

The file `tulm.fdd` for use with  $\text{\LaTeX} 2_{\epsilon}$ .\*

$\text{\LaTeX}$  Project

2021/07/23

<p>This file is maintained by the <math>\text{\LaTeX}</math> Project team. Bug reports can be opened (category <code>latex</code>) at <a href="https://latex-project.org/bugs.html">https://latex-project.org/bugs.html</a>.</p>
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## 1 TUlmr

```
1 (*TUlmr)
2 \DeclareFontFamily{TU}{lmr}{}
3 \DeclareFontShape{TU}{lmr}{m}{n}%
4   {<-5.5> \UnicodeFontFile{lmroman5-regular}{\UnicodeFontTeXLigatures}
5   <5.5-6.5> \UnicodeFontFile{lmroman6-regular}{\UnicodeFontTeXLigatures}
6   <6.5-7.5> \UnicodeFontFile{lmroman7-regular}{\UnicodeFontTeXLigatures}
7   <7.5-8.5> \UnicodeFontFile{lmroman8-regular}{\UnicodeFontTeXLigatures}
8   <8.5-9.5> \UnicodeFontFile{lmroman9-regular}{\UnicodeFontTeXLigatures}
9   <9.5-11> \UnicodeFontFile{lmroman10-regular}{\UnicodeFontTeXLigatures}
10  <11-15> \UnicodeFontFile{lmroman12-regular}{\UnicodeFontTeXLigatures}
11  <15-> \UnicodeFontFile{lmroman17-regular}{\UnicodeFontTeXLigatures}
12  }{}
13 \DeclareFontShape{TU}{lmr}{m}{sl}%
14   {<-8.5> \UnicodeFontFile{lmromanslant8-regular}{\UnicodeFontTeXLigatures}
15   <8.5-9.5> \UnicodeFontFile{lmromanslant9-regular}{\UnicodeFontTeXLigatures}
16   <9.5-11> \UnicodeFontFile{lmromanslant10-regular}{\UnicodeFontTeXLigatures}
17   <11-15> \UnicodeFontFile{lmromanslant12-regular}{\UnicodeFontTeXLigatures}
18   <15-> \UnicodeFontFile{lmromanslant17-regular}{\UnicodeFontTeXLigatures}
19   }{}
20 \DeclareFontShape{TU}{lmr}{m}{it}%
21   {<-7.5> \UnicodeFontFile{lmroman7-italic}{\UnicodeFontTeXLigatures}
22   <7.5-8.5> \UnicodeFontFile{lmroman8-italic}{\UnicodeFontTeXLigatures}
23   <8.5-9.5> \UnicodeFontFile{lmroman9-italic}{\UnicodeFontTeXLigatures}
24   <9.5-11> \UnicodeFontFile{lmroman10-italic}{\UnicodeFontTeXLigatures}
25   <11-> \UnicodeFontFile{lmroman12-italic}{\UnicodeFontTeXLigatures}
26   }{}
27 \DeclareFontShape{TU}{lmr}{m}{sc}%
28   {<-> \UnicodeFontFile{lmromancaps10-regular}{\UnicodeFontTeXLigatures}}{}
29 \DeclareFontShape{TU}{lmr}{m}{ui}%
30   {<-> \UnicodeFontFile{lmromanuns110-regular}{\UnicodeFontTeXLigatures}}{}
31 \DeclareFontShape{TU}{lmr}{m}{scsl}%
32   {<-> \UnicodeFontFile{lmromancaps10-oblique}{\UnicodeFontTeXLigatures}}{}

```

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\*This file has version number v1.8a, dated 2021/07/23.

```

33 \DeclareFontShape{TU}{lmr}{b}{n}
34 {<-> \UnicodeFontFile{lmromandemi10-regular}{\UnicodeFontTeXLigatures}}{}
35 \DeclareFontShape{TU}{lmr}{b}{sl}
36 {<-> \UnicodeFontFile{lmromandemi10-oblique}{\UnicodeFontTeXLigatures}}{}
37 \DeclareFontShape{TU}{lmr}{bx}{n}
38 {<-5.5> \UnicodeFontFile{lmroman5-bold}{\UnicodeFontTeXLigatures}
39 <5.5-6.5> \UnicodeFontFile{lmroman6-bold}{\UnicodeFontTeXLigatures}
40 <6.5-7.5> \UnicodeFontFile{lmroman7-bold}{\UnicodeFontTeXLigatures}
41 <7.5-8.5> \UnicodeFontFile{lmroman8-bold}{\UnicodeFontTeXLigatures}
42 <8.5-9.5> \UnicodeFontFile{lmroman9-bold}{\UnicodeFontTeXLigatures}
43 <9.5-11> \UnicodeFontFile{lmroman10-bold}{\UnicodeFontTeXLigatures}
44 <11-> \UnicodeFontFile{lmroman12-bold}{\UnicodeFontTeXLigatures}
45 }{}
46 \DeclareFontShape{TU}{lmr}{bx}{it}
47 {<-> \UnicodeFontFile{lmroman10-bolditalic}{\UnicodeFontTeXLigatures}}{}
48 \DeclareFontShape{TU}{lmr}{bx}{sl}
49 {<-> \UnicodeFontFile{lmromanslant10-bold}{\UnicodeFontTeXLigatures}}{}
50 \DeclareFontShape{TU}{lmr}{b}{it}
51 {<->sub * lmr/b/sl}{}
52 </TUlmr>

