       Delete     Delete       Build Path     Example To the state of the state	Image: height of the second					
2	Source Alt+Shift+S Refactor Alt+Shift+T Import Export						
S.	Refresh F5 Close Project	j @ Javadoc 🚯 Decl	aration				
	Assign Working Sets		Resource	Path	Location	Туре	
	Run As Debug As Team Compare With	<pre>b</pre>					
	Restore from Local History						

2.1. Mude o nome da pasta de saída de bin para **plugins**.

pe filter text	Java Build Path	⇔ + ⇔ +		
Resource Builders	😕 Source 🔁 Projects 📑 Libraries 🍫 Order and	Export		
Java Build Path	Source folders on build path:			
Java Code Style Java Compiler	🕮 PTC2892-Aula03/src	Add Folder		
Java Editor Javadoc Location		Link Source		
Project References Run/Debug Settings		Edit		
		Remove		
	Allow output folders for source folders			
	Default output folder:			

# 2.2. Agora vamos configurar as bibliotecas:

Acrescente a biblioteca do ImageJ

1 be used seve	Java Bulla Path	~~ ~ ~ ~
Resource Builders Java Build Path Java Code Style Java Compiler Java Editor Javadoc Location Project References Run/Debug Settings	Source Projects A Libraries Order a JARs and class folders on the build path: JRE System Library [JavaSE-1.6]	nd Export Add JARs Add External JARs Add Variable Add Library Add Class Folder Add Class Folder Add External Class Folder Edit Edit Remove Migrate JAR File

	•	• • Pesq	uisar	2
🎍 Organizar 👻 🏢 M	odos de exibição 🔻 📙	Nova Pasta	_	0
Links Favoritos	Nome	Modificado em	Тіро	Tama
<ul> <li>Documentos</li> <li>Desktop</li> <li>Computador</li> <li>Locais Recentes</li> <li>Imagens</li> <li>Músicas</li> <li>Alterados Recentem</li> <li>Pesquisas</li> <li>Público</li> </ul>	<ul> <li>jre</li> <li>luts</li> <li>plugins</li> <li>plugins</li> <li>ij</li> <li>ImageJ</li> </ul>	29/06/2009 11:35 29/06/2009 11:36 29/06/2009 11:36 29/06/2009 11:36 08/06/2009 22:36 29/06/2009 11:36	Pasta de Arquivos Pasta de Arquivos Pasta de Arquivos Pasta de Arquivos Executable Jar File Atalho da Internet	1.
Pastas . Nome:			jar;*.zip	•

No local onde o ImageJ está instalado, selecione a biblioteca ij.jar



Vamos configurar o Javadoc location:

Coloque o site: http://rsbweb.nih.gov/ij/developer/api/

#### Teste em Validate ...



## Criando, compilando e testando um plugin

Plugin: Convolucao\_media.java

Copie o arquivo Convolucao\_media.java na pasta src do projeto.

Teste (Run) a rotina. Carregue uma imagem, p.ex., *bridge.gif* e clique em *Plugins/Convolucao\_media* verifique que houve a media dos valores dos pixels (imagem filtrada e borrada).



Considerações:

O ImageJ reconhece como plugin arquivos na pasta plugins que tenham o caracter "\_". Desta forma, trabalharemos com o arquivo Threshold\_.java.