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Fox Valley Electric Auto Association
PO Box 214
Wheaton, IL 60187-0214

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April 2012 FVEAA Newsletter

The FVEAA is a Not-For-Profit Illinois Corporation and the Chicago Area Chapter of The Electric Auto Association

Note: New Meeting Place!

Next Meeting

Wednesday, April 18th, 2012 - 6:45 PM to 9:00 PM
as invited by the IEEE Fox Valley chapter

IIT Rice Campus in Wheaton on WEDNESDAY APRIL 18!! (NOT Friday)

FVEAA MEETING WITH IEEE on WEDNESDAY

DOORS OPEN 6:30 p.m. CHECKIN BY 6:45 p.m. MEETING STARTS 7:00 p.m. ENDS 9:00 p.m.

Illinois Institute of Technology
Rice Campus Location
201 East Loop Road
Wheaton, Illinois 60189

The speaker is Jason Harper of Argonne National Labs.

"Recent developments in International Electric Vehicle Charging Standards --
What Lies Ahead for Electricity as a Vehicular Fuel"

NOTE CHANGE IN DATE, DAY, TIME, AND LOCATION from our usual meetings

Directions to IIT Rice Campus in Wheaton: <http://www.iit.edu/rice/about/directions.shtml>

IEEE web site Info on the presentation: <http://ewh.ieee.org/r4/chicago/foxvalley/>

Agenda

- NOT our usual meeting agenda. Please get there early to check in
- Check in by 6:45 p.m.
- Program starts 7:00 p.m.
- Close by 9:00 p.m.

President's Words

Bruce Jones

Hi EVeryone,

I received an invitation a couple weeks ago from John Bundy the head of the local Fox Valley IEEE organization. He invited us to their meeting on Wednesday (yes April 18th) to hear the speaker this month, Jason Harper an Electrical Engineer in the Vehicle Systems Group at the Center for Transportation Research at Argonne National Lab. His talk is on "Recent developments in International Electric Vehicle Charging Standards -- What Lies Ahead for Electricity as a Vehicular Fuel."

Location: Auditorium - Illinois Institute of Technology's Rice Campus - Wheaton, Illinois

Mr. Harper will speak on the transportation options for the future of hybrid and plug-in electric (PEV) vehicles. He will show the battery, powertrain and charging systems used in electric vehicles since 1913 to present designs (Nissan Leaf, Chevy Volt, Ford Focus EV, etc). He will discuss the on board PEV battery charging systems, the unique charging needed for each vehicle type, and how we can supply electricity to vehicles most conveniently.

Jason's research interests include wireless power transfer, RF communication, and embedded systems control. Recent research includes DC fast charging and standards related to PEV to EVSE communication. Mr. Harper is an IEEE member and has BS and MS degrees in Electrical Engineering Technology from the Purdue University.

So come on out and we'll have a good time on WEDNESDAY.

Regarding permanent locations we've been checking out a couple of options and nothing has surfaced yet that fits the bill. So still looking.

Note that the next two months we have some excellent speakers so stay tuned.

Sincerely, Bruce



Martin Aguilar from Continental Mitsubishi at the March Meeting



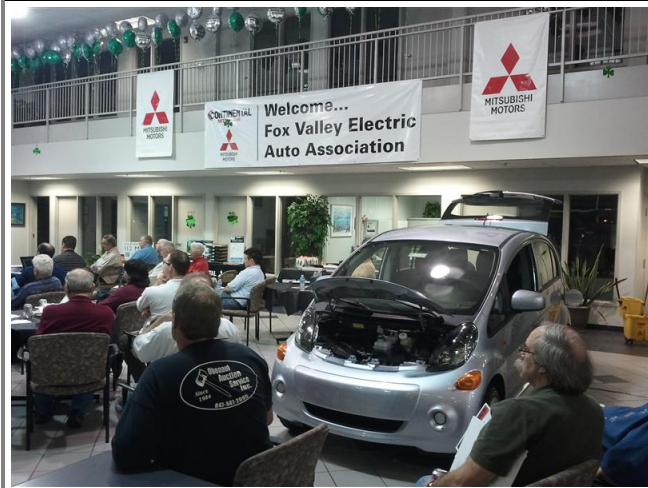
Martin has everyone's attention as he describes the details of the Mitsubishi i



Lots and lots of audience questions.



