



Another one to add to Ehlers collection.

The [MESA Adaptive Moving Average \(MAMA\)](#) adapts to price movement based on the [rate of change](#) of phase as measured by the Hilbert Transform Discriminator. This method features a fast attack average and a slow decay average so that composite average rapidly ratchets behind price changes and holds the average value until the next ratchet occurs. Consider FAMA (Following AMA) as the signal.

Here are some of the options:

FILL MAMA / FAMA region (ribbon mode):



Mark Crossovers:



The above options (along with the bar colors) allow this to be used as a standalone system.

BTW, John Ehlers calls MAMA , "Mother of all Adaptive Moving Averages", lemme know what you think :)

More info:

- [MESA Adaptive Moving Average](#) , Stocks and Commodities Magazine, August 2001
- MAMA: <http://www.mesasoftware.com/papers/MAMA...>

List of my public indicators: <http://bit.ly/1LQoPK8>

List of my app-store indicators: <http://blog.tradingview.com/?p=970>

[Twitter](#)[Website](#)

Açık kaynak kodlu komut dosyası ⓘ

Güçlü TradingView rühuyla, bu belgenin yazan, yatırımcının anlayabilmesi ve doğrulanabilmesi için onu açık kaynak olarak yayınladı. Yazının etine sağlık! Bunu ücretsiz olarak kullanabilirsiniz, ancak bu kodun bir yanında yeniden kullanım [Kullanım Koşulları](#) ile yönetilir. Bir grafikte kullanmak için favorilere ekleyebilirsiniz.

Feragatname

Bilgiler veryapılar, TradingView tarafından sağlanan veya onaylanan finansal, yatırımcı, işlem veya diğer türden taşısiye veya taşıyıcılar anlatma gelmez ve teşkil etmez. [Kullanım Şartları](#)nda daha fazlasını okuyun.

Bu komut dosyasını bir grafikte kullanmak ister misiniz? ⓘ

[★ Favori göstergelere ekle](#)

```
1 //  
2 // @author LazyBear  
3 //  
4 // List of my public indicators: http://bit.ly/1LQaPK8  
5 // List of my app-store indicators: http://blog.tradingview.com/?p=970  
6 //  
7 study("Ehlers MESA Adaptive Moving Average [LazyBear]", shorttitle="EMAMA_LB", overlay=true, precision=3)  
8 src=input(112, title="Source")  
9 f1=input(.112, title="Fast Limit")  
10 s1=input(.05, title="Slow Limit")  
11 sp = (.0862*p + .5769*nz(sp[1]) + 2*sp[2] + src[1]) / 10.0  
12 q1 = (.0862*p + .5769*nz(sp[2]) - .5769*nz(sp[4]) - .0962*nz(sp[3]))*(.075*nz(p[1]) + .54)  
13 q1 = (.0862*p + .5769*nz(dt[1]) - .5769*nz(dt[2]) - .0962*nz(dt[6]))*(.075*nz(p[1]) + .54)  
14 i1 = nz(dt[3])  
15 j1 = (.0962*i1 + .5769*nz(i1[4]) - .5769*nz(i1[5]))*(.075*nz(p[1]) + .54)  
16 j1 = (.0962*j1 + .5769*nz(q1[2]) - .5769*nz(q1[4]) - .0962*nz(q1[5]))*(.075*nz(p[1]) + .54)  
17 i2 = i1 - j1  
18 q2 = q1 + j1  
19 i2 = .2*i2 + .8*nz(i2[1])  
20 q2 = .2*q2 + .8*nz(q2[1])  
21 re_ = i2*nz(i2[1]) + q2*nz(q2[1])  
22 im_ = i2*nz(q2[1]) - q2*nz(i2[1])  
23 re = .2*re_ + .8*nz(re[1])  
24 im = .2*im_ + .8*nz(im[1])  
25 p1 = iff(im!=0 and rel!=0, 360/atan(im/re), nz(p[1]))  
26 p2 = iff(p1 > 180, p1 - 180, 1.5*nz(p[1]), iff(p1 < 0.67*nz(p[1]), 0.67*nz(p[1]), p1))  
27 p = iff(p1 > 180, 180, iff(p1 > 50, 50, p2))  
28 p = .1*p3 + .4*nz((q3[1]))  
29 spp = .33*p + .67*nz(spp[1])  
30 phase = atan(q1 / i1)  
31 dphase_ = nz(phase[1]) - phase  
32 dphase = iff(dphase_< 1, 1, dphase_)  
33 alpha_ = f1 / dphase  
34 alpha = iff(alpha_< 1, 1, iff(alpha_> f1, f1, alpha_))  
35 mama = alpha*src + (1 - alpha)*nz(mama[1])  
36 fama = .5*alpha*mama + (1 - .5*alpha)*nz(fama[1])  
37 pafalse, title="Mark crossover points"  
38 plotarrow(pa)(cross(mama, fama))mama>fama?1:na, title="Crossover Markers"  
39 frfalse, title="Plot FAMA Regressions"  
40 dual=plot(f1(mama,fama), style=circles, color-gray, linewidth=0, title="DummyL")  
41 dual=plot(fma, title="FAMA", color=green, linewidth=2)  
42 dual=plot(fma, title="FAMA", color=green, linewidth=2)  
43 fill(dml, mama, red, transp=70, title="NegativeFill")  
44 fill(dml, fma, green, transp=70, title="PositiveFill")  
45 ebcfalse, title="Enable Bar colors"  
46 bc=mama*fama?lime:red  
47 barcolor(ebc?bc:na)
```