```

## 2 TUlmss

```

53 (*TUlmss)
54 \DeclareFontFamily{TU}{lmss}{}
55 \DeclareFontShape{TU}{lmss}{m}{n}
56 {<-8.5> \UnicodeFontFile{lmsans8-regular}{\UnicodeFontTeXLigatures}
57 <8.5-9.5> \UnicodeFontFile{lmsans9-regular}{\UnicodeFontTeXLigatures}
58 <9.5-11> \UnicodeFontFile{lmsans10-regular}{\UnicodeFontTeXLigatures}
59 <11-15.5> \UnicodeFontFile{lmsans12-regular}{\UnicodeFontTeXLigatures}
60 <15.5-> \UnicodeFontFile{lmsans17-regular}{\UnicodeFontTeXLigatures}
61 }{}
62 \DeclareFontShape{TU}{lmss}{m}{it}
63 {<->ssub*lmss/m/sl}{}
64 \DeclareFontShape{TU}{lmss}{m}{sl}
65 {<-8.5> \UnicodeFontFile{lmsans8-oblique}{\UnicodeFontTeXLigatures}
66 <8.5-9.5> \UnicodeFontFile{lmsans9-oblique}{\UnicodeFontTeXLigatures}
67 <9.5-11> \UnicodeFontFile{lmsans10-oblique}{\UnicodeFontTeXLigatures}
68 <11-15.5> \UnicodeFontFile{lmsans12-oblique}{\UnicodeFontTeXLigatures}
69 <15.5-> \UnicodeFontFile{lmsans17-oblique}{\UnicodeFontTeXLigatures}
70 }{}
71 \DeclareFontShape{TU}{lmss}{m}{sc}
72 {<->sub*lmr/m/sc}{}
73 \DeclareFontShape{TU}{lmss}{b}{n}
74 {<->ssub * lmss/bx/n}{}
75 \DeclareFontShape{TU}{lmss}{b}{sl}
76 {<->ssub * lmss/bx/sl}{}
77 \DeclareFontShape{TU}{lmss}{b}{it}
78 {<->ssub * lmss/bx/it}{}
79 \DeclareFontShape{TU}{lmss}{sbc}{n}
80 {<-> \UnicodeFontFile{lmsansdemicond10-regular}{\UnicodeFontTeXLigatures}}{}
81 \DeclareFontShape{TU}{lmss}{sbc}{sl}
82 {<-> \UnicodeFontFile{lmsansdemicond10-oblique}{\UnicodeFontTeXLigatures}}{}
83 \DeclareFontShape{TU}{lmss}{sbc}{it}

```

```

84 {<->ssub*lmss/sbc/sl}{ }
85 \DeclareFontShape{TU}{lmss}{bx}{n}
86 {<-> \UnicodeFontFile{lmsans10-bold}{\UnicodeFontTeXLigatures}}{ }
87 \DeclareFontShape{TU}{lmss}{bx}{sl}
88 {<-> \UnicodeFontFile{lmsans10-boldoblique}{\UnicodeFontTeXLigatures}}{ }
89 \DeclareFontShape{TU}{lmss}{bx}{it}
90 {<->ssub*lmss/bx/sl}{ }
91 /TUlms)

```

### 3 TUlmssq

```

92 (*TUlmssq)
93 \DeclareFontFamily{TU}{lmssq}{ }
94 \DeclareFontShape{TU}{lmssq}{m}{n}
95 {<-> \UnicodeFontFile{lmsansquot8-regular}{\UnicodeFontTeXLigatures}}{ }
96 \DeclareFontShape{TU}{lmssq}{m}{sl}
97 {<-> \UnicodeFontFile{lmsansquot8-oblique}{\UnicodeFontTeXLigatures}}{ }
98 \DeclareFontShape{TU}{lmssq}{bx}{n}
99 {<-> \UnicodeFontFile{lmsansquot8-bold}{\UnicodeFontTeXLigatures}}{ }
100 \DeclareFontShape{TU}{lmssq}{bx}{sl}
101 {<-> \UnicodeFontFile{lmsansquot8-boldoblique}{\UnicodeFontTeXLigatures}}{ }
102 \DeclareFontShape{TU}{lmssq}{m}{it}
103 {<->ssub*lmssq/m/sl}{ }
104 \DeclareFontShape{TU}{lmssq}{bx}{it}
105 {<->ssub*lmssq/bx/sl}{ }
106 \DeclareFontShape{TU}{lmssq}{b}{n}
107 {<->ssub * lmssq/bx/n}{ }
108 \DeclareFontShape{TU}{lmssq}{b}{sl}
109 {<->ssub * lmssq/bx/sl}{ }
110 \DeclareFontShape{TU}{lmssq}{b}{it}
111 {<->ssub * lmssq/bx/it}{ }
112 /TUlmssq)