Martin listened to each question, and gave informative answers.



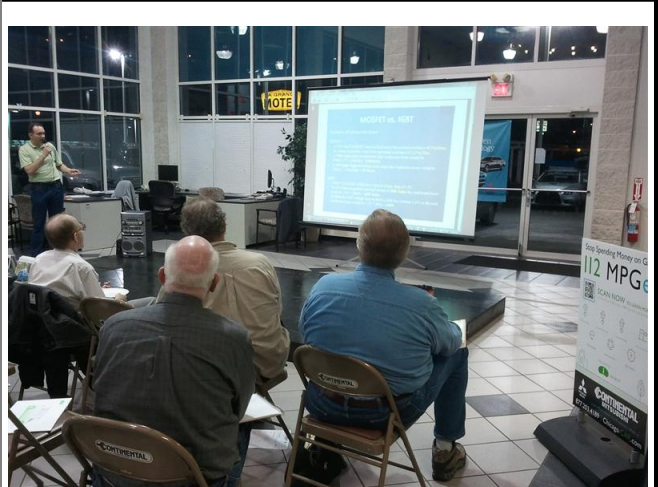
We were greeted by a custom banner for the occasion.



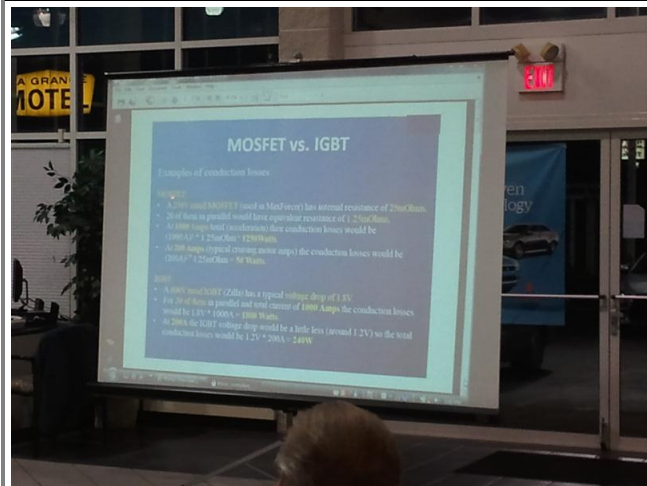
Here is the group getting into Miodrag's talk on controllers.



Miodrag discusses controller design



Mosfets vs. IGBTs



Continental Mitsubishi had transformed half of their showroom into a classroom for our presentations.



Miodrag well into his talk, with the audience still very much awake.

Rich's Ramblings

Rich Carroll

Well, I survived another winter. Winters have become much, much quieter since I 'retired' from my winter sport of 41 years. Since I was a teenager, I have raced cars on frozen lakes. Not every year was a long enough season to allow a Class Season Championship, but I did amass 15 Class Season championships in nine different classes. (At one point, I actually wanted to be a Season Champ in each and every class, but I missed two classes along the route.) I had thought I wouldn't miss the sport, although I guess I do miss the folks, the competition, and the ability to extract the utmost from a vehicle in winter conditions. I did get a partial dose of it with an absolutely great computer game called Speed Dreams 2.

And then, a news announcement brought it all back. A simple article on Jalopnik triggered lots of memories. In the video, [EV 161 MPH on Ice](#), a group of students in Finland attempt a high speed run in a prototype sports car. The best place in Finland to do high speed runs is a nice flat expanse that only occurs when the lakes freeze over in the winter. They tested their prototype to 161 MPH on locally made snow tires, the same brand I ran for the last ten or twelve years in competition. Nokian (OK, they are really the same Nokia that makes phones like electronics, but they relabeled the tire division with an additional N to kind of brand distinguish them) and the actual brand is Hakkapeliitta (and I wonder why my spell check program objects to that word). By the way, Hakkapeliitta refers to a Finnish light cavalryman in the service of King Gustavus Adolphus of Sweden. (I know you will be able to drop this word into your everyday conversations.) The [Z Series](#) and the [R Series Hakkapeliitta](#) tires use a high hysteresis rubber, which remains extremely pliable even in sub zero temperatures. This allows the tire to sink into the very slight crevices and slight surface irregularities that exist in ice made on a wind swept lake. The Hakkas also use a unique