BENZER FİĞİRLER

[Ehlers Adaptive Cyber Cycle Indicator \[LazyBear\]](#)

LazyBear 13 May 27, 2015

[Ehlers Stochastic CG Oscillator \[LazyBear\]](#)

LazyBear 5 May 25, 2015

Yorumlar



Yararlı veya teşvik edici bir yorum bırakın. Piyasalarla birlikte hakim olalım

[Alışıklarla yorum](#)[Yorum Paylaş](#)**E** **ekoroniN** · Mar 22, 2016

I admire LazyBear and his work a lot, he is one of the inspiring person that got me coding indicators for TV for my own use as well.

Unfortunately in the case of MESA - this indicator is simply incorrect and does not work as expected - sadly.

I coded quite a number of indicis by now from Ehlers original presentations and books, and at first I could not quite grasp why LB MESA does not look like anything in Ehlers presentations. You can check how it should look in Ehlers presentation here:

→18 [Cevap Gönder](#)**E** **ekoroniN** · Mar 22, 2016
(continued...) mesasoftware.com/papers/MAMA.pdf

The stringently examining LazyBear's code I figured where the problem - it is actually in the two crucial parts of calculating the period and phase value.

The issue is that TV uses radians in trigonometric functions, whereas Ehlers formula refers to degrees - and the conversion is required for the formula to work properly.

Period, line 21 must

→7 [Cevap Gönder](#)**E** **ekoroniN** · Mar 22, 2016
(for weird reasons paste operation sometimes posts my comment :))

wrong:

p1 = iff(im!=0 and rel!=0, 360/atan(im/re), nz(p))

right:

p1 = iff(im!=0 and rel!=0, 2*pi/atan(im/re), nz(p)), where pi = 3.14.5926

Phase, line 30

wrong:

phase = atan(q1 / i1)

right:

phase = 180/pi * atan(q1 / i1)

Until these corrections are made - the alpha value for MAM on line 34 is always bigger than pi/2, and as a result it never changes in the later calculation of the EMA. This MESA simply does not adapt to price changes. The alpha value stays constant 0.5 resulting in plotting the EMA(3) basically all the time. And the FAMA becomes EMA(7) of MAMA.

I believe I spotted similar coding issue in some other Ehlers based indicators, I can't unfortunately recall anymore which ones.

But apart from that I can only wish LazyBear to continue his great work for the community, big respect!

And this is how my version of MESA looks like

+5 ▲ Cevap Gönder



E ekoronin PRO+ · Mar 22, 2016 cso

I chose this chart from may 2015 to replicate the original chart in the first LazyBear's post for comparison.

The chopiness of MESA is the confirmation of its adaptive nature. On fast price advances, it quickly slides along, whereas in the congested areas it flattens on retracements, because the alpha decreases and the EMA period increases.

Hope this brings big profits to everybody, all the best!

+1 ▲ Cevap Gönder

E ekoronin PRO+ · Mar 22, 2016 cso

P.S.