```

### 4 TUlmtt

```

113 (*TUlmtt)
114 \DeclareFontFamily{TU}{lmtt}{%
115 \hyphenchar \font\m@ne
116 \fontdimen3\font\z@
117 \fontdimen4\font\z@
118 }
119 \ifx\lmtt@use@light@as@normal\@empty
120 \DeclareFontShape{TU}{lmtt}{sb}{n}
121 {<-8.5> \UnicodeFontFile{lmmmono8-regular}{ }
122 <8.5-9.5> \UnicodeFontFile{lmmmono9-regular}{ }
123 <9.5-11> \UnicodeFontFile{lmmmono10-regular}{ }
124 <11-> \UnicodeFontFile{lmmmono12-regular}{ }
125 }{ }
126 \DeclareFontShape{TU}{lmtt}{sb}{it}
127 {<-> \UnicodeFontFile{lmmmono10-italic}{ }{ }
128 \DeclareFontShape{TU}{lmtt}{sb}{sl}
129 {<-> \UnicodeFontFile{lmmmonoslant10-regular}{ }{ }
130 \DeclareFontShape{TU}{lmtt}{sb}{sc}
131 {<-> \UnicodeFontFile{lmmmonocaps10-regular}{ }{ }

```

```

132 \DeclareFontShape{TU}{lmtt}{sb}{scsl}
133   {<-> \UnicodeFontFile{lmmonocaps10-oblique}}{}{}
134 \DeclareFontShape{TU}{lmtt}{m}{n}
135   {<-> \UnicodeFontFile{lmmonolt10-regular}}{}{}
136 \DeclareFontShape{TU}{lmtt}{m}{it}
137   {<->sub*lmtt/l/sl}{}
138 \DeclareFontShape{TU}{lmtt}{m}{sl}
139   {<-> \UnicodeFontFile{lmmonolt10-oblique}}{}{}
140 \DeclareFontShape{TU}{lmtt}{c}{n}
141   {<-> \UnicodeFontFile{lmmonoltcond10-regular}}{}{}
142 \DeclareFontShape{TU}{lmtt}{c}{it}
143   {<->sub*lmtt/lc/sl}{}
144 \DeclareFontShape{TU}{lmtt}{c}{sl}
145   {<-> \UnicodeFontFile{lmmonoltcond10-oblique}}{}{}
146 \else
147 \DeclareFontShape{TU}{lmtt}{m}{n}
148   {<-8.5> \UnicodeFontFile{lmmono8-regular}{}
149   <8.5-9.5> \UnicodeFontFile{lmmono9-regular}{}
150   <9.5-11> \UnicodeFontFile{lmmono10-regular}{}
151   <11-> \UnicodeFontFile{lmmono12-regular}{}
152   }{}
153 \DeclareFontShape{TU}{lmtt}{m}{it}
154   {<-> \UnicodeFontFile{lmmono10-italic}}{}{}
155 \DeclareFontShape{TU}{lmtt}{m}{sl}
156   {<-> \UnicodeFontFile{lmmonoslant10-regular}}{}{}
157 \DeclareFontShape{TU}{lmtt}{m}{sc}
158   {<-> \UnicodeFontFile{lmmonocaps10-regular}}{}{}
159 \DeclareFontShape{TU}{lmtt}{m}{scsl}
160   {<-> \UnicodeFontFile{lmmonocaps10-oblique}}{}{}
161 \DeclareFontShape{TU}{lmtt}{l}{n}
162   {<-> \UnicodeFontFile{lmmonolt10-regular}}{}{}
163 \DeclareFontShape{TU}{lmtt}{l}{it}
164   {<->sub*lmtt/l/sl}{}
165 \DeclareFontShape{TU}{lmtt}{l}{sl}
166   {<-> \UnicodeFontFile{lmmonolt10-oblique}}{}{}
167 \DeclareFontShape{TU}{lmtt}{lc}{n}
168   {<-> \UnicodeFontFile{lmmonoltcond10-regular}}{}{}
169 \DeclareFontShape{TU}{lmtt}{lc}{it}
170   {<->sub*lmtt/lc/sl}{}
171 \DeclareFontShape{TU}{lmtt}{lc}{sl}
172   {<-> \UnicodeFontFile{lmmonoltcond10-oblique}}{}{}
173 \fi
174 \DeclareFontShape{TU}{lmtt}{b}{n}
175   {<-> \UnicodeFontFile{lmmonolt10-bold}}{}{}
176 \DeclareFontShape{TU}{lmtt}{b}{it}
177   {<->sub*lmtt/b/sl}{}
178 \DeclareFontShape{TU}{lmtt}{b}{sl}
179   {<-> \UnicodeFontFile{lmmonolt10-boldoblique}}{}{}
180 \DeclareFontShape{TU}{lmtt}{bx}{it}
181   {<->sub*lmtt/b/sl}{}
182 \DeclareFontShape{TU}{lmtt}{bx}{n}
183   {<->ssub*lmtt/b/n}{}
184 \DeclareFontShape{TU}{lmtt}{bx}{sl}
185   {<->ssub*lmtt/b/sl}{}