and very aggressive microsiping (called Pump Sipes) to squeeze any melted water out the sides. A good set of Hakkas are almost as effective on ice as the older metal stud design, and much safer on wet and dry pavement. I know them well, I have run the best of the Hakka line for years. Naturally the Finnish EV Prototype in the video, running on a reasonably smooth frozen lake, was running the latest Series 7 tires. By the way, the car they used is their own university prepared prototype called the Electric RaceAbout or E R A.

That article crossed my desk on April 9. On April 10, along came a somewhat similar article from [Tesla about their Subzero Testing](#) of their Model S, soon to be released. Notice that at 0:51 into the video, they actually push the Model S hard enough to get it sliding. The Model S is a rear drive vehicle, but does have traction control and stability control. Obviously, the Tesla engineers were testing or setting up the stability control for cold temperatures and slippery conditions. Yes the Tesla video is much more about low speed stability than a high speed run, but a curious series of news videos.

I am really glad to see that electric cars have gotten to the place in development where the best winter tires are needed for these prototype EV's and where we are testing for directional stability on ice. Gone are the days when we didn't have to test in winter, we knew that the batteries were very sluggish. Battery problems are becoming less and less of an issue, and that is a very good thing.

Meeting Minutes -

Rich Carroll

The March meeting was called to order by President Jones at 6:50 PM in the Mitsubishi Dealer in Countryside, IL (Continental Mitsubishi). We had graciously been invited to have our March meeting there, and invited for test drives of the new Mitsubishi i (formerly called the i-MiEV). After the introduction of new guests, Rich Carroll gave five quick reports: 1) the Independent Television Service was hosting a screening of "Revenge of the Electric Car" on 3/17, followed by a panel discussion. 2) John Jeide is recuperating at home from a recent hospitalization for multiple pulmonary embolisms. A card was passed for greetings and signatures. 3) *Microcar News* had recently published a rather extensive article on Citicars and Commuta-cars, electric vehicles built in the 1970's and early 1980's and Rich had color reprints for those who would like. 4) Rich still has a few FVEAA maroon polo shirts for sale. 5) Chicago Magazine had announced the Green Awards: Entrepreneur Edition and named former member Brian Levin and Said Al-Hallaj in it's five awardees.

Rich Hirschberg discussed several upcoming car shows, and had flyers. He detailed the upcoming Elgin Car show and EV Green show, with the Expo inside the Rec. Center.

Todd Dore gave a very brief report of the treasury, mentioning we had about \$1,500 in the checking account, and \$15,000 in savings.

The Green Technology of Greater Chicago group will have a showing of "Who Killed the Electric Car on Tuesday 3/20 at 7 PM at Harper College, building A. Details can be found at meetup.com.

Bruce Jones presented a brief slide show of costs and new products about EV's. Immediately after Bruce's talk we rotated to a new batch of test drivers, as test drives were continuing during the meeting. There were more than ample charging opportunities, thanks to Continental Mitsubishi, with two outside J1772 charging stations and additional 117 and 240 volt outlets in the service area.

Miodrag Zubic finished his presentation with part 3 of his talk on EV controller design. This was well received, with a number of questions during and afterwards.

Bruce Jones introduced Martin Aguilar from Continental Mitsubishi, who discussed details of the Mitsubishi i, including details of the 88 cell, 16 kWh, 330V pack.

About 8:35, we took a short break, and noted that Glenn Hunter had brought an e-car from his dealership, Todd had brought his electric bug, and Chuck Carrington had brought his Nissan Leaf. In addition Scottt Fauque had come in his Chevy Volt, and Steve Grushas had come all the way (less than a mile from home) in his Zap. A new record for number of electric cars at an FVEAA meeting.

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Please check one: New Member _____ Renewal _____

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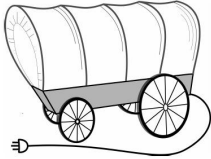





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