Final correction:

>>where pi = 3.145926

pi = 3.1415926 indeed.

+1 ▲ Cevap Gönder

F fede2.0 · Mar 29, 2016 cso

Hil I would like to see your version of the MESA as you commented on LazyBear description of his own version. Could you publish it?

I can't code the corrections you made, error message...

Thank a lot for your contribution!!!

▲ Cevap Gönder

E ekoronin PRO+ · Mar 30, 2016 cso

I am not publishing yet as I need to bring my scripts to a common standard, but I'm guessing you have forgot to define the pi variable. It would be good if you post the actual error.

Once again:

Add between line 10 and 11:

pi = 3.1415926

Change line 21 (old count before you added pi)

+1 ▲ Cevap Gönder

E ekoronin PRO+ · Mar 30, 2016 cso

line 21:

pi = If((lm!=0 and rel!=0, 2*pi/atan(lm/re), nz(pi))

line 30 (old count again):

phase = 180/pi * atan(qf / lt)

that should be all.

And I think I've finally figured out what causes earlier submission of my messages = if I paste a piece of code that has an invisible end-of-line character (cr/lf), the form treats it as ENTER button and submits the message, maybe this is something TradingView team can fix?

▲ Cevap Gönder

F fede2.0 · Mar 30, 2016 cso

Thank you ekoronin, I made the modifications but I still have an error, perhaps it is a little long to post but I publish a copy version of the indicator with the modifications as: EHlers MESA Adaptive Moving Average by Lazybear copy.

I don't know where my error is

▲ Cevap Gönder

B B120626 · May 4, 2016 cso

I think at the end of line 21, you need to lookback 1 bar of p

p

without that, the script throws an error during compile,

Error: Undeclared Identifier ' p';

please confirm your working script contains p

▲ Cevap Gönder

B B120626 · May 4, 2016 cso

well... it appears the web form strips out regular square brackets typed from the keyboard

so the prior post, you need p[1;1] typed using html entity code

p open square bracket 1 closed square bracket

+1 ▲ Cevap Gönder

C catchjacz PRO+ · May 22, 2021 cso

@ekoronin, Can you please paste the entire updated script?

▲ Cevap Gönder

B B120626 · May 4, 2016 cso

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)

EMAMA_EK (h2, 0.5, 0.05, false, 9, 5, true, false, false)



here is the chart with Lazy Bear's original script (green & red lines), vs the modifications by ekoronin (pink & aqua lines)

Lazy Bear's script hugs the price closer, which helps you get in/ out faster with a change in the trend at the ma crossover. that seems to be better for reversion to the mean instruments such as forex.

Ehler's modification may be truer to Ehler's original script, which may be targeted toward equities with strong trends and help you stay in the trade longer (months) without being stopped out due to pullbacks, which is described by Ehler in his original paper.

Ekoronin I appreciate the mods you have made, but for my use in 2 hour forex binary trades, I will stick with the original script, even if it is technically incorrect ;)

+3 ▲ Cevap Gönder

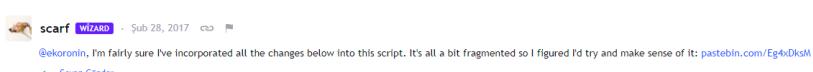


I compared this script vs 2 exp moving averages, and it behaves very close to EMA 8 h12 and EMA 3 h12, on both 5 min bars and 2 hr bars.

so now I'm probably dropping this concept.

I searched for Ehler because I just listened to his interview on Better Systems Trader podcast, and his comments on the MESA stuff sounded great. Now I'm having doubts. I'll check out some more of LB's Ehler scripts to see if those work better for my needs.

+2 ▲ Cevap Gönder



In his work Ehlers introduces an additional variable called "speed", and this is used in calculating α_{ph} instead of fast limit "f1" like this:
 $\alpha_{ph} = speed/dphase$

So I added in the beginning of the code on lines 9-10 an extra input:
`speed=input(.5, title="Speed", step=0.1)`

But I found that it has no effect when greater than fast limit "f1", because delta phase is always greater or equals to 1. So perhaps the use of "f1" as a divider is entirely justified.
Good luck!

+▲ Cevap Gönder



+▲ Cevap Gönder



@LazyBear, I couldn't figure out if you updated this script. Did you already add these fixes or should I use the corrected version published by branflakes?