```

186 </TUlmtt>

## 5 TUlmtt

```
187 (*TUlmtt)
188 \DeclareFontFamily{TU}{lmtt}{}
189 \ifx\lmtt@use@light@as@normal\@empty
190 \DeclareFontShape{TU}{lmtt}{sb}{n}
191   {<->\UnicodeFontFile{lmmonoprop10-regular}}{}{}
192 \DeclareFontShape{TU}{lmtt}{sb}{sl}
193   {<->\UnicodeFontFile{lmmonoprop10-oblique}}{}{}
194 \DeclareFontShape{TU}{lmtt}{sb}{it}
195   {<->sub*lmtt/m/sl}{}
196 \DeclareFontShape{TU}{lmtt}{m}{n}
197   {<->\UnicodeFontFile{lmmonoprop10-regular}}{}{}
198 \DeclareFontShape{TU}{lmtt}{m}{sl}
199   {<->\UnicodeFontFile{lmmonoprop10-oblique}}{}{}
200 \DeclareFontShape{TU}{lmtt}{m}{it}
201   {<->sub*lmtt/l/sl}{}
202 \else
203 \DeclareFontShape{TU}{lmtt}{m}{n}
204   {<->\UnicodeFontFile{lmmonoprop10-regular}}{}{}
205 \DeclareFontShape{TU}{lmtt}{m}{sl}
206   {<->\UnicodeFontFile{lmmonoprop10-oblique}}{}{}
207 \DeclareFontShape{TU}{lmtt}{m}{it}
208   {<->sub*lmtt/m/sl}{}
209 \DeclareFontShape{TU}{lmtt}{l}{n}
210   {<->\UnicodeFontFile{lmmonoprop10-regular}}{}{}
211 \DeclareFontShape{TU}{lmtt}{l}{sl}
212   {<->\UnicodeFontFile{lmmonoprop10-oblique}}{}{}
213 \DeclareFontShape{TU}{lmtt}{l}{it}
214   {<->sub*lmtt/l/sl}{}
215 \fi
216 \DeclareFontShape{TU}{lmtt}{b}{n}
217   {<->\UnicodeFontFile{lmmonoprop10-bold}}{}{}
218 \DeclareFontShape{TU}{lmtt}{b}{sl}
219   {<->\UnicodeFontFile{lmmonoprop10-boldoblique}}{}{}
220 \DeclareFontShape{TU}{lmtt}{b}{it}
221   {<->sub*lmtt/b/sl}{}
222 \DeclareFontShape{TU}{lmtt}{bx}{n}
223   {<->ssub*lmtt/b/n}{}
224 \DeclareFontShape{TU}{lmtt}{bx}{sl}
225   {<->ssub*lmtt/b/sl}{}
226 \DeclareFontShape{TU}{lmtt}{bx}{it}
227   {<->sub*lmtt/b/sl}{}
228 </TUlmtt>
```

## 6 TUlmdh

```
229 (*TUlmdh)
230 \DeclareFontFamily{TU}{lmdh}{}%
231 \DeclareFontShape{TU}{lmdh}{m}{n}
232   {<-> \UnicodeFontFile{lmromandunh10-regular}{\UnicodeFontTeXLigatures}
233   }{}
```

```
234 \DeclareFontShape{TU}{lmdh}{m}{sl}
235   {<-> \UnicodeFontFile{lmromandunh10-oblique}{\UnicodeFontTeXLigatures}
236   }{}
237 \DeclareFontShape{TU}{lmdh}{m}{it}
238   {<->sub*lmdh/m/sl}{}
239 </TUlmdh>
```