+5 ▲ Cevap Gönder



marco02020202 · Ara 28, 2019

@LazyBear, has the script been updated?

▲ Cevap Gönder



LazyBear WIZARD · May 24, 2015

This is what MAMA thinks of USDJPY 1M :)



+2 ▲ Cevap Gönder



A-shot · May 25, 2015

This looks interesting!

▲ Cevap Gönder



LazyBear WIZARD · May 25, 2015

MAMA or my chart on USDJPY? :)

▲ Cevap Gönder



A-shot · May 25, 2015

Which one of the ehlers indicators do you prefer most?

+1 ▲ Cevap Gönder



LazyBear WIZARD · May 25, 2015

I like all his cycle indicators (but always filter them using other indicators).

+1 ▲ Cevap Gönder



ChartArt · May 24, 2015

Excellent! This moving average indicator invented by Ehlers seems to work even better than I expected. Great additional options from you as well. Thank you!



+2 ▲ Cevap Gönder



LazyBear WIZARD · May 24, 2015

YW ;)

▲ Cevap Gönder



ChartArt · May 24, 2015

I found in my comparison only one area where Ehlers's other invention, his much cooler named 'Instantaneous Trend Line' (tradingview.com/script/DaHlcIg-Ehlers-Instantaneous-Trend-LazyBear/) performed better than his MESA Adaptive Moving Average (MAMA). Here is a screenshot where I annotated the false signals of the iTrend which the MAMA had right at that daily close (both with default settings):



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

+3 ▲ Cevap Gönder

P PIGOT · Oca 16, 2018 ☰

@LazyBear,

HELLO

Can we transform this code to a screener for trading view, is it possible? et how?

Thanks

▲ Cevap Gönder

⚖ cooney_s PREMIUM · May 25, 2015 ☰

Most excellent addition to the library! I've been using Mesa, MAMA for years and swear by it. Nice work LazyBear!

+1 ▲ Cevap Gönder

LazyBear WIZARD · May 25, 2015 ☰

Thx. Have way more Ehlers indies in my collection (he makes everything interesting, what do I do? ;)), working on publishing one more now.

+2 ▲ Cevap Gönder

⚖ cooney_s PREMIUM · May 26, 2015 ☰

Might you have the chance to add the option of MTF? Hourly Mesa on a 15min chart, etc, etc....makes it even more useful for intra-day trading. Thanks!

▲ Cevap Gönder

IvanLabrie PREMIUM · May 26, 2015 ☰

Try displacing it a la ichimoku ;)

▲ Cevap Gönder

cryptographic1 PREMIUM · Haz 6, 2015 ☰



▲ Cevap Gönder

cryptographic1 PREMIUM · Haz 6, 2015 ☰

Here's a view of the link I just posted

▲ Cevap Gönder

cryptographic1 PREMIUM · Haz 6, 2015 ☰

Here is the MAMA with profit/loss calculations (courtesy of Ni6HTH4Wk). tradingview.com/chart/FS0ENnvr/

Currently, the profits are calculated using the candle close price after the buy/sell signal is given by the line MAMA/FAMA cross. You can adjust the trade amount, but default is 10 units. Can anyone edit these calculations so that it is using the candle open price of the next candle after the signal is given? I think this would give a more accurate profit estimate.

▲ Cevap Gönder

cryptographic1 PREMIUM · Haz 6, 2015 ☰

Actually, using close price of the signal candle is probably the correct way to do it, since the signal wouldn't be confirmed until candle close. Although it looks great on a chart, this is generally not a very profitable trading strategy.

▲ Cevap Gönder

O oliver.pfaff.581 · May 25, 2015 ☰

Error lb is not authorized

▲ Cevap Gönder

O oliver.pfaff.581 · May 25, 2015 ☰

error: lb is not authorized

▲ Cevap Gönder

LazyBear WIZARD · May 25, 2015 ☰

EMAMA_LB is Ehler's MAMA. LB_RSRL is an app-store indicator. You must be subscribed to use it. More info: blog.tradingview.com/?p=970

+1 ▲ Cevap Gönder

O oliver.pfaff.581 · May 25, 2015 ☰

Got it!

▲ Cevap Gönder